

Test Center Name	iON Digital Zone iDZ 2 Sector 62
Test Date	26/09/2021
Test Time	4:30 PM - 6:30 PM
Subject	Assistant Engineer (Civil)

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Section : General Ability

Q.1 In the question statement are given, followed by two arguments, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which argument(s) is/are strong based on the information provided.

Statement : Should the private sector be completely nationalised in India?

Argument I : Yes, the only way to develop the private sector is by nationalising them.
Argument II : No, because after nationalisation the private sector will operate less efficiently.

- Ans** ☒ A. Both I and II are strong
☒ B. Only argument II is strong
☒ C. Neither I nor II is strong
☒ D. Only argument I is strong

Question ID : 97675518401

Q.2 Ashish cycles 11 km south, then turns west and cycles 8 km, then turns north and cycles 6 km, then turns east and cycles 2 km, then turns to his left and cycles 5 km. Where is he now with reference to his starting position?

- Ans** ☒ A. 6 km east
☒ B. 8 km east
☒ C. 8 km west
☒ D. 6 km west

Question ID : 97675518405

Q.3 In the question two statements are given, followed by three conclusions, I, II and III. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1 : Some cars are scooters.
Statement 2 : All scooters are buses.

Conclusion I : Some scooters are cars.
Conclusion II : Some buses are cars.
Conclusion III : All cars are buses.

- Ans**
- ☒ A. Only conclusion I follows
 - ☒ B. All conclusions I, II and III follow
 - ☒ C. Only conclusion I and II follows
 - ☒ D. Only conclusion I and III follows

Question ID : 97675518400

Q.4 Select the pair in which the words share the same relation as that shared by the words in the given two pairs:

Maharashtra: Mumbai :: Gujarat: Gandhinagar

- Ans**
- ☒ A. Himachal Pradesh: Chandigarh
 - ☒ B. Odisha: Panjim
 - ☒ C. Kerala: Thiruvananthapuram
 - ☒ D. Nagaland: Gangtok

Question ID : 97675518393

Q.5 Richa walks 4 km in south-east direction, then she turns 90° to her left and walked for another 0.5 km, she then turns 180°. Which direction is she facing now?

- Ans**
- ☒ A. north-east
 - ☒ B. south-east
 - ☒ C. north-west
 - ☒ D. south-west

Question ID : 97675518406

Q.6 Which two numbers should be interchanged to make the below equation mathematically correct?
 $15 + 48 \div 3 \times 4 - 12 = 39$

- Ans**
- ☒ A. 4, 12
 - ☒ B. 15, 48
 - ☒ C. 3, 4
 - ☒ D. 15, 12

Question ID : 97675518403

Q.7 Find the missing term in the following letter series :
NR, ____, DH, YC

- Ans**
- ☒ A. JL
 - ☒ B. KL
 - ☒ C. IM
 - ☒ D. HM

Question ID : 97675518391

Q.8 If RUSTY is coded as PSQRW, then what is the code for FLARE?

- Ans ☐ A. EKZQD
☐ B. CIXOB
☒ C. DJYPC
☐ D. ELYSC

Question ID : 97675518396

Q.9 In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

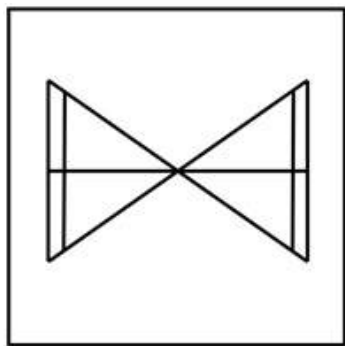
Statement 1 : All doors are windows.
Statement 2 : Some doors are gates.

Conclusion I : Some windows are gates.
Conclusion II : No gates are windows.

- Ans ☐ A. Neither I nor II follows
☒ B. Only conclusion I follows
☐ C. Only conclusion II follows
☐ D. Both I and II follow

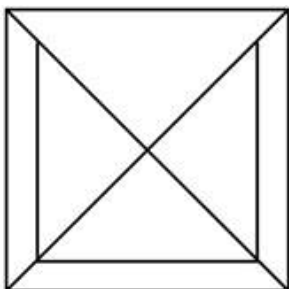
Question ID : 97675518399

Q.10 From the given answer figures, select the one in which the question figure is hidden/embedded.

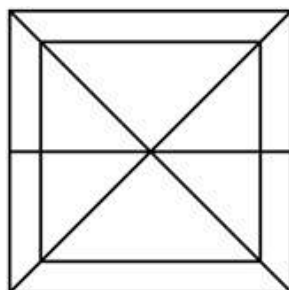


Ans

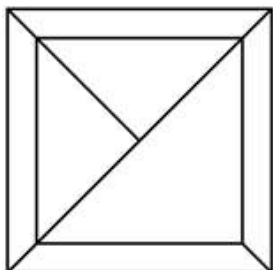
✗ A.



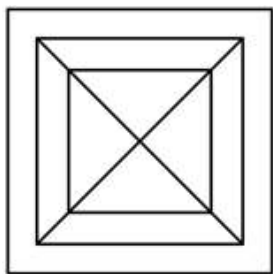
✓ B.



✗ C.

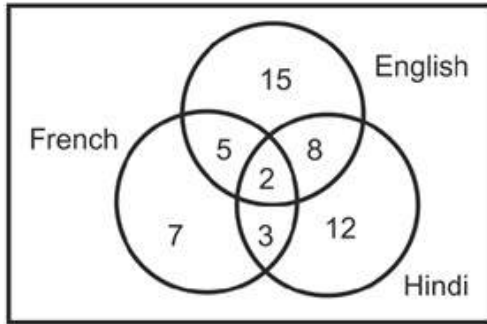


✗ D.



Question ID : 97675518410

Q.11 The given Venn diagram shows the number of students in a class who can speak various languages. How many students can only speak one language?



- Ans**
- ☒ A. 18
 - ☒ B. 36
 - ☒ C. 34
 - ☒ D. 16

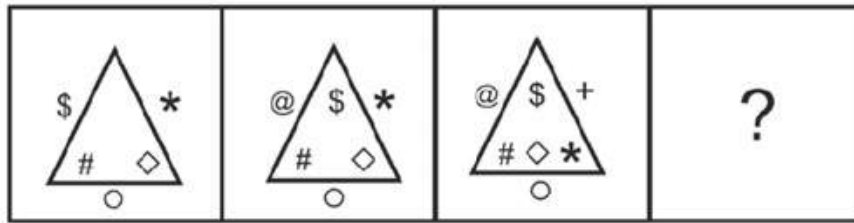
Question ID : 97675518404

Q.12 If LOCK is coded as 14-13-5-9, then what is the code for PEST?

- Ans**
- ☒ A. 18-3-20-18
 - ☒ B. 18-3-21-18
 - ☒ C. 18-4-21-19
 - ☒ D. 17-4-20-19

Question ID : 97675518395

Q.13 Which of the following answer figure completes the series of the question figure?



Ans

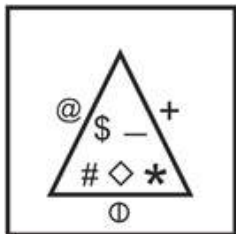
☒ A.



☒ B.



☒ C.



☒ D.



Question ID : 97675518407

Q.14 Select the pair that is related on the same basis to the pair given in the question.

MTA : JQX : GNU :: ?

Ans ☒ A. FNY : NML : SKD

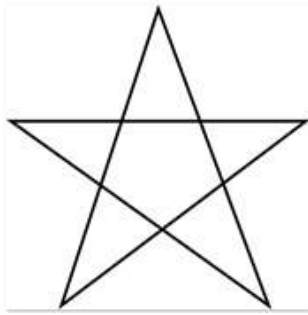
☒ B. EOY : BLV : YIS

☒ C. EMR : DNF : XCB

☒ D. ENY : CKD : SMF

Question ID : 97675518394

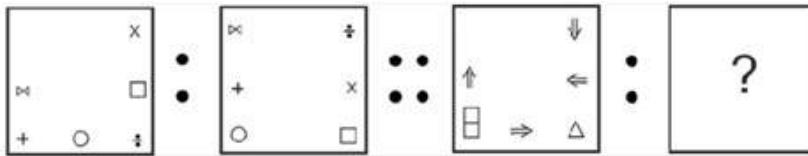
Q.15 How many triangles are there in the question figure?



- Ans
- ☒ A. 6
 - ☒ B. 12
 - ☒ C. 8
 - ☒ D. 10

Question ID : 97675518409

Q.16 Select the option that is related to the third image on the same basis as the second image is related to the first image.



Ans

- ☒ A.
- ☒ B.
- ☒ C.
- ☒ D.

Question ID : 97675518408

Q.17 Arrange the given words in the sequence in which they occur in the dictionary.

1. STALKER
2. STALKED
3. STALLER
4. STAINED
5. STAMPED

Ans ☒ A. 1,2,3,4,5
☒ B. 2,1,4,3,5
☒ C. 4,2,1,3,5
☒ D. 1,2,4,3,5

Question ID : 97675518392

Q.18 Vishal, Tanmay, Zain, Yashi, Rishi and Manish are sitting in a circle facing the centre. Rishi is opposite Manish, Yashi is to the left of Vishal who is opposite Tanmay. Who is to the left of Zain, if Manish is between Zain and Vishal?

Ans ☒ A. Manish
☒ B. Rishi
☒ C. Tanmay
☒ D. Vishal

Question ID : 97675518398

Q.19 If $-2x < -13 + 5$, then which among the following is true?

Ans ☒ A. $x > 3$
☒ B. $x < 6$
☒ C. $x > 4$
☒ D. $x < 8$

Question ID : 97675518402

Q.20 If P \$ Q means P is the husband of Q; P ! Q means P is the mother Q and P * Q means P is the daughter of Q, which of the following shows that Z is brother of W's wife, if Z is male?

Ans ☒ A. $W * X ! Y \$ Z$
☒ B. $W \$ X ! Y * Z$
☒ C. $W * X \$ Y ! Z$
☒ D. $W \$ X * Y ! Z$

Question ID : 97675518397

Section : General Awareness

Q.1 The Rowlatt Act of 1919 was termed as the _____ Act.

Ans ☒ A. Red
☒ B. Black
☒ C. Blue
☒ D. White

Question ID : 97675518421

Q.2 Who won the BBC Indian Sportswoman of the Year 2021?

- Ans ☒ A. Sania Mirza
☒ B. P.V. Sindhu
☒ C. Koneru Humpy
☒ D. Saina Nehwal

Question ID : 97675518429

Q.3 Baglihar Dam, built across Chenab river, is located in _____.

- Ans ☒ A. Jammu and Kashmir
☒ B. Himachal Pradesh
☒ C. Uttarakhand
☒ D. Punjab

Question ID : 97675518420

Q.4 As announced in the Budget 2021, to promote seaweed cultivation, Govt. will establish Multipurpose Seaweed Park in _____ by Indian Government.

- Ans ☒ A. Pondicherry
☒ B. Tamil Nadu
☒ C. Assam
☒ D. West Bengal

Question ID : 97675518414

Q.5 'We Are Displaced' is written by _____.

- Ans ☒ A. Venkaiah Naidu
☒ B. Malala Yousafzai
☒ C. Meenakshi Lekhi
☒ D. Shashi Tharoor

Question ID : 97675518424

Q.6 What is the scientific name of Vitamin D?

- Ans ☒ A. Thiamine
☒ B. Riboflavin
☒ C. Calciferol
☒ D. Tocopherol

Question ID : 97675518415

Q.7 _____ was called the First Truly Swadeshi bank and it was founded in the year 1911.

- Ans ☒ A. Canara Bank
☒ B. Bank of Baroda
☒ C. Central Bank of India
☒ D. Punjab National Bank

Question ID : 97675518413

Q.8 When was the second battle of Panipat fought?

- Ans ☒ A. 1761
- ☒ B. 1556
- ☒ C. 1628
- ☒ D. 1527

Question ID : 97675518422

Q.9 Solheim Cup is associated with which of the following games?

- Ans ☒ A. Golf
- ☒ B. Cricket
- ☒ C. Football
- ☒ D. Hockey

Question ID : 97675518430

Q.10 In 1945, Shimla Conference was proposed by _____ to solve the political deadlock.

- Ans ☒ A. Lord Wavell
- ☒ B. Lord Cornwallis
- ☒ C. Lord Irwin
- ☒ D. Lord Canning

Question ID : 97675518423

Q.11 Powada are usually ballads sung for the heroes of the past. It is associated with which of the following states?

- Ans ☒ A. Tamil Nadu
- ☒ B. Maharashtra
- ☒ C. Madhya Pradesh
- ☒ D. Odisha

Question ID : 97675518411

Q.12 Which among the following constitutional amendments is associated with the formation of Arunachal Pradesh legislative assembly?

- Ans ☒ A. 32nd
- ☒ B. 37th
- ☒ C. 25th
- ☒ D. 28th

Question ID : 97675518428

Q.13 United Nations Children's Fund (UNICEF) was founded in _____.

- Ans ☒ A. 1948
- ☒ B. 1945
- ☒ C. 1946
- ☒ D. 1947

Question ID : 97675518426

Q.14 The concept of Fundamental Duties in the Indian constitution is borrowed from the constitution of _____.

- Ans** ☒ A. Union of Soviet Socialist Republics (USSR)
- ☒ B. France
- ☒ C. Ireland
- ☒ D. Canada

Question ID : 97675518427

Q.15 Snails belongs to _____ animal phylum.

- Ans** ☒ A. Anthropoda
- ☒ B. Echinodermata
- ☒ C. Platyhelminthes
- ☒ D. Mollusca

Question ID : 97675518417

Q.16 Performed by the community of snake charmers, _____ dance involves dancers emulating the movements of snakes.

- Ans** ☒ A. Ghoomar
- ☒ B. Chari
- ☒ C. Kalbelia
- ☒ D. Kachchhi Ghodi

Question ID : 97675518412

Q.17 Black soil is also known as 'Black _____ Soil'.

- Ans** ☒ A. Cotton
- ☒ B. Bajara
- ☒ C. Maize
- ☒ D. Rice

Question ID : 97675518419

Q.18 Which among the following films won the Oscar award 2020 for the Best International Feature Film of the year?

- Ans** ☒ A. Corpus Christi
- ☒ B. Honeyland
- ☒ C. Pain and Glory
- ☒ D. Parasite

Question ID : 97675518425

Q.19 _____ are called the amphibians of the plant kingdom.

- Ans** ☒ A. Gymnosperms
- ☒ B. Angiosperms
- ☒ C. Bryophytes
- ☒ D. Pteridophytes

Question ID : 97675518416

Q.20 Which among the following mountain ranges is the longest in the Lesser Himalayas?

- Ans ☒ A. Mahabharat Lekh
☒ B. Pir Panjal
☒ C. Dhauladhar
☒ D. Nag Tibba

Question ID : 97675518418

Section : Arithmetic Ability

Q.1 P borrowed an amount from Q at a simple interest of 10% p.a. At the end of the year, P paid back Rs 99000 which was 90% of what she owed. How much money did P borrow?

- Ans ☒ A. Rs 100000
☒ B. Rs 11000
☒ C. Rs 111000
☒ D. Rs 90000

Question ID : 97675518437

Q.2 A car can cover 150 km at a certain time. If its speed is decreased by 5km/h, the same car requires one hour extra time to cover the same distance. What is the speed of the car?

- Ans ☒ A. 35km/h
☒ B. 30 km/h
☒ C. 25 km/h
☒ D. 18 km/h

Question ID : 97675518443

Q.3 Saumya donates 8% of her salary as a charity. If she donated Rs 115200 in a year, what was her monthly income?

- Ans ☒ A. Rs 240000
☒ B. Rs 10000
☒ C. Rs 160000
☒ D. Rs 120000

Question ID : 97675518438

Q.4 Which is the largest among $\frac{1}{2}$, $\frac{2}{3}$, $\frac{4}{5}$, 1?

- Ans ☒ A. 1
☒ B. $\frac{4}{5}$
☒ C. $\frac{2}{3}$
☒ D. $\frac{1}{2}$

Question ID : 97675518433

Q.5 A trader cheats his customers by using weight $x\%$ less than the true weight. On selling an item worth Rs 2000 per kilo at the cost price he makes a profit of 25%. What is the value of x ?

- Ans ☒ A. 20%
- ☐ B. 30%
- ☐ C. 25%
- ☐ D. 50%

Question ID : 97675518440

Q.6 A cone of radius 5 cm and height 12 cm was attached to a solid cylinder of the same dimensions. What will be the total cost of painting the entire solid at the rate of Rs 10 per sq cm?

- Ans ☐ A. Rs 660
- ☐ B. Rs 66000
- ☒ C. Rs 6600
- ☐ D. Rs 6000

Question ID : 97675518446

Q.7 A 70 litre mixture has liquids A and B in the ratio 5 : 9. How many litres of liquid A must be added so that the ratio becomes 2 : 3?

- Ans ☐ A. 4 litres
- ☐ B. 10 litres
- ☐ C. 3 litres
- ☒ D. 5 litres

Question ID : 97675518441

Q.8 In a village a well of height 60 m and of diameter 4 m was dug and the earth that was dug out was spread out in the shape of a cone of height 20 m. What will be the radius of the cone so formed?

- Ans ☐ A. 3 m
- ☐ B. 10 m
- ☐ C. 5 m
- ☒ D. 6 m

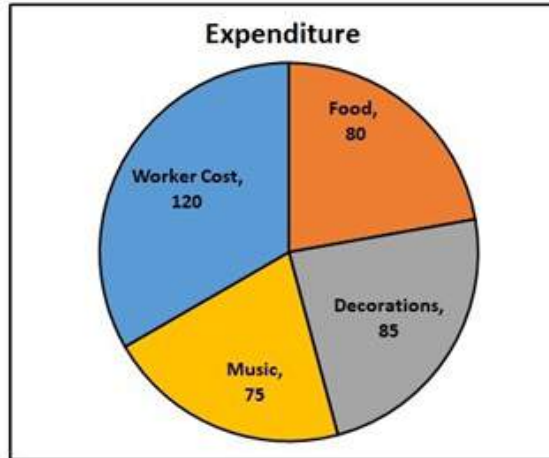
Question ID : 97675518445

Q.9 The average height of a class of 40 students is 100 cm. If height of the teacher is included, the average increases by 1 cm. What is the height of the teacher?

- Ans ☐ A. 140 cm
- ☒ B. 141 cm
- ☐ C. 142 cm
- ☐ D. 143 cm

Question ID : 97675518436

Q.10 The following pie chart shows (in form of degrees) the expenditure incurred during the organisation of food festival.
There were 20 workers employed for the event and each was to be paid Rs 25000 in cash. What was the total expense of the event?



- Ans ☒ A. Rs 1500000
☒ B. Rs 150000
☒ C. Rs 15000
☒ D. Rs 150000

Question ID : 97675518448

Q.11 P and Q were to compete in a 12 km race. P takes 2 hours less than Q to complete the race. Had Q increased his speed by 100%, he would have completed the race in 3 hours. What is the speed of P?

- Ans ☒ A. 3 km/h
☒ B. 4 km/h
☒ C. 2 km/h
☒ D. 1 km/h

Question ID : 97675518442

Q.12 Irina and Isla can complete a piece of work in 20 and 25 days respectively. If they were working together, what percent of the work will be completed in 5 days?

- Ans ☒ A. 36%
☒ B. 45%
☒ C. 30%
☒ D. 40%

Question ID : 97675518444

Q.13 What is the LCM of 24 and 36?

- Ans ☒ A. 44
☒ B. 48
☒ C. 36
☒ D. 72

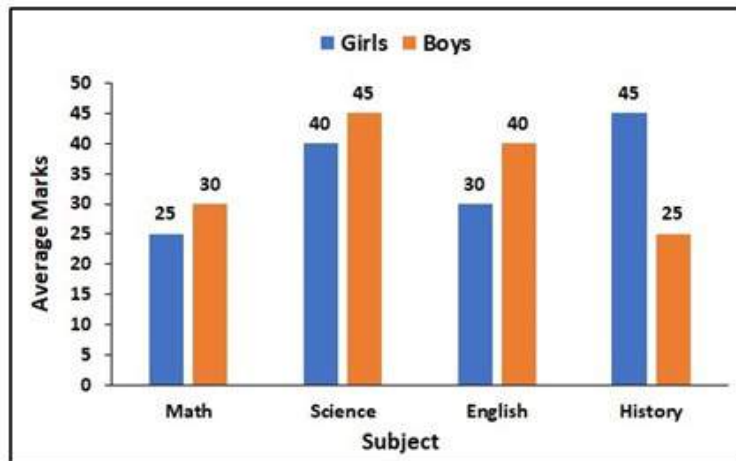
Question ID : 97675518431

Q.14 What must be added to 45680 to make it exactly divisible by 9?

- Ans ☒ A. 0
☒ B. 1
☒ C. 5
☒ D. 4

Question ID : 97675518432

Q.15 The following bar graph gives the average marks distributions of 50 girls and 40 boys in a class.
 What is the average marks of the students in Math? [Round it off to the nearest integer]



- Ans ☒ A. 26
☒ B. 25
☒ C. 27
☒ D. 24

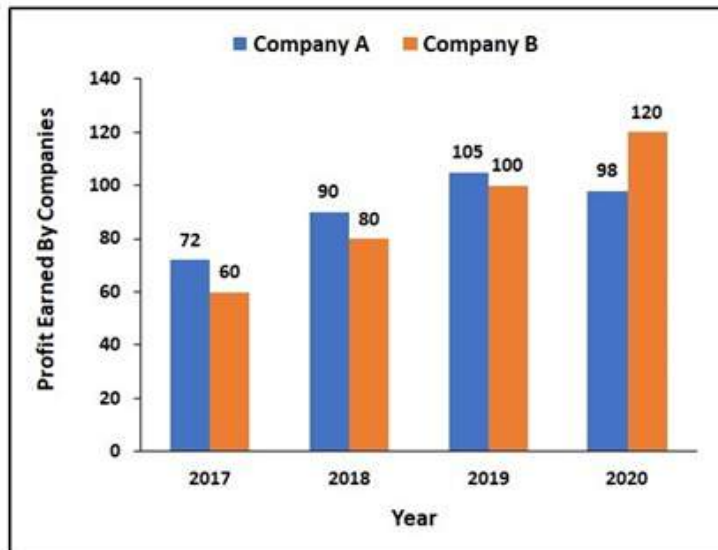
Question ID : 97675518449

Q.16 What is the number which on dividing 80 and 85 leaves a remainder of 3 and 1 respectively?

- Ans ☒ A. 5
☒ B. 6
☒ C. 7
☒ D. 11

Question ID : 97675518434

- Q.17** The following graph gives the details of the profit earned by companies A and B in Rs lakhs over the years.
Which of the following years has the highest difference in profit between A and B?



- Ans ☒ A. 2020
☒ B. 2018
☒ C. 2017
☒ D. 2019

Question ID : 97675518450

- Q.18** The following table gives the production ratio of wheat and jute.
If the total cost of production in 2018 was Rs 18 lakhs, what was the cost of production of wheat for the same year?

YEAR	RATIO	
	WHEAT	JUTE
2017	3	4
2018	2	3
2019	1	2
2020	6	5

- Ans ☒ A. Rs 5 lakhs
☒ B. Rs 7.2 lakhs
☒ C. Rs 6 lakhs
☒ D. Rs 8 lakhs

Question ID : 97675518447

- Q.19** Which of the following is the single discount equivalent to successive discounts of 10% and 20%?

- Ans ☒ A. 15%
☒ B. 28%
☒ C. 32%
☒ D. 30%

Question ID : 97675518439

Q.20 What is the least perfect square that is a multiple of 7, 11 and 12?

- Ans ☐ A. 45000
- ☐ B. 9000
- ☒ C. 853776
- ☐ D. 8100

Question ID : 97675518435

Section : General English

Q.1 Select the most appropriate 'one word ' for the expression given below.

"strange and unpleasant, especially in a silly or slightly frightening way"

- Ans ☐ A. grotto
- ☐ B. grumpy
- ☒ C. grotesque
- ☐ D. grunge

Question ID : 97675518455

Q.2 Select the most appropriate 'one word ' for the expression given below.

"having very little money"

- Ans ☐ A. wholesome
- ☐ B. impeccable
- ☒ C. impecunious
- ☐ D. impeccable

Question ID : 97675518454

Q.3 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

Ecological connectivity can also help species adopt to future / environmental conditions and buffer / changes by bolstering ecological resilience.

- Ans ☒ A. Ecological connectivity can also help species adopt to future
- ☐ B. No Error
- ☐ C. changes by bolstering ecological resilience.
- ☐ D. environmental conditions and buffer

Question ID : 97675518451

Q.4 Fill in the blank with the appropriate word.

_____ may refer to being clear of immediate or residual effects of any mind-altering substances.

- Ans ☐ A. Austerity
- ☐ B. Sorority
- ☒ C. Sobriety
- ☐ D. Atrocity

Question ID : 97675518457

Q.5 Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.

Although Amazon

P: the first streaming service to produce an Oscar-winning movie

Q: screenplay in 2016, it has adopted a more

R: when Manchester by the Sea won best actor for Casey Affleck and best original

S: beat Netflix to become

low-key strategy.

- Ans ☒ A. PSQR
☒ B. PQSR
☒ C. SPQR
☒ D. SPRQ

Question ID : 97675518459

Q.6 Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word.

- Ans ☒ A. GOURMEY
☒ B. GORMETT
☒ C. GOURMET
☒ D. GORMETTE

Question ID : 97675518462

Q.7 Select the word that is closest in meaning (SYNONYM) to the word given below.

CAISSON

- Ans ☒ A. Monarch
☒ B. Case
☒ C. Ration
☒ D. Raisins

Question ID : 97675518460

Q.8 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

It must be compelled that during the first three decades /
of the 19th century, the development of education / took place only through the
traditional institutions.

- Ans ☒ A. of the 19th century, the development of education
☒ B. It must be compelled that during the first three decades
☒ C. took place only through the traditional institutions.
☒ D. No Error

Question ID : 97675518453

Q.9 Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word.

- Ans ☒ A. KALEIDSCOPE
☒ B. KALEIDOSCOPE
☒ C. KALAIIDOSCOPE
☒ D. KALAIIDSCOPE

Question ID : 97675518463

Q.10 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

On 22nd May 2020, India would be launching it's / Marine Turtle Policy aimed at addressing the / pollution caused by micro-plastics.

- Ans ☒ A. pollution caused by micro-plastics.
- ☒ B. On 22nd May 2020, India would be launching it's
- ☒ C. Marine Turtle Policy aimed at addressing the
- ☒ D. No Error

Question ID : 97675518452

Q.11 Select the most appropriate meaning of the given idiom.

"chink in one's armor"

- Ans ☒ A. Vulnerable area
- ☒ B. Most resilient area
- ☒ C. The shiny edge resembling the strengths
- ☒ D. Most guarded area

Question ID : 97675518465

Q.12 Fill in the blank with the appropriate word.

There is no such thing as voluntary attention _____ for more than a few seconds at a time.

- Ans ☒ A. levied
- ☒ B. shrunk
- ☒ C. taken
- ☒ D. sustained

Question ID : 97675518456

Q.13 Select the most appropriate meaning of the given idiom.

"Cook the books"

- Ans ☒ A. Dishonest accounting
- ☒ B. Wasting a valuable resource completing a task
- ☒ C. Using an incorrect tool for
- ☒ D. Not knowing the right thing to do

Question ID : 97675518464

Q.14 Select the word that is the opposite meaning (ANTONYM) to the word given below.

"Mirage"

- Ans ☒ A. Hallucination
- ☒ B. Reality
- ☒ C. Fantasy
- ☒ D. Phantasm

Question ID : 97675518461

Q.15 Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.

Being the

P: it is important to look through samples of essays

Q: to get a clear picture of how to write one

R: and university students,

S: most important writing task for college on your own.

Ans ☒ A. SRPQ

☐ B. RSQP

☐ C. PSQR

☐ D. PSRQ

Question ID : 97675518458

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

Every time we Google something, Facebook someone, Uber somewhere, or even just turn on a light, we create data that businesses collect and use to make decisions about us. In many ways this has improved our lives, yet, we as individuals do not benefit from this wealth of data as much as we could. Moreover, whether it is a bank evaluating our credit worthiness, an insurance company determining our risk level, or a potential employer deciding whether we get a job, it is likely that this data will be used against us rather than for us.

In Data for the People, Andreas Weigend draws on his years as a consultant for commerce, education, healthcare, travel and finance companies to outline how Big Data can work better for all of us. As of today, how much we benefit from Big Data depends on how closely the interests of big companies align with our own. Too often, outdated standards of control and privacy force us into unfair contracts with data companies, but it doesn't have to be this way. Weigend makes a powerful argument that we need to take control of how our data is used to actually make it work for us. Only then can we the people get back more from Big Data than we give it.

The success of data mining solutions tailored for e-commerce applications, as opposed to generic data mining systems, is an example. With more and more information accessible in electronic forms and available on the Web, and with increasingly powerful data mining tools being developed and put into use, there are increasing concerns that data mining may pose a threat to our privacy and data security. However, it is important to note that most of the major data mining applications do not even touch personal data. Prominent examples include applications involving natural resources, the prediction of floods and droughts, meteorology, astronomy, geography, geology, biology, and other scientific and engineering data.

SubQuestion No : 16

Q.16 Data mining is used for :

Ans ☐ A. Shaping diamond mines to give a better yield

☒ B. Making decisions about us

☐ C. To search the correct keyword on search engines on the internet

☐ D. To turn on the light

Question ID : 97675518467

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

Every time we Google something, Facebook someone, Uber somewhere, or even just turn on a light, we create data that businesses collect and use to make decisions about us. In many ways this has improved our lives, yet, we as individuals do not benefit from this wealth of data as much as we could. Moreover, whether it is a bank evaluating our credit worthiness, an insurance company determining our risk level, or a potential employer deciding whether we get a job, it is likely that this data will be used against us rather than for us.

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SubQuestion No : 17

Q.17 How can we utilise big data in a better fashion ?

- Ans**
- ☒ A. Insurance companies should not be allowed to used mined data
 - ☒ B. Everybody should be taught in detail big data and data mining
 - ☒ C. Job employer should have all the data about his employee
 - ☒ D. We should be able to control how our data is used

Question ID : 97675518469

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

Every time we Google something, Facebook someone, Uber somewhere, or even just turn on a light, we create data that businesses collect and use to make decisions about us. In many ways this has improved our lives, yet, we as individuals do not benefit from this wealth of data as much as we could. Moreover, whether it is a bank evaluating our credit worthiness, an insurance company determining our risk level, or a potential employer deciding whether we get a job, it is likely that this data will be used against us rather than for us.

In Data for the People, Andreas Weigend draws on his years as a consultant for commerce, education, healthcare, travel and finance companies to outline how Big Data can work better for all of us. As of today, how much we benefit from Big Data depends on how closely the interests of big companies align with our own. Too often, outdated standards of control and privacy force us into unfair contracts with data companies, but it doesn't have to be this way. Weigend makes a powerful argument that we need to take control of how our data is used to actually make it work for us. Only then can we the people get back more from Big Data than we give it.

The success of data mining solutions tailored for e-commerce applications, as opposed to generic data mining systems, is an example. With more and more information accessible in electronic forms and available on the Web, and with increasingly powerful data mining tools being developed and put into use, there are increasing concerns that data mining may pose a threat to our privacy and data security. However, it is important to note that most of the major data mining applications do not even touch personal data. Prominent examples include applications involving natural resources, the prediction of floods and droughts, meteorology, astronomy, geography, geology, biology, and other scientific and engineering data.

SubQuestion No : 18

Q.18 How has data mining improved our lives ?

- Ans** ☒ **A. Data mined from the user is cheaply sold in the market.**
- ☒ **B. Data mined from the user tells the internet about the needs and wants of the users and give appropriate search results.**
- ☐ **C. Data mining requires more cookies which indeed makes the internet slower**
- ☐ **D. Data mining has barely had any impact on the society**

Question ID : 97675518468

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

Every time we Google something, Facebook someone, Uber somewhere, or even just turn on a light, we create data that businesses collect and use to make decisions about us. In many ways this has improved our lives, yet, we as individuals do not benefit from this wealth of data as much as we could. Moreover, whether it is a bank evaluating our credit worthiness, an insurance company determining our risk level, or a potential employer deciding whether we get a job, it is likely that this data will be used against us rather than for us.

In *Data for the People*, Andreas Weigend draws on his years as a consultant for commerce, education, healthcare, travel and finance companies to outline how Big Data can work better for all of us. As of today, how much we benefit from Big Data depends on how closely the interests of big companies align with our own. Too often, outdated standards of control and privacy force us into unfair contracts with data companies, but it doesn't have to be this way. Weigend makes a powerful argument that we need to take control of how our data is used to actually make it work for us. Only then can we the people get back more from Big Data than we give it.

The success of data mining solutions tailored for e-commerce applications, as opposed to generic data mining systems, is an example. With more and more information accessible in electronic forms and available on the Web, and with increasingly powerful data mining tools being developed and put into use, there are increasing concerns that data mining may pose a threat to our privacy and data security. However, it is important to note that most of the major data mining applications do not even touch personal data. Prominent examples include applications involving natural resources, the prediction of floods and droughts, meteorology, astronomy, geography, geology, biology, and other scientific and engineering data.

SubQuestion No : 19

Q.19 In *Data for the People*, Andreas Weigend draws on his years as a consultant for:

- Ans**
- ☒ A. Commerce, education, manufacturing, travel and finance companies
 - ☒ B. Science, education, healthcare, travel and finance companies
 - ☒ C. Commerce, education, healthcare, travel and finance companies
 - ☒ D. Commerce, education, healthcare, production and finance companies

Question ID : 97675518471

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

Every time we Google something, Facebook someone, Uber somewhere, or even just turn on a light, we create data that businesses collect and use to make decisions about us. In many ways this has improved our lives, yet, we as individuals do not benefit from this wealth of data as much as we could. Moreover, whether it is a bank evaluating our credit worthiness, an insurance company determining our risk level, or a potential employer deciding whether we get a job, it is likely that this data will be used against us rather than for us.

In Data for the People, Andreas Weigend draws on his years as a consultant for commerce, education, healthcare, travel and finance companies to outline how Big Data can work better for all of us. As of today, how much we benefit from Big Data depends on how closely the interests of big companies align with our own. Too often, outdated standards of control and privacy force us into unfair contracts with data companies, but it doesn't have to be this way. Weigend makes a powerful argument that we need to take control of how our data is used to actually make it work for us. Only then can we the people get back more from Big Data than we give it.

The success of data mining solutions tailored for e-commerce applications, as opposed to generic data mining systems, is an example. With more and more information accessible in electronic forms and available on the Web, and with increasingly powerful data mining tools being developed and put into use, there are increasing concerns that data mining may pose a threat to our privacy and data security. However, it is important to note that most of the major data mining applications do not even touch personal data. Prominent examples include applications involving natural resources, the prediction of floods and droughts, meteorology, astronomy, geography, geology, biology, and other scientific and engineering data.

SubQuestion No : 20

Q.20 Why is data mining becoming a reason for concern ?

- Ans ☒ A. major data mining applications do not even touch personal data
- ☒ B. we as individuals do not benefit from this wealth of data as much as we could
- ☒ C. updated standards of control and privacy contracts with data companies
- ☒ D. data mining may pose a threat to our privacy and data security.

Question ID : 97675518470

Section : General Hindi

Q.1 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विराम चिह्न युक्त वाक्य का सही विकल्प हो।

- Ans ☒ A. अब क्या लेकर घर लौटू यह सोचकर वह बहुत ही दुखी हो गया ।
- ☒ B. 'अब क्या लेकर घर लौटू'- यह सोचकर वह बहुत ही दुखी हो गया।
- ☒ C. अब क्या लेकर घर लौटू, यह सोचकर, वह बहुत ही दुखी हो गया।
- ☒ D. अब क्या लेकर घर लौटू यह सोचकर वह बहुत ही दुखी हो गया

Question ID : 97675518483

Q.2 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दी गई लोकोक्ति का सही अर्थ वाला विकल्प है।

अंधे को अंधेरे में बड़े दूर की सूझी -

- Ans ☒ A. मनचाही वस्तु मिल जाना
- ☒ B. मूर्ख को बुद्धिमत्ता की बात सूझना
- ☒ C. बेसहारे का सहारा
- ☒ D. भलाई करने वाले का भला होना

Question ID : 97675518486

Q.3 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए वाक्य के काल का सही विकल्प हो।

सीमा ने पढ़ाई की होगी।

- Ans ☒ A. संदिग्ध भूतकाल
☒ B. सामान्य वर्तमानकाल
☒ C. हेतु हेतुमद भविष्यत् काल
☒ D. हेतु हेतुमद भूतकाल

Question ID : 97675518482

Q.4 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विलोम शब्द का सबसे अच्छा विकल्प है।

पाश्चात्य

- Ans ☒ A. परार्थ
☒ B. संहारक
☒ C. पिछला
☒ D. पौर्वात्य

Question ID : 97675518477

Q.5 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे का सही अर्थ वाला विकल्प है।

अपना उल्लू सीधा करना -

- Ans ☒ A. होश में आना
☒ B. मूर्ख
☒ C. स्वार्थ सिद्ध करना
☒ D. बुद्धिमान व्यक्ति

Question ID : 97675518484

Q.6 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो भाववाचक संज्ञा का सही विकल्प नहीं है।

- Ans ☒ A. उपेक्षा
☒ B. मित्रत्व
☒ C. सुखद
☒ D. कायरता

Question ID : 97675518474

Q.7 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द के लिए बहुवचन शब्द का सबसे अच्छा विकल्प है।
तस्वीर

- Ans ☒ A. तस्वीर
☒ B. तस्वीरो
☒ C. तस्वीरें
☒ D. तस्वीरें

Question ID : 97675518480

Q.8 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द के पर्यायवाची शब्द का सही विकल्प नहीं है।

धनुष

- Ans ☒ A. पामर
☒ B. कोदंड
☒ C. कमान
☒ D. शरासन

Question ID : 97675518476

Q.9 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो शुद्ध शब्द का सही विकल्प है।

- Ans ☒ A. वीसमृति
☒ B. विस्मृति
☒ C. विस्मिती
☒ D. विस्मिति

Question ID : 97675518479

Q.10 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे का सही अर्थ वाला विकल्प है।

अथाह में पड़ना -

- Ans ☒ A. फायदा होना
☒ B. बहुत मिलना
☒ C. मुश्किल में पड़ना
☒ D. उपाय सोचना

Question ID : 97675518485

Q.11 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो देशज शब्द का सही विकल्प हो।

- Ans ☒ A. खुसुर-पुसुर
☒ B. नोटिस
☒ C. गोभी
☒ D. बहादुर

Question ID : 97675518472

Q.12 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विदेशी शब्द का सही विकल्प हो।

- Ans ☒ A. खामोश
☒ B. धक्का
☒ C. घोटाला
☒ D. टोटी

Question ID : 97675518473

Q.13 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो कोष्ठक में दिए गए शब्द के अनुसार उत्तम पुरुष वाचक सर्वनाम का सबसे अच्छा विकल्प है।

- Ans ☒ A. (तुम्हें) कुछ काम करना चाहिए।
☒ B. बारिश में (हमारी) पुस्तकें भीग गई।
☒ C. (तुमसे) कुछ काम है।
☒ D. (उसे) कुछ मत कहना।

Question ID : 97675518481

**Q.14 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो सर्वनाम के भेद का सही विकल्प हो।
जैसा करोगे, वैसा भरोगे।**

- Ans ☒ A. अनिश्चय वाचक
☒ B. सम्बन्ध वाचक
☒ C. निजवाचक
☒ D. उत्तम पुरुष

Question ID : 97675518475

**Q.15 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस सही विकल्प का चयन करें जो रिक्त स्थान के लिए उपयुक्त शब्द का सही विकल्प है।
भारतवासियों को _____ दृष्टि से सोचना चाहिए।**

- Ans ☒ A. संकोच
☒ B. निकृष्ट
☒ C. व्यापक
☒ D. अचेतन

Question ID : 97675518478

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

जीवन में बहुत अंधकार है और अंधकार की ही भाँति अशुभ और अनीति है। कुछ लोग इस अंधकार को स्वीकार कर लेते हैं और तब उनके भीतर जो प्रकाश तक पहुँचने और पाने की आकांक्षा थी, वह क्रमशः क्षीण होती जाती है। मैं अंधकार की इस स्वीकृति को मनुष्य का सबसे बड़ा पाप कहता हूँ। यह मनुष्य का स्वयं अपने प्रति किया गया अपराध है। उसके दूसरों के प्रति किए गए अपराधों का जन्म इस मूल पाप से ही होता है। यह स्मरण रहे कि जो व्यक्ति अपने ही प्रति इस पाप को नहीं करता है, वह किसी के भी प्रति कोई पाप नहीं कर सकता है। किन्तु कुछ लोग अंधकार के स्वीकार से बचने के लिए उसके अस्वीकार में लग जाते हैं। उनका जीवन अंधकार के निषेध का ही सतत उपक्रम बन जाता है।

SubQuestion No : 16

Q.16 इच्छा' शब्द में 'इक' प्रत्यय जोड़ने से बनने वाला नया शब्द कौन-सा है?

- Ans ☒ A. इच्छिक
☒ B. एच्छिक
☒ C. ईच्छिक
☒ D. ऐच्छिक

Question ID : 97675518491

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

जीवन में बहुत अंधकार है और अंधकार की ही भाँति अशुभ और अनीति है। कुछ लोग इस अंधकार को स्वीकार कर लेते हैं और तब उनके भीतर जो प्रकाश तक पहुँचने और पाने की आकांक्षा थी, वह क्रमशः क्षीण होती जाती है। मैं अंधकार की इस स्वीकृति को मनुष्य का सबसे बड़ा पाप कहता हूँ। यह मनुष्य का स्वयं अपने प्रति किया गया अपराध है। उसके दूसरों के प्रति किए गए अपराधों का जन्म इस मूल पाप से ही होता है। यह स्मरण रहे कि जो व्यक्ति अपने ही प्रति इस पाप को नहीं करता है, वह किसी के भी प्रति कोई पाप नहीं कर सकता है। किन्तु कुछ लोग अंधकार के स्वीकार से बचने के लिए उसके अस्वीकार में लग जाते हैं। उनका जीवन अंधकार के निषेध का ही सतत उपक्रम बन जाता है।

SubQuestion No : 17

Q.17 गद्यांश में 'अन्धकार' शब्द किस ओर संकेत करता है?

- Ans ☒ A. बुराईयों और कठिनाईयों की ओर
☒ B. पाप की ओर
☒ C. अपराधों की ओर
☒ D. गरीबी की ओर

Question ID : 97675518488

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

जीवन में बहुत अंधकार है और अंधकार की ही भाँति अशुभ और अनीति है। कुछ लोग इस अंधकार को स्वीकार कर लेते हैं और तब उनके भीतर जो प्रकाश तक पहुँचने और पाने की आकांक्षा थी, वह क्रमशः क्षीण होती जाती है। मैं अंधकार की इस स्वीकृति को मनुष्य का सबसे बड़ा पाप कहता हूँ। यह मनुष्य का स्वयं अपने प्रति किया गया अपराध है। उसके दूसरों के प्रति किए गए अपराधों का जन्म इस मूल पाप से ही होता है। यह स्मरण रहे कि जो व्यक्ति अपने ही प्रति इस पाप को नहीं करता है, वह किसी के भी प्रति कोई पाप नहीं कर सकता है। किन्तु कुछ लोग अंधकार के स्वीकार से बचने के लिए उसके अस्वीकार में लग जाते हैं। उनका जीवन अंधकार के निषेध का ही सतत उपक्रम बन जाता है।

SubQuestion No : 18**Q.18 इस गद्यांश का मुख्य उद्देश्य क्या है?**

- Ans ☒ A. तरह-तरह के लोगों की विशेषताएँ बताना
- ☒ B. पाप और पुण्य की व्याख्या करना
- ☒ C. अन्याय और बुराइयों को दूर करने के लिए प्रेरित करना
- ☒ D. अन्धकार और प्रकाश का पक्ष लेना

Question ID : 97675518490

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

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SubQuestion No : 19**Q.19 लेखक ने किसे सबसे बड़ा पाप कहा है?**

- Ans ☒ A. प्रकाश पाने की क्षीण आकांक्षा
- ☒ B. मनुष्य का अपने प्रति पाप न करना
- ☒ C. अन्धकार को स्वीकार कर लेना
- ☒ D. अंधकार को स्वीकार न करना

Question ID : 97675518489

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

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SubQuestion No : 20**Q.20 इस अनुच्छेद का कोई उपयुक्त शीर्षक-**

- Ans ☒ A. जीवन का अंधकार
- ☒ B. मनुष्य की सोच
- ☒ C. अंधकार का महत्त्व
- ☒ D. पाप और पुण्य

Question ID : 97675518492

Section : Discipline1

Q.1 In a double riveted double covered butt joint, the strength of the joint per pitch length in shearing the rivets P_d and strength of one rivet in single shear P_s are related as;

- Ans
- ☒ A. $P_d = 2.5 P_s$
 - ☒ B. $P_d = 3 P_s$
 - ☒ C. $P_d = 2 P_s$
 - ☒ D. $P_d = 4 P_s$

Question ID : 97675518503

Q.2 The characteristics of air pollution control mechanism is given below.

1. Uses electrical forces to move the particles out of the flowing gas stream onto collector plates.
2. The particles are removed from the plate by rapping and collected in a hopper below the unit.

Identify the control mechanism.

- Ans
- ☒ A. Electrostatic Precipitators
 - ☒ B. Venturi scrubbers
 - ☒ C. Settling chambers
 - ☒ D. Cyclones

Question ID : 97675518510

Q.3 A steel rod of 20 mm diameter is used as a tie member in the roof bracing system and may be subjected to possible reversal of stress due to wind load. What is the maximum permissible length of the member?

- Ans
- ☒ A. 2250 mm
 - ☒ B. 2000 mm
 - ☒ C. 1750 mm
 - ☒ D. 3000 mm

Question ID : 97675518504

Q.4 A body submerged in liquid is in equilibrium when:

- Ans
- ☒ A. Its meta centre is above the centre of buoyancy
 - ☒ B. Its centre of gravity is above the centre of buoyancy
 - ☒ C. Its meta centre is above the centre of gravity
 - ☒ D. Its centre of buoyancy is above the centre gravity

Question ID : 97675518501

Q.5 A reinforced concrete beam is subjected to the following bending moments:
Moment due to Dead load = 60 kNm; Moment due to live load = 90 kNm; Moment due to Seismic load = 30 kNm. The design bending moment for limit state of collapse is:

- Ans
- ☒ A. 225 kNm
 - ☒ B. 216 kNm
 - ☒ C. 180 kNm
 - ☒ D. 135 kNm

Question ID : 97675518493

Q.6 The recommended values of compressive strength (CS) and water absorption (WA) for heavy duty burnt clay bricks of class 400 as per IS 2180 are respectively:

- Ans
- ☐ A. CS = 45 to 50 N/mm²; WA ≤ 20 %
 - ☐ B. CS = 35 to 40 N/mm²; WA ≤ 15 %
 - ☐ C. CS = 30 to 40 N/mm²; WA ≤ 12 %
 - ☒ D. CS = 40 to 45 N/mm²; WA ≤ 10 %

Question ID : 97675518512

Q.7 The maximum spacing of shear reinforcement (as vertical stirrups) measured along the axis of a reinforced concrete beam of width 300 mm and effective depth 500 mm, with a span 6 m is:

- Ans
- ☐ A. 300 mm
 - ☐ B. 375 mm
 - ☒ C. 200 mm
 - ☐ D. 337.5 mm

Question ID : 97675518496

Q.8 A closed cylindrical tank of height 2 m is partly filled with oil of relative density 0.8 to a depth of 1m, is subjected to an air pressure of 20kN/m² above the oil. Determine the total pressure (in kN/m² units) at the bottom of the tank. Take unit weight of water as 10000 N/m²

- Ans
- ☐ A. 12
 - ☐ B. 20
 - ☒ C. 28
 - ☐ D. 20.8

Question ID : 97675518499

Q.9 In plate girders intermediate vertical stiffeners are provided to safeguard:

- Ans
- ☐ A. Increase self-weight of plate girder
 - ☒ B. Web against Shear buckling stress
 - ☐ C. Transfer concentrated loads on girder to the web
 - ☐ D. Web against Bending buckling stress

Question ID : 97675518507

Q.10 In dealing with the problem of air pollution, gravitational settling chambers are generally used to remove large, abrasive particles from :

- Ans
- ☐ A. Stack
 - ☒ B. Gas Streams
 - ☐ C. Stack & Ambient Air
 - ☐ D. Ambient Air

Question ID : 97675518511

Q.11 Identify the air pollutant which is not produced from automobile exhaust.

- Ans ☒ A. Oxides of nitrogen
- ☒ B. Hydrogen Sulphide
- ☒ C. Lead
- ☒ D. Particulate dust

Question ID : 97675518508

Q.12 Water flows with a flow rate of 0.5 cumecs through a pipe AB of length 12 m length having a uniform cross-section. The end B of the pipe is above the end A and the pipe makes an angle of 30° to the horizontal. For a pressure of 20 kN/m² at the end B, the corresponding pressure at the end A (in kN/m² units) is: (Take unit weight of water as 10 kN/m³)

- Ans ☒ A. 120
- ☒ B. 32
- ☒ C. 40
- ☒ D. 80

Question ID : 97675518500

Q.13 The effective length of a steel compression member of length l , restrained against translation and rotation at one end, while the other end is restrained against translation and not restrained against rotation is:

- Ans ☒ A. $0.8 l$
- ☒ B. $1.2 l$
- ☒ C. $0.65 l$
- ☒ D. $2 l$

Question ID : 97675518502

Q.14 Vortex flow of irrotational motion, without any external torque the rate of change of angular momentum must be

- Ans ☒ A. Zero
- ☒ B. Two
- ☒ C. One
- ☒ D. Three

Question ID : 97675518498

Q.15 According to IS 456, under limit state of collapse condition, for assessing the strength of a structure, the values of partial safety factors for steel and concrete are respectively:

- Ans ☒ A. 1.15 and 1.65
- ☒ B. 1.15 and 1.5
- ☒ C. 0.87 and 1.2
- ☒ D. 1.5 and 1.15

Question ID : 97675518495

Q.16 A steel built up column is subjected to an axial force of 2000 kN. The lacing system has to be designed for resisting a transverse shear of:

- Ans
- ☒ A. 40 kN
 - ☒ B. 20 kN
 - ☒ C. 80 kN
 - ☒ D. 50 kN

Question ID : 97675518506

Q.17 Web crippling in I section steel beams occurs at the points where:

- Ans
- ☒ A. Concentrated loads act
 - ☒ B. Bending moment is maximum
 - ☒ C. Deflection is maximum
 - ☒ D. Shear force is maximum

Question ID : 97675518505

Q.18 As per Newton's Law of Viscosity the shear stress acting between two layers of fluid is:

- Ans
- ☒ A. Directly proportional to the distance between them.
 - ☒ B. Inversely proportional to the square of the distance between them
 - ☒ C. Directly proportional to the square of the distance between them.
 - ☒ D. Inversely proportional to the distance between them.

Question ID : 97675518497

Q.19 For 2 way continuous slabs having shorter span (less than 3.5 m), with high strength deformed bars of Fe415 grade, span to overall depth ratio of slab, to satisfy the vertical deflection limits for loading class upto 3 kN/m², is :

- Ans
- ☒ A. 32
 - ☒ B. 40
 - ☒ C. 28
 - ☒ D. 35

Question ID : 97675518494

Q.20 Identify the one which does not belong to the category of Secondary air pollutant?

- Ans
- ☒ A. Oxides of Nitrogen
 - ☒ B. Ozone
 - ☒ C. Photochemical Smog
 - ☒ D. PAN (Peroxy Acetyl Nitrate)

Question ID : 97675518509

Section : Discipline2

Q.1 For a trapezoidal channel of specified side slope, the most economical cross-section for conveying the maximum discharge through the channel section is given by the condition:

- Ans ☒ A. Top width must be equal to one of the sloping side of channel
- ☒ B. Hydraulic radius must be equal to the depth of Flow
- ☒ C. Twice the Top width must be equal to one of the sloping side of channel
- ☒ D. Hydraulic radius must be equal to half the depth of Flow

Question ID : 97675518531

Q.2 The addition of 50 decibel noise with another 50 decibel noise is equivalent to a noise of:

- Ans ☒ A. 53 decibel
- ☒ B. 73 decibel
- ☒ C. 100 decibel
- ☒ D. 83 decibel

Question ID : 97675518532

Q.3 Two statements S1, S2 pertaining to clay soils are given.

S1 : The in situ moisture content for a sensitive clay may be greater than the liquid limit, and the liquidity index is greater than one.

S2 : In many naturally deposited clay soils, the unconfined compressive strength for undisturbed clay is less than the remolded clay, at the same moisture content.

Choose the correct answer.

- Ans ☒ A. Both S1 and S2 are True
- ☒ B. S1 is False and S2 is True.
- ☒ C. S1 is True, and S2 is False
- ☒ D. Both S1 and S2 are False

Question ID : 97675518521

Q.4 A father notes that when his teenage daughter uses the telephone, she takes not less than 6 minutes for a call and some times as much as 1 hour. Calls of duration 15 minutes are most frequent than calls of any other duration. If the daughters call were an activity in a PERT project, estimate the call's expected duration?

- Ans ☒ A. 15 minute
- ☒ B. 16 minute
- ☒ C. 21 minute
- ☒ D. 13.5 minute

Question ID : 97675518517

Q.5 A rigid isolated footing is resting on Clay. The contact pressure at the edges and centre of the footing are respectively:

- Ans ☒ A. Maximum and minimum
- ☒ B. Minimum and maximum
- ☒ C. Zero and maximum
- ☒ D. Maximum and zero

Question ID : 97675518525

Q.6 Determine the shear strength of soil (in kN/m^2 units) in terms of effective stress on a plane within a saturated soil mass at a point where the total stress is 220 kN/m^2 and the pore water pressure is 120 kN/m^2 . The effective stress shear strength parameters for the soil are: cohesion = 16 kN/m^2 and angle of internal friction = 30° . (take $\sin 30^\circ = 0.5$, $\tan 30^\circ = 0.6$; $\cos 30^\circ = 0.9$)

- Ans
- ☒ A. 106
 - ☒ B. 136
 - ☒ C. 66
 - ☒ D. 76

Question ID : 97675518527

Q.7 From the three typical cases C1, C2, C3 choose the combination, where one can expect occurrence of negative skin friction, on piles:
 C1 : An upward drag exists in the pile
 C2 : Develop if the filled material around pile is a loose sand deposit.
 C3 : Lowering of ground water table resulting in consolidation of soil

- Ans
- ☒ A. C1, C2 and C3
 - ☒ B. C1 only
 - ☒ C. C2 and C3 only
 - ☒ D. C1 and C3 only

Question ID : 97675518528

Q.8 In project management, Critical path is identified as the one which connects the events having:

- Ans
- ☒ A. Zero slack time
 - ☒ B. Negative slack time
 - ☒ C. Smallest path
 - ☒ D. Positive Slack time

Question ID : 97675518518

Q.9 According to IS4954:1968, the usual noise level of the industries is in the order of:

- Ans
- ☒ A. 130 to 165 decibels
 - ☒ B. 170 to 210 decibels
 - ☒ C. 105 to 130 decibels
 - ☒ D. 60 to 95 decibels

Question ID : 97675518529

Q.10 Two statements S1, S2, associated with the properties of soil are given:
 S1 : As the compaction effort is increased, the maximum dry unit weight of the compaction is also increased.
 S2 : The co-efficient of consolidation generally increases as the liquid limit of soil increases.

Choose the correct answer:

- Ans
- ☒ A. S1 is True, S2 is False
 - ☒ B. Both S1 and S2 are False.
 - ☒ C. Both S1 and S2 are True.
 - ☒ D. S1 is False, S2 is True

Question ID : 97675518523

Q.11 Among the following construction materials, identify the one having maximum density?

- Ans**
- ☐ A. Wood
 - ☐ B. Cement
 - ☐ C. Granite stone
 - ☒ D. Steel

Question ID : 97675518515

Q.12 Which of the following is an incorrect assumption of Coulomb's Wedge Theory of Earth pressure?

- Ans**
- ☐ A. The back-fill soil is dry, cohesion less, homogeneous, isotropic and ideally plastic material.
 - ☐ B. The slip surface is a plane surface which passes through the heel of the wall.
 - ☐ C. The sliding wedge itself acts as a rigid body and the value of earth pressure is obtained by considering the limiting equilibrium of the sliding wedge as a whole.
 - ☒ D. The resultant earth pressure on the wall is inclined at an angle $(90^\circ + \phi)$ to the normal to the wall, where ϕ is the angle of friction between the wall and backfill.

Question ID : 97675518526

Q.13 Dry rot is decomposition of felled timber caused by the action of:

- Ans**
- ☐ A. Beetles attack
 - ☐ B. Termites attack
 - ☒ C. Fungi attack
 - ☐ D. Bacterial attack

Question ID : 97675518514

Q.14 Identify the property for which Crystallisation Test is conducted on freshly quarried stones.

- Ans**
- ☒ A. Durability
 - ☐ B. Frost resistance
 - ☐ C. Toughness
 - ☐ D. Weather resistance

Question ID : 97675518513

Q.15 Among the properties of soil, identify the one which is not appropriate for determination from disturbed soil samples:

- Ans**
- ☐ A. Plasticity characteristics
 - ☒ B. Shear strength
 - ☐ C. Specific Gravity
 - ☐ D. Grain size distribution

Question ID : 97675518524

Q.16 The water content of a fully saturated soil mass is 100 %. The inference about the void ratio of soil sample is:

- Ans**
- ☒ A. Greater than the specific gravity of soil
 - ☒ B. Equal to the unit weight of soil
 - ☒ C. Equal to the specific gravity of soil
 - ☒ D. Independent of the specific gravity of soil

Question ID : 97675518522

Q.17 In civil engineering project planning, a Dummy activity is a type of operation in the network which requires:

- Ans**
- ☒ A. Time only
 - ☒ B. Both Time and resources
 - ☒ C. Resources only
 - ☒ D. No Time and Resources

Question ID : 97675518516

Q.18 Soils carried by water and have been deposited from suspension in still water of lakes are known as:

- Ans**
- ☒ A. Aeolian deposits
 - ☒ B. Lacustrine deposits
 - ☒ C. Loess deposits
 - ☒ D. Alluvial deposits

Question ID : 97675518519

Q.19 What will be the resultant decibel level when there are 4 sources making noise of equal levels?

- Ans**
- ☒ A. Decibel levels will remain the same
 - ☒ B. Decibel level will increase by 4 decibels
 - ☒ C. Decibel level will increase by 6 decibels
 - ☒ D. Decibel level will increase by 8 decibels

Question ID : 97675518530

Q.20 A partly saturated sample from a borrow pit has a natural moisture content of 20 % and bulk unit weight of 24 kN/m^3 . Estimate the unit weight of dry soil sample (in kN/m^3 units)

- Ans**
- ☒ A. 20
 - ☒ B. 24
 - ☒ C. 18
 - ☒ D. 15

Question ID : 97675518520

Section : Discipline3

Q.1 In the Plane Table Surveying, Bessel's Graphical method is adopted for the solution of:

- Ans**
- ☐ A. Two-point problem
 - ☐ B. Traversing problem
 - ☒ C. Three-point problem
 - ☐ D. Graphic triangulation

Question ID : 97675518549

Q.2 A triangular Direct hydrograph due to a 6 hour storm in a catchment has a time base of 100 hour and a peak flow 40 m³/s. The catchment area is 360 km². The 6-hour unit hydrograph of this catchment will have a peak flow (m³/s) of:

- Ans**
- ☐ A. 30
 - ☒ B. 20
 - ☐ C. 6.67
 - ☐ D. 10

Question ID : 97675518533

Q.3 Three pipes having diameter d_1 , d_2 and d_3 ($d_1 > d_2 > d_3$) are connected in series. Identify the correct option pertaining to the flow through the pipes.

- Ans**
- ☐ A. Reynolds number of flow for each pipe is the same.
 - ☒ B. Discharge through each pipe is the same.
 - ☐ C. Head loss in each pipe is the same
 - ☐ D. Total discharge is the sum of the discharge in the individual pipes

Question ID : 97675518537

Q.4 If the moisture content in a soil is at the field capacity of soil, the ratio of Actual Evapotranspiration (AET) to the Potential Evapotranspiration (PET) is:

- Ans**
- ☐ A. Less than 1
 - ☐ B. Equal to 0.5
 - ☒ C. Equal to 1
 - ☐ D. More than 1

Question ID : 97675518543

Q.5 The Hydrologic flood routing methods employ the equations of:

- Ans**
- ☐ A. Energy Equation only
 - ☐ B. Both momentum and continuity equations
 - ☒ C. Equation of Continuity only
 - ☐ D. Equation of motion only

Question ID : 97675518534

Q.6 Agonic line is the line made up of points having:

- Ans
- ☐ A. Negative declination
 - ☒ B. Zero declination
 - ☐ C. Positive declination
 - ☐ D. Same declination

Question ID : 97675518546

Q.7 A line of levels has been run from a bench mark of elevation $+35.32$ m and ends at another bench mark of elevation $+35.35$ m. The sum of back sights is 16.55 m and the sum of foresights is 16.58 m respectively. The closing error in the survey work is:

- Ans
- ☐ A. -0.03 m
 - ☐ B. -0.06 m
 - ☐ C. 0.03 m
 - ☒ D. 0.06 m

Question ID : 97675518550

Q.8 In defining Froude number applicable to channels of any shape, the length parameter used is:

- Ans
- ☒ A. Ratio of wetted area to top width
 - ☐ B. Wetted perimeter
 - ☐ C. Hydraulic radius
 - ☐ D. Depth of flow

Question ID : 97675518538

Q.9 Identify a Rabi Crop cultivated in India.

- Ans
- ☒ A. Barley
 - ☐ B. Groundnut
 - ☐ C. Jowar
 - ☐ D. Rice

Question ID : 97675518542

Q.10 While designing of summit curve on highways the important factor to be considered is:

- Ans
- ☐ A. Impact factor
 - ☐ B. Comfort to passengers
 - ☒ C. Sight distance
 - ☐ D. Superelevation

Question ID : 97675518552

Q.11 The equipment used for the measurement of Evapotranspiration for a given vegetation type in the fields is:

- Ans**
- ☒ A. Lysimeter
 - ☐ B. Colorado sunken Evaporation pan
 - ☐ C. Pan-evaporimeter
 - ☐ D. Double ring Infiltrometer

Question ID : 97675518535

Q.12 Which one is not the characteristics of the critical state of flow through an open channel?

- Ans**
- ☒ A. The discharge is minimum for a given specific Energy
 - ☐ B. The specific energy is minimum for a given discharge.
 - ☐ C. The specific force is minimum for a given discharge.
 - ☐ D. Froude number is equal to Unity

Question ID : 97675518540

Q.13 Among the sources of errors in theodolite survey listed, one of them is not considered as a natural error. Identify it:

- Ans**
- ☐ A. Wind producing vibrations
 - ☐ B. Unequal atmospheric refraction due to high temperature
 - ☒ C. Inaccurate centering
 - ☐ D. Unequal settlement of tripod

Question ID : 97675518548

Q.14 Which is not suitable for setting out right angles to another line

- Ans**
- ☒ A. Telescopic Alidade
 - ☐ B. Prism square
 - ☐ C. Open Cross staff
 - ☐ D. Sextant

Question ID : 97675518545

Q.15 In hydraulic modelling of flow pattern around a body submerged in a fluid the non-dimensional number which has to be kept the same in the model and prototype is:

- Ans**
- ☐ A. Weber number
 - ☐ B. Strouhal number
 - ☒ C. Reynold's number
 - ☐ D. Froude number

Question ID : 97675518541

Q.16 In which year 'Motor Vehicle Act' was adopted in India

- Ans
- ☐ A. 1947
 - ☐ B. 1940
 - ☐ C. 1938
 - ☒ D. 1939

Question ID : 97675518551

Q.17 An irrigation canal that is aligned nearly parallel to the contours of the area, can irrigate area only on one side of canal, and generally constructed as a single bank canal is known as:

- Ans
- ☐ A. Detour canal
 - ☐ B. Ridge Canal
 - ☐ C. Side slope canal
 - ☒ D. Contour Canal

Question ID : 97675518544

Q.18 A streamlined body is one for which:

- Ans ☒ A.
- The separation point occurs on the far downstream part of the body
- ☐ B. The thickness of the body is minimum
 - ☐ C. The skin friction is zero
 - ☐ D. The skin friction is minimum

Question ID : 97675518539

Q.19 The graphical plot of the intensity of rainfall against the time interval for a basin is known as:

- Ans
- ☐ A. Hydrograph
 - ☒ B. Hyetograph
 - ☐ C. Mass curve of rainfall
 - ☐ D. Unit Hydrograph

Question ID : 97675518536

Q.20 Contour lines of different elevations can unite to form one line in case of:

- Ans
- ☐ A. A cave
 - ☐ B. An overhanging cliff
 - ☐ C. A hill
 - ☒ D. Vertical cliff

Question ID : 97675518547

Section : Discipline4

Q.1 The sum of all the forces acting on a body is Zero. The inference that can be deduced from it is :

Ans ☒ A.

The body may be in equilibrium provided the forces are parallel.

☒ B.

The body may be in equilibrium provided the forces are concurrent.

☒ C. The body cannot be in equilibrium.

☒ D. The body must be in equilibrium.

Question ID : 97675518568

Q.2 A solid cylinder, solid sphere, and a hoop, each of radius R and mass m are released simultaneously from rest on an incline at the same elevation. The order in which they will pass through a common mark at the same level is :

Ans ☒ A. Cylinder, hoop, sphere

☒ B. Hoop, Cylinder, Sphere

☒ C. Sphere, Cylinder, Hoop

☒ D. Cylinder, Sphere, Hoop

Question ID : 97675518572

Q.3 Under which part of the Planning Survey of Highways, "Road Life Studies" is included.

Ans ☒ A. Financial Studies

☒ B. Economic Studies

☒ C. Traffic use Studies

☒ D. Engineering Studies

Question ID : 97675518553

Q.4 Name the test on Aggregate, to determine the resistance of aggregates to weathering action:

Ans ☒ A. Abrasion Test

☒ B. Bitumen adhesion Test

☒ C. Soundness Test

☒ D. Crushing Test

Question ID : 97675518562

Q.5 Identify the factor which is not taken into account for computing the breaking distance in highways.

Ans ☒ A. Reaction time of Driver

☒ B. Gradient

☒ C. Speed of Vehicle

☒ D. Co-efficient of longitudinal friction

Question ID : 97675518554

Q.6 Identify the test that is not commonly adopted for evaluating the strength properties of subgrade soil in pavements:

- Ans**
- ☒ A. California bearing Test (CBR)
 - ☒ B. Plate bearing Test
 - ☒ C. Dynamic Cone penetration (DCP) Test
 - ☒ D. Pressuremeter test (PMT)

Question ID : 97675518563

Q.7 The following 2 statements (S1 and S2) pertain to design of flexible pavements:

S1 : Most flexible pavement design procedures are based on Benkelman beam deflection measurements

S2 : Elastic deflection is a practical non-destructive measure of pavement stiffness which relates well to fatigue failure.

- Ans**
- ☒ A. S1 is False and S2 is True
 - ☒ B. Both S1 and S2 are True and S2 is the correct explanation of S1.
 - ☒ C. Both S1 and S2 are True and S2 is not a correct explanation of S1
 - ☒ D. S1 is true and S2 is False

Question ID : 97675518567

Q.8 Which of the following is not the purpose of "Origin & Destination Studies" in Traffic Engineering?

- Ans**
- ☒ A. To judge the adequacy of existing routes and to plan new network of roads.
 - ☒ B. To establish preferential routes for various categories of vehicle including bypass.
 - ☒ C. To locate terminals and to plan terminal facilities.
 - ☒ D. To study the causes of accidents and to suggest corrective treatment at potential locations.

Question ID : 97675518556

Q.9 The maximum super elevation to be provided on a road curve is 1 in 10. If the rate of change of super elevation is specified as 1 in 100 and the road width is 10 m, the minimum length of transition to be provided on either end of circular curve is:

- Ans**
- ☒ A. 50 m
 - ☒ B. 75 m
 - ☒ C. 125 m
 - ☒ D. 100 m

Question ID : 97675518555

Q.10 Which of the following is not correctly matched?

- Ans**
- ☒ A. Bituminous mix design : Marshall method
 - ☒ B. Float test : Water Content in bitumen
 - ☒ C. Penetration test : Hardness or softness of bitumen
 - ☒ D. Los Angeles Test : Hardness of aggregates

Question ID : 97675518564

Q.11 A body is acted upon by a force system. It can in general be brought to equilibrium by the application of :

- Ans ☐ A. A force acting on a suitable point on the body.
- ☐ B. A wrench acting anywhere on the body.
- ☒ C. A force acting along a suitable line and a moment along the direction of the force
- ☐ D. A force acting anywhere along a suitable line

Question ID : 97675518569

Q.12 What is the height of free fall of hammer in the Aggregate Impact Test?

- Ans ☐ A. 30 cm
- ☒ B. 38 cm
- ☐ C. 35 cm
- ☐ D. 45 cm

Question ID : 97675518561

Q.13 According to Indian Road Congress (IRC), for the design of traffic control signals, the pedestrian green time required for the major and minor roads are calculated based on walking speed of:

- Ans ☐ A. 0.5 m/s
- ☐ B. 1.5 m/s
- ☒ C. 1.2 m/s
- ☐ D. 1.0 m/s

Question ID : 97675518559

Q.14 Two statements S1 and S2 pertaining to D'Alembert Principle in Mechanics is given.

S1 : It states that the net external Force F actually acting on the body and the inertia force Fi together keep the body in a state of fictitious dynamic equilibrium.

S2 : This is a hypothetical principle and is independent of Newton's law of motion.

Choose the correct answer

- Ans ☐ A. Both S1 and S2 are True
- ☐ B. Both S1 and S2 are False.
- ☒ C. S1 is True and S2 is False.
- ☐ D. S1 is False and S2 is True.

Question ID : 97675518571

Q.15 As per the IRC guidelines for design of flexible pavements by CBR method, the load parameter required is:

- Ans ☐ A. Number of vehicles (all types) during the design life
- ☒ B. Cumulative standard axles in msa
- ☐ C. Equivalent single axle load
- ☐ D. Number of commercial vehicles per day

Question ID : 97675518560

Q.16 Which type of traffic survey details are plotted by desire lines ?

- Ans
- ☐ A. Speed and delay
 - ☐ B. Classified volume
 - ☒ C. Origin and destination
 - ☐ D. Accidents

Question ID : 97675518558

Q.17 Given the following parameters for a concrete pavement:

r – radius of load distribution, P – wheel load, h – thickness of slab, μ – Poisson's ratio of concrete, E – modulus of elasticity of concrete, K – modulus of subgrade reaction.

The combination of parameters required for estimating the Radius of relative stiffness of concrete slab is :

- Ans
- ☐ A. P, h, K, μ
 - ☒ B. E, h, K, μ
 - ☐ C. h, K, μ, r
 - ☐ D. E, K, μ, r

Question ID : 97675518565

Q.18 Identify the traffic signs which do not come under the category of a Regulatory Sign.

- Ans
- ☐ A. Prohibitory signs
 - ☐ B. Stop and give-way signs
 - ☐ C. No Parking & No Stopping Signs
 - ☒ D. Warning signs

Question ID : 97675518557

Q.19 The point of contraflexure in a loaded beam subjected to bending action is one where :

- Ans
- ☐ A. The shear force changes sign
 - ☐ B. The bending moment is maximum
 - ☐ C. The shear force is maximum
 - ☒ D. The bending moment changes sign

Question ID : 97675518570

Q.20 The recommended maximum spacing of contraction joints in 15 cm thick reinforced slabs of rigid pavements, for highways as per IRC 15 : 1981 is

- Ans
- ☒ A. 13 m
 - ☐ B. 12 m
 - ☐ C. 10 m
 - ☐ D. 14 m

Question ID : 97675518566

Q.1 A water sample contains 10^{-9} ml/litre of OH^- ions at 25°C . The pH of this sample is :

- Ans**
- ☒ A. 12
 - ☒ B. 2
 - ☒ C. 9
 - ☒ D. 5

Question ID : 97675518582

Q.2 In which method of forecasting population, the percentage increase in population from decade to decade is assumed to be constant.

- Ans**
- ☒ A. Geometrical increase method
 - ☒ B. Incremental increase method
 - ☒ C. Logistic Curve method
 - ☒ D. Arithmetical increase method

Question ID : 97675518579

Q.3 In sewerage system drop manholes are provided when there is a:

- Ans**
- ☒ A. Sloping ground, with drop more than 0.6 m is required to control the gradient.
 - ☒ B. Change in alignment of sewer line
 - ☒ C. Change in size of sewers
 - ☒ D. Change from gravity system to pressure system

Question ID : 97675518583

Q.4 The major constituent gases produced from a land fill site are:

- Ans**
- ☒ A. Hydrogen sulphide and oxygen
 - ☒ B. Carbon monoxide and nitrogen
 - ☒ C. Ammonia and Hydrogen
 - ☒ D. Carbon dioxide and methane

Question ID : 97675518591

Q.5 The anaerobic fermentation of biodegradable matter in an enclosed space under controlled conditions of temperature, moisture, pH, etc. The waste mass undergoes decomposition due to microbial activity, thereby generating biogas comprising of methane and carbon dioxide, and also digested sludge. Which of the following options is described here?

- Ans**
- ☒ A. Biomethanation
 - ☒ B. Incineration
 - ☒ C. Plasma Pyrolysis Vitrification
 - ☒ D. Autoclaving

Question ID : 97675518592

Q.6 Which is the least preferred strategy of Integrated Solid waste Management according to their Environmental benefits?

- Ans**
- ☒ A. Land fills
 - ☐ B. Composting
 - ☐ C. Waste to Energy
 - ☐ D. Recycling

Question ID : 97675518590

Q.7 A bar of length L and cross-section area A is subjected to a gradually applied load P. Another bar of the same material, having the same length L, and cross section area 2A is also subjected to a gradually applied load Q. If the strain energy stored in the two bars are the same, then the ratio $\frac{P}{Q}$ is:

- Ans**
- ☒ A. $\frac{1}{\sqrt{2}}$
 - ☐ B. $\sqrt{2}$
 - ☐ C. $\frac{1}{2}$
 - ☐ D. 2

Question ID : 97675518574

Q.8 The following statements S1 and S2 pertain to water treatment scheme.

S1 : The efficiency of sedimentation process, depends on the difference of specific gravities of the particle and the medium.
 S2 : Disinfection being the last process in the treatment scheme, is not affected by poor coagulation and flocculation.
 Choose the correct answer.

- Ans**
- ☒ A. S1 is True and S2 is False
 - ☐ B. S1 is False and S2 is True
 - ☐ C. Both S1 and S2 are False
 - ☐ D. Both S1 and S2 are True

Question ID : 97675518581

Q.9 The features of anaerobic digestion of sewage are given. Identify the incorrect one.

- Ans**
- ☐ A. Reduces odour/ flies problem.
 - ☐ B. Reduction in volume of sludge and improving the dewatering characteristics of the sludge, makes it easy to dry.
 - ☒ C. High operating cost,
 - ☐ D. Reduce production of landfill greenhouse gases when otherwise these untreated sludge is disposed on landfill

Question ID : 97675518584

Q.10 The result of analysis of raw water sample from a source are given below.
 Turbidity : 3.5 NTU
 pH : 7.4
 Fluoride : 1.0 mg/l
 Total Hardness : 350 mg/l
 Iron : 2.7 mg/l
 MPN : 60 per 100 ml
 For the above data, treatment has to be provided to the water for the removal of :

- Ans**
- ☒ A. Turbidity, fluoride, and hardness
 - ☒ B. Hardness, Iron, followed by disinfection
 - ☒ C. Turbidity, fluoride, hardness, Iron, followed by disinfection
 - ☒ D. Iron followed by disinfection

Question ID : 97675518580

Q.11 The beneficial association between algae and bacteria known as Symbiosis, has been made use for the treatment of waste water in the following unit:

- Ans**
- ☒ A. Activated Sludge tank
 - ☒ B. Oxidation pond
 - ☒ C. Imhoff tank
 - ☒ D. Anaerobic digester

Question ID : 97675518585

Q.12 Which of the following methods is not used for the disposal of hospital waste?

- Ans**
- ☒ A. Electropyrolysis
 - ☒ B. Landfilling
 - ☒ C. Incineration
 - ☒ D. Thermal treatment

Question ID : 97675518589

Q.13 A thin spherical shell is subjected to an internal pressure p . What is the ratio of volumetric strain to circumferential strain in shell ?

- Ans**
- ☒ A. 0.5
 - ☒ B. 2
 - ☒ C. 1
 - ☒ D. 3

Question ID : 97675518573

Q.14 The major and minor principal stresses at a point on a body are 10 MPa and -10 MPa respectively. Determine the maximum shear stress at the point (in MPa units)

- Ans**
- ☒ A. 20
 - ☒ B. Zero
 - ☒ C. 5
 - ☒ D. 10

Question ID : 97675518576

Q.15 The analysis of a Kinematically Indeterminate Structure by Stiffness Matrix method is also known as :

- Ans
- ☒ A. Force method
 - ☒ B. Displacement method
 - ☒ C. Flexibility matrix method
 - ☒ D. Compatibility Method

Question ID : 97675518578

Q.16 What is the ILD (Influence Line Diagram) of a three hinged Arch of Span 'L' and rise 'h' due to horizontal thrust 'H'

- Ans
- ☒ A. Triangle with its maximum ordinate at center equals to $\frac{L}{24h}$
 - ☒ B. Square with its ordinate equals to $\frac{L}{24h}$
 - ☒ C. Square with its ordinate equals to $\frac{L}{2h}$
 - ☒ D. Triangle with its maximum ordinate at center equals to $\frac{L}{4h}$

Question ID : 97675518577

Q.17 What is the Mass Moment of Inertia of a Metallic Circular Plate of uniform thickness 't', radius 'R' and mass density 'ρ', about an axis passing through its planar surface.

- Ans
- ☒ A. $0.25 t \rho \pi R^4$
 - ☒ B. $0.5 t \rho \pi R^2$
 - ☒ C. $0.25 t \rho \pi R^3$
 - ☒ D. $0.25 t \rho \pi R^2$

Question ID : 97675518575

Q.18 The following statements S1 and S2 pertain to two procedures for disposal of Municipal solid Waste.

S1 : Gasification is the conversion of waste and biomass into liquid and gaseous fuel as well as solid residues and char at 500°C-1000°C in absence of air.

S2 : Pyrolysis is a partial combustion of organic or fossil based carbonaceous material, plastics, etc. into carbon monoxide, hydrogen, carbon dioxide, and methane, at a temperature of 650°C, with controlled amount of air/oxygen.

Identify the correct answer.

- Ans
- ☒ A. S1 is False and S2 is True
 - ☒ B. Both S1 and S2 are False
 - ☒ C. Both S1 and S2 are True
 - ☒ D. S1 is True and S2 is False

Question ID : 97675518588

Q.19 Which of the following Rules / policies / Schemes is not Initiated by the Govt. of India in the year 2008

- Ans
- ☒ A. Plastic waste Rules
 - ☒ B. National Urban sanitation policy
 - ☒ C. National Mission on Sustainable Habitat
 - ☒ D. Hazardous waste Rules

Question ID : 97675518586

Q.20 In the aerobic composting process, when the C/N (Carbon to Nitrogen) ratio of Municipal solid Waste is less than 25 : 1, identify the material which is added to it to increase the C/N value, to avoid the production of foul smell.

- Ans**
- ☐ A. Slaughter House Waste
 - ☐ B. Non-edible oil cakes
 - ☐ C. Green biomass
 - ☒ D. Saw dust

Question ID : 97675518587



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T Test Date	27/09/2021
Test Time	12:30 PM - 2:30 PM
Subject	Assistant Engineer (Civil)

Section : General Ability

Q.1 Which two signs should be interchanged to make the below equation mathematically correct?

$$16 \times 2 + 5 - 18 \div 3 = 33$$

- Ans ☒ A. $\times, +$
☒ B. $\times, -$
☒ C. $+, -$
☒ D. $+, +$

Question ID : 97675517998

Q.2 Complete the following number series:

128, 115, 103, 92, _____

- Ans ☒ A. 82
☒ B. 72
☒ C. 75
☒ D. 68

Question ID : 97675517999

Q.3 If P \$ Q means P is the brother of Q; P ! Q means P is the mother of Q and P * Q means P is the son of Q, which of the following shows that W is brother of Z?

- Ans ☒ A. $W * X \$ Y ! Z$
☒ B. $W * X ! Y \$ Z$
☒ C. $W ! X * Y \$ Z$
☒ D. $W ! X \$ Y * Z$

Question ID : 97675517993

Q.4 Naina, Preksha, Yash, Uma, Esha and Gauri are sitting around a round table facing the centre. Preksha is between Uma and Yash, Gauri is between Naina and Yash and Gauri is to the left of Naina. Who is to the left of Esha?

- Ans ☒ A. Naina
☒ B. Gauri
☒ C. Uma
☒ D. Esha

Question ID : 97675517995

Q.5 Shubham jogs 3 km west, he then turns 45° to his left and jogs 2 km, he then turns 90° to his left and jogs 3 km, he then turns 180° to his right. Which direction is he facing now?

- Ans ☒ A. north-east
☒ B. north-west
☒ C. south-west
☒ D. south-east

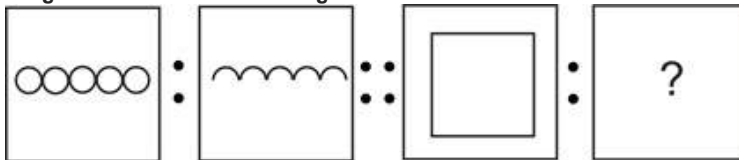
Question ID : 97675518002

Q.6 Aman walks 0.4 km east, then turns south and walks 0.3 km, then turns east and walks 0.7 km, then turns south and walks 0.5 km, and turns to its right and walks 0.11 km. Where is he now with reference to his starting position?

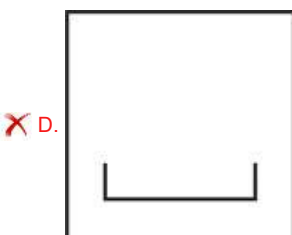
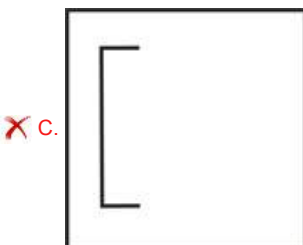
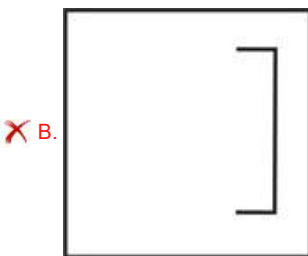
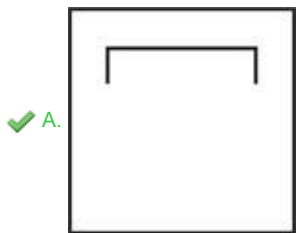
- Ans ☒ A. 0.8 km south
☒ B. 0.2 km north
☒ C. 0.2 km south
☒ D. 0.8 km north

Question ID : 97675518001

Q.7 Select the option that is related to the third image on the same basis as the second image is related to the first image.



Ans



Question ID : 97675518004

Q.8 If JACKAL is coded as 11-2-4-12-2-13, then what is the code for TIGER?

Ans ☒ A. 21-10-8-6-19

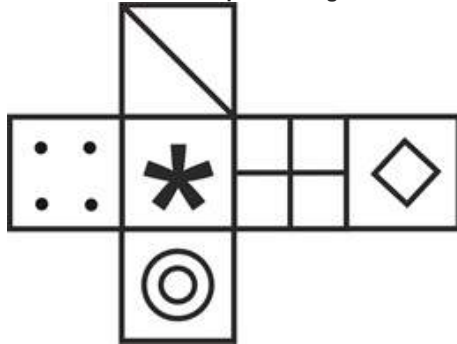
☐ B. 19-12-10-8-17

☐ C. 20-9-7-5-18

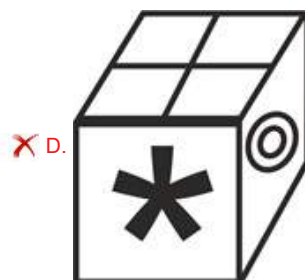
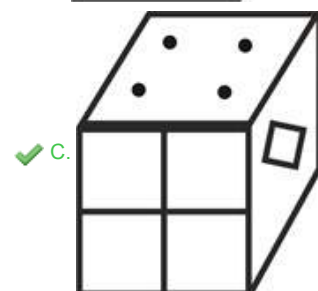
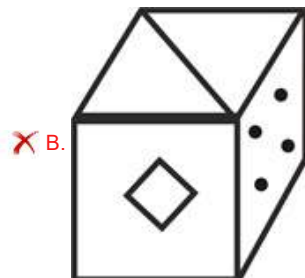
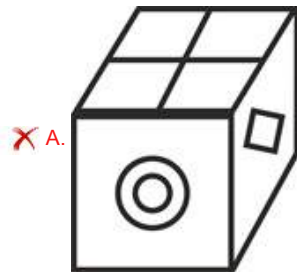
☐ D. 22-11-9-7-20

Question ID : 97675517991

Q.9 Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?

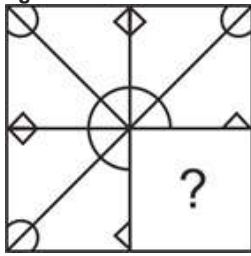


Ans



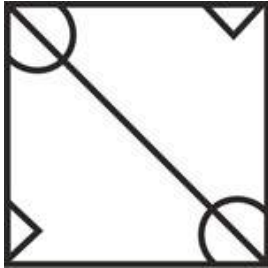
Question ID : 97675518005

Q.10 Which of the following answer figure patterns can be combined to make the question figure?

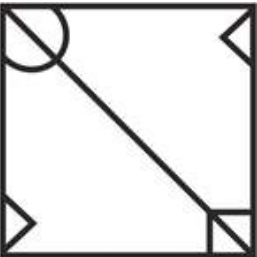


Ans

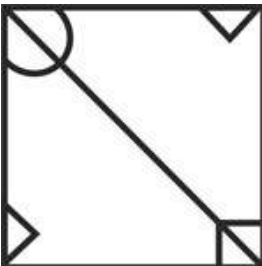
✓ A.



✗ B.



✗ C.



✗ D.



Question ID : 97675518006

Q.11 In a certain code language
963 means flowers are beautiful
438 means beautiful and expensive
14 means expensive bag
What is the code for 'and'?

Ans ✗ A. 4

✓ B. 8

✗ C. 3

✗ D. 9

Question ID : 97675517992

Q.12 Find the missing term in the following series :
6Q9, ____, 20Y23, 27C30

- Ans ☒ A. 13U16
☐ B. 12S15
☐ C. 13S17
☐ D. 10T12

Question ID : 97675517987

Q.13 If Seema is taller than Yash; Aisha is taller than Seema; and Yash is taller than Wasim, who is the tallest among all?

- Ans ☐ A. Seema
☐ B. Yash
☒ C. Aisha
☐ D. Wasim

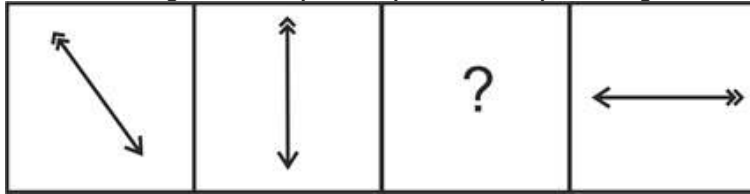
Question ID : 97675517994

Q.14 Select the pair that is related on the same basis to the pair given in the question.
Needle : Tailor :: ?

- Ans ☐ A. Wood : Carpenter
☐ B. Leather : Cobbler
☐ C. School : Teacher
☒ D. Saw : Carpenter

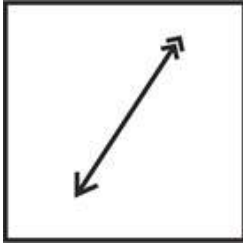
Question ID : 97675517990

Q.15 Which answer figure will complete the pattern in the question figure?



Ans

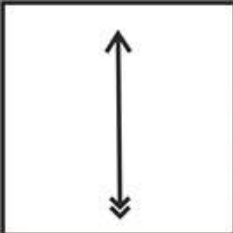
✓ A.



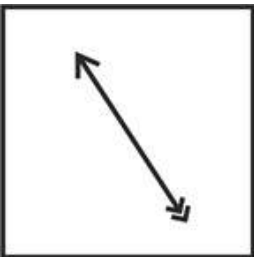
✗ B.



✗ C.



✗ D.



Question ID : 97675518003

Q.16 Find the wrong term in the following series :
MJ, QN, US, YV, CZ

Ans ✓ A. US

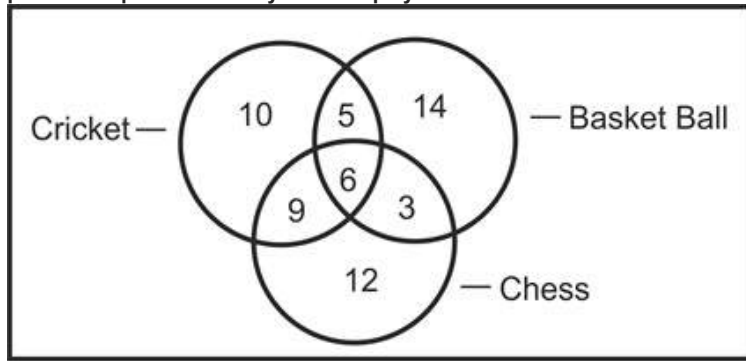
✗ B. CZ

✗ C. QN

✗ D. YV

Question ID : 97675517988

Q.17 The given Venn diagram shows the number of children in a complex who play a particular sport. How many children play Cricket as well as Chess?



- Ans ☒ A. 18
☒ B. 31
☒ C. 15
☒ D. 27

Question ID : 97675518000

Q.18 In the question one statement is given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement : 55% of Manisha's office colleagues went to watch the movie.

Conclusion I : Manisha went to watch the movie.

Conclusion II : Manisha did not go to watch the movie.

- Ans ☒ A. Only conclusion I follows
☒ B. Only conclusion II follows
☒ C. Both I and II follow
☒ D. Either I or II follows.

Question ID : 97675517997

Q.19 Select the option that is related to the third term on the same basis as the second term is related to the first term.

HPT : EMQ :: RUD : ?

- Ans ☒ A. MSC
☒ B. ORA
☒ C. PND
☒ D. MTC

Question ID : 97675517989

Q.20 In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1 : All schools are books.

Statement 2 : No books are papers.

Conclusion I : No schools are books.

Conclusion II : Some books are schools.

- Ans**
- ☒ A. Only conclusion I follows
 - ☒ B. Both I and II follow
 - ☒ C. Only conclusion II follows
 - ☒ D. Neither I nor II follows

Question ID : 97675517996

Section : General Awareness

Q.1 Which among the following banks merged with the Indian Bank with effect from April 2020?

- Ans**
- ☒ A. Canara Bank
 - ☒ B. Andhra Bank
 - ☒ C. Punjab National Bank
 - ☒ D. Allahabad Bank

Question ID : 97675518009

Q.2 The Kamet is the highest summit in the _____ mountain range.

- Ans**
- ☒ A. Aravalli
 - ☒ B. Western Ghats
 - ☒ C. Zaskar
 - ☒ D. Eastern Ghats

Question ID : 97675518015

Q.3 Which among the following instruments is used to measure the wind force?

- Ans**
- ☒ A. Hygrometer
 - ☒ B. Galvanometer
 - ☒ C. Altimeter
 - ☒ D. Anemometer

Question ID : 97675518011

Q.4 As announced in the Budget 2021, Indian Railways have prepared a National Rail Plan for India. The plan is to create a 'future ready' Railway system by _____.

- Ans**
- ☒ A. 2028
 - ☒ B. 2030
 - ☒ C. 2026
 - ☒ D. 2025

Question ID : 97675518010

Q.5 Who is the director general of World Health Organisation as of February 2021?

- Ans ☐ A. Margaret Chan
- ☐ B. Roberto Azevedo
- ☐ C. Christine Lagarde
- ☒ D. Tedros Adhanom Ghebreyesus

Question ID : 97675518020

Q.6 When was the Battle of Talikota fought?

- Ans ☐ A. 1558
- ☐ B. 1535
- ☒ C. 1565
- ☐ D. 1532

Question ID : 97675518018

Q.7 The members of chlorophyceae are commonly called _____ algae.

- Ans ☒ A. green
- ☐ B. red
- ☐ C. blue
- ☐ D. brown

Question ID : 97675518012

Q.8 How many forms of Shakti are worshipped during Navaratri?

- Ans ☐ A. 7
- ☒ B. 9
- ☐ C. 10
- ☐ D. 8

Question ID : 97675518007

Q.9 Who has the record of the most wickets in career in One Day Internationals as of February 2021?

- Ans ☐ A. Wasim Akram
- ☒ B. Muttiah Muralitharan
- ☐ C. Shahid Afridi
- ☐ D. Waqar Younis

Question ID : 97675518025

Q.10 The ancient name of the _____ river is Vitasta.

- Ans ☐ A. Beas
- ☒ B. Jhelum
- ☐ C. Chenab
- ☐ D. Ganga

Question ID : 97675518014

Q.11 _____ will be hosting the International Olympic Committee's (IOC) session in 2023.

- Ans ☒ A. Chennai
☒ B. Mumbai
☒ C. Kolkata
☒ D. New Delhi

Question ID : 97675518026

Q.12 Pavri Nach is performed by the Kokna tribe of which of the following states?

- Ans ☒ A. Maharashtra
☒ B. Odisha
☒ C. Madhya Pradesh
☒ D. Tamil Nadu

Question ID : 97675518008

Q.13 In which year 'Atal Pension Yojana' was launched?

- Ans ☒ A. 2016
☒ B. 2017
☒ C. 2014
☒ D. 2015

Question ID : 97675518016

Q.14 Which among the following Schedule in the Indian Constitution is associated with Panchayat Raj?

- Ans ☒ A. Eighth
☒ B. Ninth
☒ C. Tenth
☒ D. Eleventh

Question ID : 97675518023

Q.15 49th Constitutional Amendment Act gave a constitutional sanctity to the Autonomous District Council in _____.

- Ans ☒ A. Sikkim
☒ B. Meghalaya
☒ C. Arunachal Pradesh
☒ D. Tripura

Question ID : 97675518024

Q.16 'Playing to Win' is the autobiography of which of the following sportspersons?

- Ans ☒ A. Saina Nehwal
☒ B. Sania Mirza
☒ C. Anil Kumble
☒ D. Novak Djokovic

Question ID : 97675518021

Q.17 Who won the Oscar award in 2020 for the performance by an actor in a supporting role?

- Ans ☒ A. Tom Hanks
☒ B. Brad Pitt
☒ C. Al Pacino
☒ D. Joe Pesci

Question ID : 97675518022

Q.18 Night Blindness is caused by the severe deficiency of which of the following vitamins?

- Ans ☒ A. Vitamin A
☒ B. Vitamin B
☒ C. Vitamin D
☒ D. Vitamin C

Question ID : 97675518013

Q.19 Historian Vincent Smith has elevated _____ in Indian history as the Napoleon of India.

- Ans ☒ A. Skandagupta
☒ B. Kumaragupta I
☒ C. Samudragupta
☒ D. Chandragupta I

Question ID : 97675518017

Q.20 Who was the first king of the Rashtrakuta dynasty?

- Ans ☒ A. Dantidurga
☒ B. Krishna I
☒ C. Govinda I
☒ D. Dhruva Dharavarsha

Question ID : 97675518019

Section : Arithmetic Ability

Q.1 What is the least positive number that is exactly divisible by 7, 11 and 3?

- Ans ☒ A. 235
☒ B. 231
☒ C. 77
☒ D. 230

Question ID : 97675518029

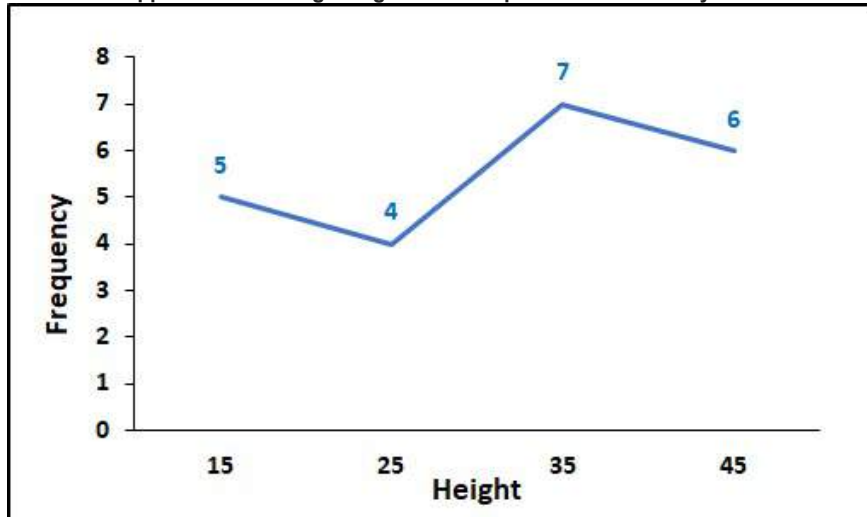
Q.2 Two identical glass jars have milk and water in the ratio 3 : 1 and 5 : 2 respectively. If the mixture in the two jars were emptied out in an empty bucket, what is the resultant ratio of milk and water in the new mixture?

- Ans ☒ A. 41 : 15
☒ B. 41 : 17
☒ C. 31 : 15
☒ D. 41 : 14

Question ID : 97675518037

Q.3 The following graph shows the frequency of plant samplings in a nursery against height (in cm).

What is the approximate average height of all the plants in the nursery?



Ans ☒ A. 31 cm

☒ B. 40 cm

☒ C. 30 cm

☒ D. 45 cm

Question ID : 97675518045

Q.4 Jack has 4 types of candies in the ratio 2 : 6 : 9 : 12. He decided to distribute it among kids such that each get equal number of candies and of only one variety. If he had a total of 116 candies, find the number of kids.

Ans ☒ A. 4

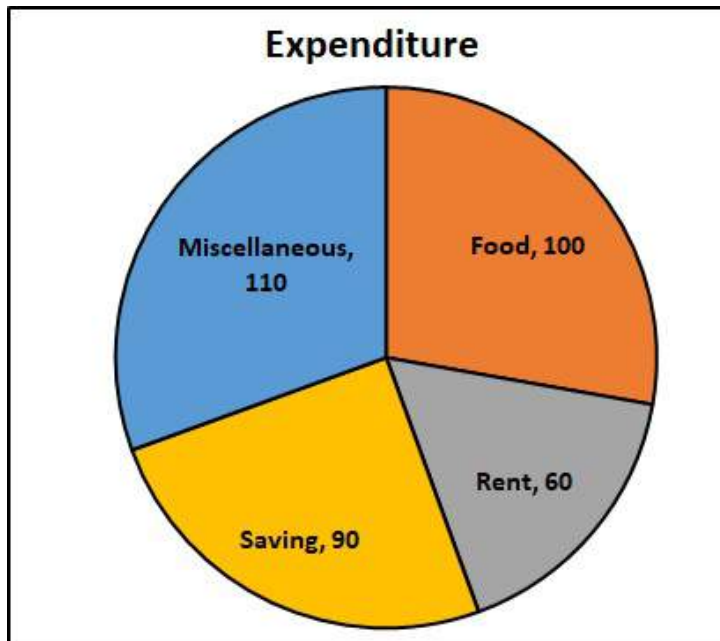
☒ B. 20

☒ C. 6

☒ D. 29

Question ID : 97675518031

Q.5 The given pie chart shows the monthly expenditure of a man (in Rs 1000s). What is the approximate percentage of the man's savings?



Ans ☒ A. 25%

☒ B. 10%

☒ C. 40%

☒ D. 20%

Question ID : 97675518043

Q.6 A number when divided by 15, 21 and 24 leaves a remainder 1. What is the number?

Ans ☒ A. 840

☒ B. 900

☒ C. 841

☒ D. 790

Question ID : 97675518027

Q.7 The wheel of a small toy car has circumference of 30 cm. What is the distance it has travelled when the wheel has made 4.5 revolutions?

Ans ☒ A. 135 cm

☒ B. 125 cm

☒ C. 150 cm

☒ D. 120 cm

Question ID : 97675518038

Q.8 A metal sheet of dimension 44 cm × 20 cm was rolled such that its breadth is now the height of the cylinder so formed. What will be the radius of the cylinder?

Ans ☒ A. 10 cm

☒ B. 7 cm

☒ C. 21 cm

☒ D. 14 cm

Question ID : 97675518041

Q.9 There are three light bulbs which blink at an interval of 3, 4 and 5 minutes. If they all start together, then in what time will they all blink together again?

- Ans
- ☐ A. 40 min
 - ☐ B. 30 min
 - ☐ C. 100 min
 - ☒ D. 60 min

Question ID : 97675518030

Q.10 The total number of voters in a small town increased from 40000 to 60000 in a span of 5 years. What is the arithmetic average percentage increase of voters per year in the time span?

- Ans
- ☒ A. 10%
 - ☐ B. 12%
 - ☐ C. 16%
 - ☐ D. 8%

Question ID : 97675518033

Q.11 The average weight of 40 girls is 40 kg and the average weight of 40 boys is 50 kg. What is the overall average weight?

- Ans
- ☐ A. 40 kg
 - ☐ B. 60kg
 - ☒ C. 45 kg
 - ☐ D. 50kg

Question ID : 97675518032

Q.12 There are two trains travelling in opposite directions. Train 1 crosses train 2 in 20 seconds and a pole in 24 seconds. What is the length of train 2 if the length of train 1 is 192 m? The speed of train 2 is given as 36 km /hr

- Ans
- ☒ A. 168 m
 - ☐ B. 360 m
 - ☐ C. 150 m
 - ☐ D. 124 m

Question ID : 97675518039

Q.13 Meena decided to paint a hollow cone of height 20 m and radius 21 m. What will be the total cost of painting at the rate of Rs 15 per sq m?

- Ans
- ☐ A. Rs 28700
 - ☒ B. Rs 28710
 - ☐ C. Rs 2900
 - ☐ D. Rs 3000

Question ID : 97675518042

Q.14 A is 30% more than C and B is 20% less than C. What is the ratio of A : B : C?

- Ans
- ☐ A. 11 : 7 : 10
 - ☒ B. 13 : 8 : 10
 - ☐ C. 13 : 7 : 10
 - ☐ D. 13 : 8 : 1

Question ID : 97675518036

Q.15 Meena sells 70 red marbles and 105 blue marbles in boxes without mixing such that each box has x number of marbles. What is the value of x?

- Ans ☒ A. 30
☒ B. 35
☒ C. 70
☒ D. 45

Question ID : 97675518028

Q.16 The following table shows the men and women ratio of a few countries. Which of the given countries has the highest men to women ratio?

COUNTRY	MEN	WOMEN
HUNGARY	3	4
INDIA	4	5
TAIWAN	3	1
BHUTAN	2	4

- Ans ☒ A. India
☒ B. Taiwan
☒ C. Bhutan
☒ D. Hungary

Question ID : 97675518044

Q.17 What will be the selling price if three successive discounts of 10% is applied on an item marked at Rs 3000?

- Ans ☒ A. Rs 2100
☒ B. Rs 729
☒ C. Rs 2187
☒ D. Rs 1800

Question ID : 97675518035

Q.18 A number is increased by 25%. Two fourth of the original number is what percent of the new number so formed?

- Ans ☒ A. 45%
☒ B. 50%
☒ C. 25%
☒ D. 40%

Question ID : 97675518034

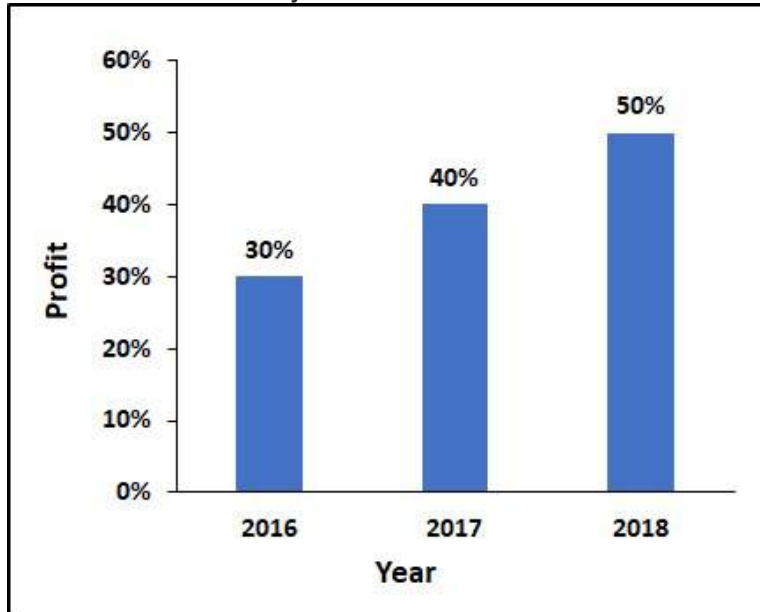
Q.19 A man and a child can do a work in 90 days, a woman and a child can do the same work in 60 days and a man and a woman can do the same work in 45 days. How many days will be required to complete the work if all the three work together?

- Ans ☒ A. 20 days
☒ B. 40 days
☒ C. 30 days
☒ D. 25 days

Question ID : 97675518040

Q.20 The following bar graph shows the profit earned by company A in percentage over the years.

The profit in 2017 is more than the profit in 2016 by _____ assuming that the revenue is same in both the years.



Ans ☒ A. 33.33%

☐ B. 50%

☐ C. 65%

☐ D. 100%

Question ID : 97675518046

Section : General English

Q.1 Select the most appropriate meaning of the given idiom.

"Bite the bullet"

Ans ☐ A. To get something over with because it is inevitable

☒ B. To do something that is nearly impossible

☐ C. To eat a very hard biscuit

☐ D. To procrastinate

Question ID : 97675518060

Q.2 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

As the time rolls by, rats in there thousands die and lie scattered all over / the streets, while vultures begin hovering over the house as more people / start dying in the village and the epidemic kills without discrimination.

Ans ☐ A. No Error

☒ B.

As the time rolls by, rats in there thousands die and lie scattered all over

☐ C. the streets, while vultures begin hovering over the house as more people

☐ D. start dying in the village and the epidemic kills without discrimination.

Question ID : 97675518048

Q.3 Fill in the blank with the appropriate word.

Like all classics, this single movement for large orchestra is both luminous and _____ ; both captivating and overwhelming.

Ans ☒ A. unfathomable

☒ B. unassailable

☒ C. insatiable

☒ D. unequivocal

Question ID : 97675518052

Q.4 Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully. Select the option 'no correction required' if the sentence is correct as given.

The purpose of the Act was to establish an institutional (structured) that could effectively protect, promote and fulfil the fundamental rights guaranteed by the Indian Constitution.

Ans ☒ A. framework

☒ B. qualification

☒ C. reservation

☒ D. no correction required

Question ID : 97675518049

Q.5 Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.

The principle

P: is to present your stand on the issue at

Q: hand but effective introductory

R: purpose of the introduction

S: paragraphs are so much more than that.

Ans ☒ A. SRPQ

☒ B. SPQR

☒ C. RPQS

☒ D. RQSP

Question ID : 97675518053

Q.6 Select the most appropriate 'one word ' for the expression given below.

"perfect, or complete in every way"

Ans ☒ A. consulate

☒ B. consume

☒ C. consuetude

☒ D. consummate

Question ID : 97675518061

Q.7 Select the word that is the opposite meaning (ANTONYM) to the word given below.

Oblivion

- Ans ☒ A. Indifference
☒ B. Inadvertence
☒ C. Consciousness
☒ D. Featherbrained

Question ID : 97675518056

Q.8 Fill in the blank with the appropriate word.

In protest, a nationwide _____ of work was called, marking the commencement of widespread, although not nationwide, popular discontent.

- Ans ☒ A. persistence
☒ B. cessation
☒ C. beginning
☒ D. celebration

Question ID : 97675518051

Q.9 Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.

After Gandhi

P: because he was a colored person travelling in first-class,

Q: was thrown off a train

R: for injustices that many people of color faced

S: he took that emotion and used it to commence the fight at the time.

- Ans ☒ A. QSPR
☒ B. QPSR
☒ C. SPQR
☒ D. PQRS

Question ID : 97675518054

Q.10 Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully. Select the option 'no correction required' if the sentence is correct as given.

The controversy before the Madras High Court (products) from the issue of what is to be done after the Human Rights Commission completes its inquiry.

- Ans ☒ A. refrains
☒ B. digresses
☒ C. stems
☒ D. no correction required

Question ID : 97675518050

Q.11 Select the most appropriate meaning of the given idiom.

"To cost an arm and a leg"

- Ans ☒ A. Not having the means to do basic things in life
☒ B. Something is very expensive
☒ C. Doing a courageous act
☒ D. Losing something very precious

Question ID : 97675518059

Q.12 Select the word that is closest in meaning (SYNONYM) to the word given below

Flabbergasted

- Ans ☒ A. Disgusted
☒ B. Rubber ring
☒ C. Extreme heat
☒ D. Surprised

Question ID : 97675518055

Q.13 Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word.

- Ans ☒ A. VISCIOUS
☒ B. VISIOUS
☒ C. VICIOUS
☒ D. VICSIUS

Question ID : 97675518057

Q.14 Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word.

- Ans ☒ A. SOBRIQUE
☒ B. SOUBRIQUET
☒ C. SOBRIQUET
☒ D. SOBRIKE

Question ID : 97675518058

Q.15 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

A priest uses the opportunity of the plague, / and invoking his god, preach refuge in religion / to overcome the deadly attack.

- Ans ☒ A. A priest uses the opportunity of the plague,
☒ B. No Error
☒ C. to overcome the deadly attack.
☒ D. and invoking his god, preach refuge in religion

Question ID : 97675518047

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

All the world's a stage,
And all the men and women merely players;
They have their exits and their entrances ...
- William Shakespeare, As You Like It,

The Philosophy of Rhetoric (1937) by rhetorician I. A. Richards describes a metaphor as having two parts: the tenor and the vehicle. The tenor is the subject to which attributes are ascribed. The vehicle is the object whose attributes are borrowed. In the previous example, "the world" is compared to a stage, describing it with the attributes of "the stage"; "the world" is the tenor, and "a stage" is the vehicle; "men and women" is the secondary tenor, and "players" is the secondary vehicle.

Psychologist Julian Jaynes coined the terms 'metaphrand' and 'metaphier', plus two new concepts, 'paraphrand' and 'paraphier'. 'Metaphrand' is equivalent to the metaphor-theory terms 'tenor', 'target', and 'ground'. 'Metaphier' is equivalent to the metaphor-theory terms 'vehicle', 'figure', and 'source'. In a simple metaphor, an obvious attribute of the metaphier exactly characterizes the metaphrand (e.g. the ship plowed the seas). With an inexact metaphor, however, a metaphier might have associated attributes or nuances – its paraphiers – that enrich the metaphor because they "project back" to the metaphrand, potentially creating new ideas – the paraphrands – associated thereafter with the metaphrand or even leading to a new metaphor. For example, in the metaphor "Pat is a tornado", the metaphrand is "Pat", the metaphier is "tornado". As metaphier, "tornado" carries paraphiers such as power, storm and wind, counter clockwise motion, and danger, threat, destruction, etc. The metaphoric meaning of "tornado" is inexact: one might understand that 'Pat is powerfully destructive' through the paraphrand of physical and emotional destruction; another person might understand the metaphor as 'Pat can spin out of control'. In the latter case, the paraphier of 'spinning motion' has become the paraphrand 'psychological spin', suggesting an entirely new metaphor for emotional unpredictability, a possibly apt description for a human being hardly applicable to a tornado. Based on his analysis, Jaynes claims that metaphors not only enhance description, but "increase enormously our powers of perception...and our understanding, and literally create new objects".

SubQuestion No : 16

Q.16 Metaphrand and metaphier are equivalent to_____.

- Ans ☒ A. Meaning and relation
☒ B. Cause and effect
☒ C. Target and source
☒ D. Relation and co-relation

Question ID : 97675518065

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

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SubQuestion No : 17

Q.17 What is the "vehicle" in the above passage?

- Ans ☒ A. A word that gives a reference to a new word
- ☒ B. The subject to which attributes are ascribed
- ☒ C. A thing used to express, embody, or fulfil something
- ☒ D. The object whose attributes are borrowed

Question ID : 97675518064

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.





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SubQuestion No : 18

Q.18 What is the world compared to?

- Ans  A. Needs
-  B. Stage
-  C. Part of life
-  D. Arena of opportunities

Question ID : 97675518063

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

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And all the men and women merely players;
They have their exits and their entrances ...
- William Shakespeare, As You Like It,

The Philosophy of Rhetoric (1937) by rhetorician I. A. Richards describes a metaphor as having two parts: the tenor and the vehicle. The tenor is the subject to which attributes are ascribed. The vehicle is the object whose attributes are borrowed. In the previous example, "the world" is compared to a stage, describing it with the attributes of "the stage"; "the world" is the tenor, and "a stage" is the vehicle; "men and women" is the secondary tenor, and "players" is the secondary vehicle.

Psychologist Julian Jaynes coined the terms 'metaphrand' and 'metaphier', plus two new concepts, 'paraphrand' and 'paraphier'. 'Metaphrand' is equivalent to the metaphor-theory terms 'tenor', 'target', and 'ground'. 'Metaphier' is equivalent to the metaphor-theory terms 'vehicle', 'figure', and 'source'. In a simple metaphor, an obvious attribute of the metaphier exactly characterizes the metaphrand (e.g. the ship plowed the seas). With an inexact metaphor, however, a metaphier might have associated attributes or nuances – its paraphiers – that enrich the metaphor because they "project back" to the metaphrand, potentially creating new ideas – the paraphrands – associated thereafter with the metaphrand or even leading to a new metaphor. For example, in the metaphor "Pat is a tornado", the metaphrand is "Pat", the metaphier is "tornado". As metaphier, "tornado" carries paraphiers such as power, storm and wind, counter clockwise motion, and danger, threat, destruction, etc. The metaphoric meaning of "tornado" is inexact: one might understand that 'Pat is powerfully destructive' through the paraphrand of physical and emotional destruction; another person might understand the metaphor as 'Pat can spin out of control'. In the latter case, the paraphier of 'spinning motion' has become the paraphrand 'psychological spin', suggesting an entirely new metaphor for emotional unpredictability, a possibly apt description for a human being hardly applicable to a tornado. Based on his analysis, Jaynes claims that metaphors not only enhance description, but "increase enormously our powers of perception...and our understanding, and literally create new objects".

SubQuestion No : 19

Q.19 Referring to Julian Jaynes theory and considering the metaphor "All the men and women merely players", what are "men" and "women" ?

- Ans ☒ A. history
☒ B. metaphrand
☒ C. metaphor
☒ D. metaphier

Question ID : 97675518066

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

All the world's a stage,
And all the men and women merely players;
They have their exits and their entrances ...
- William Shakespeare, As You Like It,

The Philosophy of Rhetoric (1937) by rhetorician I. A. Richards describes a metaphor as having two parts: the tenor and the vehicle. The tenor is the subject to which attributes are ascribed. The vehicle is the object whose attributes are borrowed. In the previous example, "the world" is compared to a stage, describing it with the attributes of "the stage"; "the world" is the tenor, and "a stage" is the vehicle; "men and women" is the secondary tenor, and "players" is the secondary vehicle.

Psychologist Julian Jaynes coined the terms 'metaphrand' and 'metaphier', plus two new concepts, 'paraphrand' and 'paraphier'. 'Metaphrand' is equivalent to the metaphor-theory terms 'tenor', 'target', and 'ground'. 'Metaphier' is equivalent to the metaphor-theory terms 'vehicle', 'figure', and 'source'. In a simple metaphor, an obvious attribute of the metaphier exactly characterizes the metaphrand (e.g. the ship plowed the seas). With an inexact metaphor, however, a metaphier might have associated attributes or nuances – its paraphiers – that enrich the metaphor because they "project back" to the metaphrand, potentially creating new ideas – the paraphrands – associated thereafter with the metaphrand or even leading to a new metaphor. For example, in the metaphor "Pat is a tornado", the metaphrand is "Pat", the metaphier is "tornado". As metaphier, "tornado" carries paraphiers such as power, storm and wind, counter clockwise motion, and danger, threat, destruction, etc. The metaphoric meaning of "tornado" is inexact: one might understand that 'Pat is powerfully destructive' through the paraphrand of physical and emotional destruction; another person might understand the metaphor as 'Pat can spin out of control'. In the latter case, the paraphier of 'spinning motion' has become the paraphrand 'psychological spin', suggesting an entirely new metaphor for emotional unpredictability, a possibly apt description for a human being hardly applicable to a tornado. Based on his analysis, Jaynes claims that metaphors not only enhance description, but "increase enormously our powers of perception...and our understanding, and literally create new objects".

SubQuestion No : 20

Q.20 The statements at the start of the passage are attributed to:

- Ans ☒ A. George Eliot
☒ B. William Shakespeare
☒ C. George Orwell
☒ D. William Blake

Question ID : 97675518067

Section : General Hindi

Q.1 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे का सही अर्थ वाला विकल्प है।
सिर पर हाथ होना -

- Ans ☒ A. सहारा होना
☒ B. आज्ञा मानना
☒ C. विरोधियों से घिरे होना
☒ D. अच्छी जगह पर होना

Question ID : 97675518081

Q.2 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दी गई लोकोक्ति का सही अर्थ वाला विकल्प है।
अब की अब, तब की तब -

- Ans ☒ A. अपनी इज्जत की रक्षा स्वयं करना
☒ B. अपनी बड़ाई आप करना
☒ C. सफलता दूर होना
☒ D. भविष्य की चिंता छोड़कर वर्तमान की ही सोचना

Question ID : 97675518082

Q.3 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द का तद्भव रूप हो।
इमि

- Ans ☒ A. ऊँचा
☒ B. एवम
☒ C. ऐसा
☒ D. एका

Question ID : 97675518069

Q.4 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विराम चिह्न युक्त वाक्य का सही विकल्प हो।

- Ans ☒ A. जब शेर इंतजार करते करते थक गया, तब उसने सोचा चलें ज़रा मोची का पता लगाएँ।
☒ B. जब शेर इंतजार करते करते थक गया तब उसने सोचा चलें ज़रा मोची का पता लगाएँ।
☒ C. जब शेर इंतजार करते-करते थक गया, तब उसने सोचा, "चलें, ज़रा मोची का पता लगाएँ।"
☒ D. जब शेर इंतजार करते करते थक गया तब उसने सोचा "चलें ज़रा मोची का पता लगाएँ।"

Question ID : 97675518079

Q.5 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विदेशी शब्द का सही विकल्प हो।

- Ans ☒ A. धक्का
☒ B. डकारा
☒ C. खटपट
☒ D. चेहरा

Question ID : 97675518068

Q.6 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए वाक्य के लिए अव्यय के भेद का सही विकल्प हो।
वह दिन भर काम करता रहा।

- Ans ☒ A. समानाधिकरण समुच्चयबोधक अव्यय
☒ B. विस्मयादिबोधक अव्यय
☒ C. व्यधिकरण समुच्चयबोधक अव्यय
☒ D. क्रियाविशेषण अव्यय

Question ID : 97675518071

Q.7 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो क्रिया के भेद वाला सही विकल्प हो।
मैंने खाना बनवाया।

- Ans ☒ A. तात्कालिक क्रिया
☒ B. पूर्वकालिक क्रिया
☒ C. नामधातु क्रिया
☒ D. प्रेरणार्थक क्रिया

Question ID : 97675518070

Q.8 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो शुद्ध शब्द का सही विकल्प है।

- Ans ☒ A. अर्धांगिनी
☒ B. अरधंगिनी
☒ C. अर्धांगिनी
☒ D. अरधांगिनी

Question ID : 97675518075

Q.9 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो शुद्ध वाक्य का सबसे अच्छा विकल्प है।

- Ans ☒ A. मैं जानता हूँ तुम्हारे अक्षर अच्छा नहीं बनते है।
☒ B. मैं जानता हूँ कि तुम्हारे अक्षर अच्छे नहीं बनते है।
☒ C. मैं जानता हूँ कि तुम अक्षर अच्छे नहीं बनाते है।
☒ D. मैं जानता कि तुम्हारा अक्षर अच्छे नहीं बनते है।

Question ID : 97675518077

Q.10 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए वाक्य के लिए पक्ष के भेद का सबसे अच्छा विकल्प है।
स्वादिरु खाने को देखकर भूख बढ़ती जा रही है।

- Ans ☒ A. प्रगतिद्योतक
☒ B. पूर्णताद्योतक
☒ C. सातप्यबोधक
☒ D. आरंभद्योतक

Question ID : 97675518078

Q.11 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे का सही अर्थ वाला विकल्प है।
सिर धुनना -

- Ans ☒ A. पछताना
☒ B. कृतज्ञ होना
☒ C. लजा जाना
☒ D. मुसीबत दूर होना

Question ID : 97675518080

Q.12 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विलोम शब्द का सबसे अच्छा विकल्प है।

मर्त्य

- Ans ☒ A. मृत
☒ B. मृदुल
☒ C. अमर
☒ D. मृत्यु

Question ID : 97675518072

Q.13 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस सही विकल्प का चयन करें जो रिक्त स्थान के लिए उपयुक्त शब्द का सही विकल्प है।
सभी शिष्य मैदान में _____ खड़े हो गए।

- Ans ☒ A. कहकर
☒ B. होकर
☒ C. आकर
☒ D. गुजरकर

Question ID : 97675518074

Q.14 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो सही वाक्य भेद का विकल्प हो ज्यों ही उसने दवा पी, वह सो गया।

- Ans ☒ A. विधानवाचक वाक्य
☒ B. सरल वाक्य
☒ C. संयुक्त वाक्य
☒ D. मिश्र वाक्य

Question ID : 97675518076

Q.15 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस सही विकल्प का चयन करें जो दिए गए शब्द के सही अर्थ का उचित विकल्प हो।
बंदर

- Ans ☒ A. वसु
☒ B. सैकत
☒ C. खग
☒ D. हरि

Question ID : 97675518073

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।
मेरे मकान के आगे चौराहे पर फुटपाथ पर खाना खाने वाले लोग बैठते हैं- रिक्शेवाले, मजदूर, फेरीवाले, कबाड़ीवाले...। लोग कहते हैं "आपको बुरा नहीं लगता? लोग सड़क पर गन्दा फैला रहे हैं और आप इन्हें बर्दाश्त कर रहे हैं? इनके कारण पूरे मोहल्ले की आबोहवा खराब हो रही है।" मैं उनकी बातों को हल्के में ही लेता हूँ। मुझे पता है कि यहाँ जो लोग जुटते हैं वे गरीब लोग होते हैं। अपने काम-धाम के बीच रोटी खाने चले आते हैं और खाकर चले जाते हैं। ये आमतौर पर गरीब ईमानदार लोग हैं जो हमारे इस परिसर के स्थायी सदस्य हो गए हैं। ये उन अशिष्ट अमीरों से भिन्न हैं, जो साधारण-सी बात पर भी हंगामा खड़ा कर देते हैं। लोगों के पास पैसा तो आ गया पर रहने का तरीका नहीं आया। अधजल गगरी छलकत जाए की तर्ज पर इनमें दिखावे की भावना उबाल खाती है। इस दुनिया में कहा-सुनी होती है, हाथापाई भी हो जाती है लेकिन कोई किसी के प्रति गाँठ नहीं बाँधता। दूसरे-तीसरे ही दिन परस्पर हँसते-बतियाते और एक-दूसरे के दुःख-दर्द में शामिल होते दिखाई पड़ते हैं।

SubQuestion No : 16

Q.16 साधारण बात पर भी हंगामा कौन खड़ा कर देते हैं?

- Ans ☒ A. लेखक के अपरिचित लोग
☒ B. गाँव से आए गरीब मजदूर
☒ C. अमीर किन्तु असभ्य लोग
☒ D. अशिष्ट रेहड़ी-पटरी वाले

Question ID : 97675518085

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

मेरे मकान के आगे चौराहे पर फुटपाथ पर खाना खाने वाले लोग बैठते हैं- रिक्शेवाले, मजदूर, फेरीवाले, कबाड़ीवाले...। लोग कहते हैं "आपको बुरा नहीं लगता? लोग सड़क पर गन्दा फैला रहे हैं और आप इन्हें बर्दाश्त कर रहे हैं? इनके कारण पूरे मोहल्ले की आबोहवा खराब हो रही है।" मैं उनकी बातों को हल्के में ही लेता हूँ। मुझे पता है कि यहाँ जो लोग जुटते हैं वे गरीब लोग होते हैं। अपने काम-धाम के बीच रोटी खाने चले आते हैं और खाकर चले जाते हैं। ये आमतौर पर गरीब ईमानदार लोग हैं जो हमारे इस परिसर के स्थायी सदस्य हो गए हैं। ये उन अशिष्ट अमीरों से भिन्न हैं, जो साधारण-सी बात पर भी हंगामा खड़ा कर देते हैं। लोगों के पास पैसा तो आ गया पर रहने का तरीका नहीं आया। अधजल गगरी छलकत जाए की तर्ज पर इनमें दिखावे की भावना उबाल खाती है। इस दुनिया में कहा-सुनी होती है, हाथापाई भी हो जाती है लेकिन कोई किसी के प्रति गाँठ नहीं बाँधता। दूसरे-तीसरे ही दिन परस्पर हँसते-बतियाते और एक-दूसरे के दुःख-दर्द में शामिल होते दिखाई पड़ते हैं।

SubQuestion No : 17

Q.17 "इस दुनिया में कहा-सुनी होती है" - 'इस दुनिया' का संकेत है

- Ans** ☒ A. लेखक को उकसाने वाला पड़ोस
☒ B. गाँव से शहर आ बसे गरीब
☒ C. अमीर किन्तु अशिष्ट लोग
☒ D. गाँव से शहर जा बसे मजदूरों की दुनिया

Question ID : 97675518086

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

मेरे मकान के आगे चौराहे पर फुटपाथ पर खाना खाने वाले लोग बैठते हैं- रिक्शेवाले, मजदूर, फेरीवाले, कबाड़ीवाले...। लोग कहते हैं "आपको बुरा नहीं लगता? लोग सड़क पर गन्दा फैला रहे हैं और आप इन्हें बर्दाश्त कर रहे हैं? इनके कारण पूरे मोहल्ले की आबोहवा खराब हो रही है।" मैं उनकी बातों को हल्के में ही लेता हूँ। मुझे पता है कि यहाँ जो लोग जुटते हैं वे गरीब लोग होते हैं। अपने काम-धाम के बीच रोटी खाने चले आते हैं और खाकर चले जाते हैं। ये आमतौर पर गरीब ईमानदार लोग हैं जो हमारे इस परिसर के स्थायी सदस्य हो गए हैं। ये उन अशिष्ट अमीरों से भिन्न हैं, जो साधारण-सी बात पर भी हंगामा खड़ा कर देते हैं। लोगों के पास पैसा तो आ गया पर रहने का तरीका नहीं आया। अधजल गगरी छलकत जाए की तर्ज पर इनमें दिखावे की भावना उबाल खाती है। इस दुनिया में कहा-सुनी होती है, हाथापाई भी हो जाती है लेकिन कोई किसी के प्रति गाँठ नहीं बाँधता। दूसरे-तीसरे ही दिन परस्पर हँसते-बतियाते और एक-दूसरे के दुःख-दर्द में शामिल होते दिखाई पड़ते हैं।

SubQuestion No : 18

Q.18 लेखक लोगों की शिकायतों को हल्के में क्यों लेता है?

- Ans** ☒ A. लेखक उन्हें जानता-पहचानता है
☒ B. शिकायत करना लोगों की आदत होती है
☒ C. वह किसी बात को गम्भीरता से नहीं लेता
☒ D. जुटने वाले लोग गरीब और ईमानदार हैं

Question ID : 97675518084

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।
 मेरे मकान के आगे चौराहे पर फुटपाथ पर खाना खाने वाले लोग बैठते हैं- रिक्शेवाले, मजदूर, फेरीवाले, कबाड़ीवाले...। लोग कहते हैं "आपको बुरा नहीं लगता? लोग सड़क पर गन्दा फैला रहे हैं और आप इन्हें बर्दाश्त कर रहे हैं? इनके कारण पूरे मोहल्ले की आबोहवा खराब हो रही है।" मैं उनकी बातों को हल्के में ही लेता हूँ। मुझे पता है कि यहाँ जो लोग जुटते हैं वे गरीब लोग होते हैं। अपने काम-धाम के बीच रोटी खाने चले आते हैं और खाकर चले जाते हैं। ये आमतौर पर गरीब ईमानदार लोग हैं जो हमारे इस परिसर के स्थायी सदस्य हो गए हैं। ये उन अशिष्ट अमीरों से भिन्न हैं, जो साधारण-सी बात पर भी हंगामा खड़ा कर देते हैं। लोगों के पास पैसा तो आ गया पर रहने का तरीका नहीं आया। अधजल गगरी छलकत जाए की तर्ज पर इनमें दिखावे की भावना उबाल खाती है। इस दुनिया में कहा-सुनी होती है, हाथापाई भी हो जाती है लेकिन कोई किसी के प्रति गाँठ नहीं बाँधता। दूसरे-तीसरे ही दिन परस्पर हँसते-बतियाते और एक-दूसरे के दुःख-दर्द में शामिल होते दिखाई पड़ते हैं।

SubQuestion No : 19**Q.19 इनमें से कौन - सा अशिष्ट का पर्यायवाची नहीं है?**

- Ans ☒ A. विनीत
☒ B. अविनीत
☒ C. उजड़ु
☒ D. असभ्य

Question ID : 97675518087

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।
 मेरे मकान के आगे चौराहे पर फुटपाथ पर खाना खाने वाले लोग बैठते हैं- रिक्शेवाले, मजदूर, फेरीवाले, कबाड़ीवाले...। लोग कहते हैं "आपको बुरा नहीं लगता? लोग सड़क पर गन्दा फैला रहे हैं और आप इन्हें बर्दाश्त कर रहे हैं? इनके कारण पूरे मोहल्ले की आबोहवा खराब हो रही है।" मैं उनकी बातों को हल्के में ही लेता हूँ। मुझे पता है कि यहाँ जो लोग जुटते हैं वे गरीब लोग होते हैं। अपने काम-धाम के बीच रोटी खाने चले आते हैं और खाकर चले जाते हैं। ये आमतौर पर गरीब ईमानदार लोग हैं जो हमारे इस परिसर के स्थायी सदस्य हो गए हैं। ये उन अशिष्ट अमीरों से भिन्न हैं, जो साधारण-सी बात पर भी हंगामा खड़ा कर देते हैं। लोगों के पास पैसा तो आ गया पर रहने का तरीका नहीं आया। अधजल गगरी छलकत जाए की तर्ज पर इनमें दिखावे की भावना उबाल खाती है। इस दुनिया में कहा-सुनी होती है, हाथापाई भी हो जाती है लेकिन कोई किसी के प्रति गाँठ नहीं बाँधता। दूसरे-तीसरे ही दिन परस्पर हँसते-बतियाते और एक-दूसरे के दुःख-दर्द में शामिल होते दिखाई पड़ते हैं।

SubQuestion No : 20**Q.20 इस अनुच्छेद का कोई उपयुक्त शीर्षक-**

- Ans ☒ A. शिष्ट परिवार
☒ B. गरीब ईमानदार लोग
☒ C. गरीबों की शिकायत
☒ D. अशिष्ट मजदूर

Question ID : 97675518088

Section : Discipline1

Q.1 A block of weight 250 N is placed on an inclined plane, which makes an angle of 20° with the horizontal. The components of this weight parallel to the inclined plane and perpendicular to the inclined plane are _____ and _____, respectively.

- Ans ☒ A. 204.2 N, 36.59 N
☒ B. 85.5 N, 234.92 N
☒ C. 72.5 N, 56.25 N
☒ D. 92.85 N, 182.6 N

Question ID : 97675518091

Q.2 Calculate the distance of a centroid from the top of a T-section wherein width of the flange = 150 mm, height of the flange = 10 mm, width of the web = 10 mm and height of the web = 140 mm.

- Ans ☐ A. 72.98 mm
☒ B. 41.21 mm
☐ C. 55.68 mm
☐ D. 68.23 mm

Question ID : 97675518094

Q.3 A 20-mm-thick soil sample takes 20 min to reach 20% consolidation. The time taken for a 6-m-thick clay layer to reach 40% consolidation is _____. (Assume double drainage in both cases.)

- Ans ☐ A. 14.2 years
☐ B. 12.2 years
☐ C. 15.6 years
☒ D. 13.7 years

Question ID : 97675518106

Q.4 In bolted connections, the minimum pitch allowed as per IS: 800-2007 is:

- Ans ☐ A. $2.7 \times$ diameter of the bolt
☒ B. $2.5 \times$ diameter of the bolt
☐ C. $1.5 \times$ diameter of the bolt
☐ D. $3 \times$ diameter of the bolt

Question ID : 97675518097

Q.5 A simply supported beam AB of length 10 m carries point loads 100 kN and 80 kN at a distance of 2 m and 6 m, respectively, from end A. It also carries a uniformly distributed load of 10 kN/m between the point loads. The support reactions at A and B are _____ and _____, respectively.

- Ans ☐ A. 163 kN, 57 kN
☐ B. 54 kN, 166 kN
☒ C. 136 kN, 84 kN
☐ D. 25 kN, 195 kN

Question ID : 97675518092

Q.6 A single bolted lap joint is used to connect two plates 8 mm thick. If bolts of 20 mm diameter are used at 60 mm pitch and if we use Fe410 plate and 4.6 grade of bolt, then the efficiency of the joint is _____.

- Ans ☐ A. 45.23%
☒ B. 31.94%
☐ C. 51.23%
☐ D. 21.45%

Question ID : 97675518100

Q.7 Which of the following is the correct expression for calculating the direction (θ) of the resultant force between two forces P and Q. Take angle between the forces as α .

Ans

- ☒ A. $\theta = \tan^{-1} \left(\frac{P \sin \alpha}{P + Q \cos \alpha} \right)$
- ☒ B. $\theta = \tan^{-1} \left(\frac{Q \cos \alpha}{P + Q \sin \alpha} \right)$
- ☒ C. $\theta = \tan^{-1} \left(\frac{Q \sin \alpha}{P + Q \cos \alpha} \right)$
- ☒ D. $\theta = \tan^{-1} \left(\frac{P \sin \alpha}{P + Q \sin \alpha} \right)$

Question ID : 97675518089

Q.8 A strip footing is 1m wide at its base. It is located at a depth of 0.8 m below the ground level. Consider unit weight of soil = 18 kN/m³, cohesion = 30 kN/m² and the angle of friction = 20°. Calculate the safe bearing capacity of soil using terzaghi's analysis. (Take $N_q = 3.9$, $N_c = 11.8$, $N_\gamma = 1.7$, factor of safety = 2.5.)

Ans

- ☒ A. 112.09 kN/m²
- ☒ B. 108.33 kN/m²
- ☒ C. 131.62 kN/m²
- ☒ D. 126.24 kN/m²

Question ID : 97675518108

Q.9 The natural water content, liquid limit and plastic limit of a clay sample are 20%, 40% and 18%, respectively. Its liquidity index is:

Ans

- ☒ A. 0.06
- ☒ B. 0.07
- ☒ C. 0.08
- ☒ D. 0.09

Question ID : 97675518103

Q.10 If a soil sample in its natural state is fully saturated, it will have water content of 30%. The total weight of water required to saturate a soil mass of volume 10m³ is: (Assume $G_s = 2.60$.)

Ans

- ☒ A. 440 KN
- ☒ B. 220 KN
- ☒ C. 22 KN
- ☒ D. 44 KN

Question ID : 97675518101

Q.11 A truss member consists of two angles of ISA 75×75×6, which are placed back to back carrying an ultimate tensile load of 200 KN. The member is connected to an 8-mm thick gusset plate placed in between the two connected legs using 16 mm diameter bolts of grade 4.6. How many bolts are required? (Assume f_u of plates as 410 MPa.)

Ans

- ☒ A. 6
- ☒ B. 4
- ☒ C. 2
- ☒ D. 8

Question ID : 97675518098

Q.12 The diameter of a clean capillary tube is 0.06 mm. Determine the expected rise of water in the tube.

- Ans ☒ A. 50 cm
☒ B. 42 cm
☒ C. 35 cm
☒ D. 27 cm

Question ID : 97675518104

Q.13 The correct unit of force among the following is:

- Ans ☒ A. kg-m/sec
☒ B. Kg/m/sec
☒ C. kg/m/sec²
☒ D. kg-m/sec²

Question ID : 97675518093

Q.14 What is the full form of ISMC?

- Ans ☒ A. Indian standard mortar and cement
☒ B. Indian standard medium weight channel
☒ C. Indian standard for mixing cement
☒ D. Indian standard mean compaction

Question ID : 97675518099

Q.15 A clay layer of 6 m thickness has an existing overburden pressure of 300 kpa at the centre of the clay layer. The pressure is expected to increase by 150 kpa due to a new building. By taking $c_c = 0.45$, $w = 50\%$ and $G = 2.71$, calculate the consolidation settlement.

- Ans ☒ A. 147.25 mm
☒ B. 198.56 mm
☒ C. 250.84 mm
☒ D. 201.88 mm

Question ID : 97675518105

Q.16 A circular area of 6 m diameter carries a uniformly distributed load of 10 kN/m². The vertical stress at a depth of 5 m is:

- Ans ☒ A. 1.79 kN/m²
☒ B. 8.29 kN/m²
☒ C. 3.69 kN/m²
☒ D. 4.88 kN/m²

Question ID : 97675518107

Q.17 If two concurrent forces P and Q of magnitude 25 N and 50 N are acting away from the point of concurrency and inclined at angles 15° and 30° with the horizontal plane respectively, the magnitude of the resultant force is:

- Ans
- ☒ A. 64.25 N
 - ☒ B. 74.43 N
 - ☒ C. 85.26 N
 - ☒ D. 58.63 N

Question ID : 97675518090

Q.18 The equation that represents the A-line on the plasticity chart is:

- Ans
- ☒ A. $I_p = 0.73(w_1 - 20)$
 - ☒ B. $w_1 = 0.73(I_p - 20)$
 - ☒ C. $I_p = 0.2(w_1 - 73)$
 - ☒ D. $w_1 = 0.2(I_p - 73)$

Question ID : 97675518102

Q.19 A boat is rowed at a velocity of 30 km/h across (perpendicular to the direction of stream) a river. The velocity of the stream is 10 km/h. The resultant velocity of the boat (in km/h) is:

- Ans
- ☒ A. 47.28
 - ☒ B. 31.62
 - ☒ C. 42.5
 - ☒ D. 51.42

Question ID : 97675518095

Q.20 Which of the following is the main advantage of rivets in steel construction?

- Ans
- ☒ A. They do not loosen when subjected to vibration.
 - ☒ B. They need pre-heating.
 - ☒ C. They provide an aesthetic finish
 - ☒ D. Less workforce is required.

Question ID : 97675518096

Q.1 Match the following

Traffic sign	General shape
1.regulatory signs	a. triangular
2. warning signs	b. rectangular
3.informatory signs	c. circular

- Ans
- ✓ A. 1-c, 2-a, 3-b
 - ✗ B. 1-c, 2-c, 3-a
 - ✗ C. 1-a, 2-b, 3-c
 - ✗ D. 1-b, 2-a, 3-c

Question ID : 97675518125

Q.2 Plate load tests were conducted in a c-φ soil on the plates of two different sizes and the following data was obtained.

Load	Size of plate	Settlement
40 kN	0.3m X 0.3m	25 mm
100kN	0.6m X 0.6m	25 mm

The size of the square footing required to carry a load of 600 kN at the same specified settlement is:

- Ans
- ✗ A. 1.75 m
 - ✗ B. 2.15 m
 - ✗ C. 2.27 m
 - ✓ D. 1.92 m

Question ID : 97675518111

Q.3 In a braking test, a vehicle travelling at a speed of 40km/h was stopped by applying brakes fully; the skid marks were 6.3 m in length. The average skid resistance of the pavement surface is (take $g = 10\text{ms}^{-2}$):

- Ans
- ✗ A. 0.86
 - ✗ B. 0.72
 - ✗ C. 0.61
 - ✓ D. 0.98

Question ID : 97675518122

Q.4 In a collision diagram, the symbols $\rightarrow \circ \leftarrow$ and $\rightarrow \bullet \leftarrow$ represent _____ and _____, respectively.

- Ans
- ✗ A. parked vehicle, fixed object
 - ✓ B. personal injury, fatal accident
 - ✗ C. rear-end collision, front-end collision
 - ✗ D. side swipe, out of control

Question ID : 97675518124

Q.5 According to IS 456 : 2000, for a nominal 1.5-hour fire resistance, the nominal covers specified for the simply supported beams, slabs and ribs are _____.

- Ans**
- ☒ A. 20 mm, 25 mm and 40 mm
 - ☒ B. 20 mm, 25 mm and 35 mm
 - ☒ C. 20 mm, 25 mm and 20 mm
 - ☒ D. 20 mm, 20 mm and 40 mm

Question ID : 97675518128

Q.6 Maximum width of all vehicles excluding the front and rear bumper is:

- Ans**
- ☒ A. 2.5 m
 - ☒ B. 2.2 m
 - ☒ C. 1.8 m
 - ☒ D. 3.2 m

Question ID : 97675518121

Q.7 Which IS code is referred to for the ductile detailing of reinforced concrete structures subjected to seismic forces?

- Ans**
- ☒ A. IS 13920 : 1993
 - ☒ B. IS 1343 : 1980
 - ☒ C. IS 875 : 1987
 - ☒ D. IS 1893 : 2002

Question ID : 97675518127

Q.8 The lustre of pyrite is:

- Ans**
- ☒ A. vitreous
 - ☒ B. silky
 - ☒ C. dull
 - ☒ D. metallic

Question ID : 97675518118

Q.9 The strength of a sample of fully matured concrete is found to be 40 MPa. Find the strength of identical concrete at the age of 7 days, when cured at an average temperature of 20° C during daytime and average temperature of 10° C during night time (take A = 32, B = 54).

- Ans**
- ☒ A. 17.28 MPa
 - ☒ B. 26.63 MPa
 - ☒ C. 29.23 Mpa
 - ☒ D. 22.56 MPa

Question ID : 97675518113

Q.10 High tensile steel usually contains _____ % of carbon and _____ % of manganese.

- Ans
- ☐ A. 0.7 to 0.85 and 0.75 to 1
 - ☐ B. 0.6 to 0.85 and 0.75 to 1
 - ☒ C. 0.6 to 0.85 and 0.7 to 1
 - ☐ D. 0.7 to 0.85 and 0.7 to 1

Question ID : 97675518126

Q.11 Which of the following is/are true about cast-in-situ piles?

- a) Piles of any size and length may be constructed at the site.
- b) The damage due to driving and handling, which is common in the precast piles, is eliminated in this case.
- c) They are suitable in soils of poor drainage qualities.
- d) They cause vibrations and affect the surrounding structures.

- Ans
- ☒ A. a, b and c only
 - ☐ B. d and c only
 - ☐ C. b, c and d only
 - ☐ D. a and b only

Question ID : 97675518112

Q.12 A concrete pile of diameter 30 cm is driven into a homogenous consolidated clay deposit having cohesion of 40 kN/m^2 and adhesion factor of 0.7. If the embedded length is 10 m, the safe load is _____. (Take factor of safety as 3.)

- Ans
- ☐ A. 73.95 kN
 - ☐ B. 82.15 kN
 - ☒ C. 96.45 kN
 - ☐ D. 56.25 kN

Question ID : 97675518110

Q.13 The acute vision cone is around _____ degrees around the line of sight.

- Ans
- ☒ A. 3
 - ☐ B. 5
 - ☐ C. 9
 - ☐ D. 7

Question ID : 97675518120

Q.14 Which of the following options is INCORRECT with respect to the plate load test?

- Ans
- ☐ A. The bottom of the pit should coincide with the level of the foundation.
 - ☒ B. The size of the plate should be equal to the size of the footing.
 - ☐ C. A seating load of about 70 gm/cm^2 is first applied and released after some time.
 - ☐ D. The test should continue until a total settlement of 2.5 cm or the settlement at which the soil fails, whichever is earlier.

Question ID : 97675518109

Q.15 From the following information, identify the critical path.

Activity	Time in weeks	Preceded by
A	15	-
B	15	-
C	3	A
D	5	A
E	8	B, C
F	12	B, C
G	1	E
H	14	E
I	3	D, G
J	14	F, H, I

- Ans
- ☒ A. B-F-J
 - ☒ B. B-E-G-I-J
 - ☒ C. A-C-E-H-J
 - ☒ D. A-C-E-G-I-J

Question ID : 97675518114

Q.16 Horizontal communication does NOT include:

- Ans
- ☒ A. directing subordinates
 - ☒ B. task co-ordination
 - ☒ C. problem solving
 - ☒ D. conflict resolution

Question ID : 97675518115

Q.17 Which of the following is NOT a method used to obtain self-compacting concrete?

- Ans
- ☒ A. Use of plasticizers
 - ☒ B. Low water-powder ratio
 - ☒ C. Limited aggregate content
 - ☒ D. Increasing the water content beyond 350 litres per cum

Question ID : 97675518119

Q.18 The correct order of steps involved in preparation of brick earth for clay brick manufacturing process is:

- Ans
- ☒ A. digging→weathering→unsoiling→tempering→blending
 - ☒ B. digging→weathering→blending→tempering→unsoiling
 - ☒ C. Unsoiling→digging→weathering→blending→tempering
 - ☒ D. Unsoiling→tempering→digging→blending→weathering

Question ID : 97675518116

Q.19 Who defined management as 'the art of getting things done through people'?

- Ans
- ☐ A. Henri Fayol
 - ☐ B. Newman and Summer
 - ☐ C. George R Terry
 - ☒ D. Mary Parker Follett

Question ID : 97675518117

Q.20 From the data in the given table, the modal speed is:

Speed range, km/h	No. of speed observations
0-10	0
10-20	11
20-30	30
30-40	105
40-50	233
50-60	216
60-70	68
70-80	24
80-90	0

- Ans
- ☒ A. 47 km/h
 - ☐ B. 37 km/h
 - ☐ C. 32 km/h
 - ☐ D. 55 km/h

Question ID : 97675518123

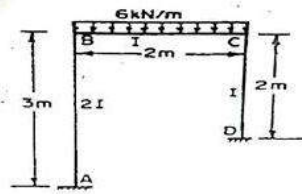
Section : Discipline3

Q.1 Lysimeters and field plots are used to measure:

- Ans
- ☐ A. interception
 - ☒ B. evapotranspiration
 - ☐ C. infiltration
 - ☐ D. precipitation

Question ID : 97675518141

Q.2 Find out the rotational factor for joint 'C' using Kani's method for the following figure.



Ans

✗ A.

Member	R.F
CB	-0.25
CD	0.25

✗ B.

Member	R.F
CB	0.25
CD	0.25

✗ C.

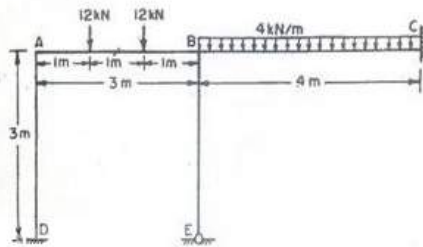
Member	R.F
CB	0.25
CD	-0.25

✓ D.

Member	R.F
CB	-0.25
CD	-0.25

Question ID : 97675518137

Q.3



From the above figure,

find out the distribution factor for joint 'B' using moment distribution method.

Ans

✓ A.

Member	D.F
BA	0.4
BE	0.3
BC	0.3

✗ B.

Member	D.F
BA	0.4
BE	0.4
BC	0.3

✗ C.

Member	D.F
BA	0.3
BE	0.3
BC	0.4

✗ D.

Member	D.F
BA	0.3
BE	0.4
BC	0.3

Question ID : 97675518134

Q.4 Match the following.

Type of lining	Values of Manning's Rugosity Coefficient 'n' for straight alignment
1. Brick lining	A. 0.018 – 0.020
2. Split boulder lining	B. 0.025 – 0.035
3. Round boulder lining	C. 0.020 – 0.025

Ans

✗ A. 1-A, 2-B, 3-C

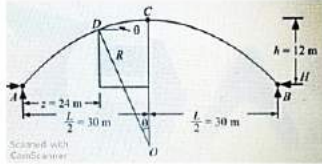
✗ B. 1-C, 2-A, 3-B

✓ C. 1-A, 2-C, 3-B

✗ D. 1-C, 2-B, 3-A

Question ID : 97675518146

Q.5 A three-hinged symmetric circular arch has a span of 60 m and a rise of 12 m. Find the value of ' θ ' from the given figure by using properties of circle formula.



- Ans
- ☒ A. $\theta = 6.928^\circ$
 - ☒ B. $\theta = 7.928^\circ$
 - ☒ C. $\theta = 9.928^\circ$
 - ☒ D. $\theta = 8.928^\circ$

Question ID : 97675518135

Q.6 Determine the time taken to irrigate a strip of land 400 m^2 in area and with a discharge through supply ditch of $70.5 \text{ m}^3/\text{hr}$. The irrigation capacity of the soil is taken as 0.05 m/hr and the average depth of the water flowing over the border strip is 0.1 m .

- Ans
- ☒ A. 35 minutes
 - ☒ B. 45 minutes
 - ☒ C. 40 minutes
 - ☒ D. 30 minutes

Question ID : 97675518143

Q.7 In case of pin-connected trusses, which method is used to find the deflections of a single joint at a time?

- Ans
- ☒ A. Stiffness matrix method
 - ☒ B. Williot-Mohr's method
 - ☒ C. Joint displacement method
 - ☒ D. Castigliano's method

Question ID : 97675518133

Q.8 A _____ can be defined as a plot of intensity of rainfall against the time interval, represented as a bar chart, which is used for analysing precipitation data.

- Ans
- ☒ A. hydrograph
 - ☒ B. depth area duration curve
 - ☒ C. hyetograph
 - ☒ D. mass curve

Question ID : 97675518138

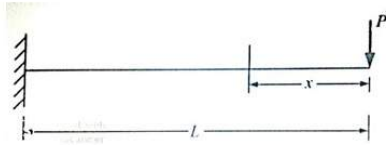
Q.9 For highways, the maximum legal axle load as specified by IRC is _____ with a maximum equivalent single wheel load of _____.

- Ans
- ☒ A. 8170 kg, 4850 kg
 - ☒ B. 8710 kg, 4580 kg
 - ☒ C. 8710 kg, 4805 kg
 - ☒ D. 8170 kg, 4085 kg

Question ID : 97675518148

Q.10 Using strain energy,

which formula is used to find the deflection of the free end of the cantilever beam of length 'L' subjected to concentrated load 'P' at the free end?



Ans

☐ A. $\Delta = \frac{PL^2}{2EI}$

☐ B. $\Delta = \frac{PL^2}{4EI}$

☒ C. $\Delta = \frac{PL^3}{3EI}$

☐ D. $\Delta = \frac{PL^2}{EI}$

Question ID : 97675518132

Q.11 A catchment has 3 rain gauge stations. In a year, the annual rainfalls recorded by the gauges are as follows:

Station	A	B	C
Rainfall (cm)	80	100	180

For a 9% error in the estimation of rainfall, calculate the optimum number of stations in the catchment.

Ans

☐ A. 15

☐ B. 32

☒ C. 24

☐ D. 18

Question ID : 97675518142

Q.12 In case of slenderness limits, according to IS 456 – 2000, the ratio of unsupported length (l) to the least lateral dimension (d) of a column should not exceed a value of _____.

Ans

☐ A. 30

☐ B. 45

☐ C. 50

☒ D. 60

Question ID : 97675518130

Q.13 A rectangular reinforced concrete beam of size 250 mm x 600 mm is simply supported on two masonry walls 230 mm thick and 6 m apart (centre to centre). A beam has to carry, in addition to its own weight, a distributed live load of 10 kN/m and a dead load of 5 kN/m. Determine the factored moment.

(Take safety factor as 1.5 and effective cover as 50 mm.)

Ans

☐ A. 121 kNm

☒ B. 126 kNm

☐ C. 142 kNm

☐ D. 169 kNm

Question ID : 97675518129

Q.14 The _____ is used under rigid pavement for preventing pumping and protecting the subgrade under frost action.

- Ans
- ☐ A. sub base course
 - ☐ B. soil subgrade
 - ☒ C. base course
 - ☐ D. surface course

Question ID : 97675518147

Q.15 By which of the following formulas can we measure the excess rainfall?

- Ans
- ☒ A. $\text{Excess rainfall} = \text{Rainfall} - \text{initial basin loss} - \text{infiltration}$
 - ☐ B. $\text{Excess rainfall} = \text{Rainfall} + \text{initial basin loss} + \text{infiltration}$
 - ☐ C. $\text{Excess rainfall} = \text{Rainfall} - \text{initial basin loss} + \text{infiltration}$
 - ☐ D. $\text{Excess rainfall} = \text{Rainfall} + \text{initial basin loss} - \text{infiltration}$

Question ID : 97675518140

Q.16 A pre-stressed concrete beam 100 mm wide and 300 mm deep is pre-stressed by straight wires carrying an initial force of 150 kN at an eccentricity of 50 mm. Determine the loss of pre-stress due to elastic deformation of concrete if the area of steel wires is 188 mm^2 . Take E_s and E_c as 210 kN/mm^2 and 35 kN/mm^2

- Ans
- ☒ A. 40 N/mm^2
 - ☐ B. 60 N/mm^2
 - ☐ C. 20 N/mm^2
 - ☐ D. 80 N/mm^2

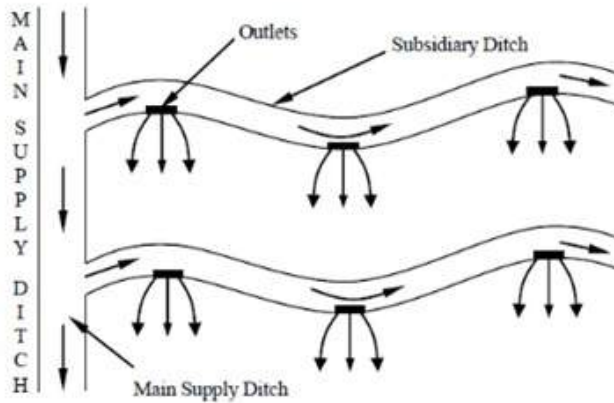
Question ID : 97675518131

Q.17 Trickle irrigation is also known as:

- Ans
- ☐ A. flood irrigation
 - ☒ B. drip irrigation
 - ☐ C. sub-surface irrigation
 - ☐ D. lift irrigation

Question ID : 97675518145

Q.18



Identify the type of flooding shown in the given figure.

- Ans
- ☒ A. Check flooding
 - ☒ B. Border flooding
 - ☒ C. Free flooding
 - ☒ D. Basin flooding

Question ID : 97675518144

Q.19 A lake had a water surface elevation of 102.91 m above datum at the beginning of the month. The average lake surface area can be taken as 5000 ha.

Given,

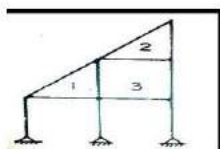
1. Inflow volume = 16 Mm^3
2. Outflow volume = 16 Mm^3
3. Input due to precipitation = 7.5 Mm^3
4. Outflow due to evaporation = 3 Mm^3

Find out the net water surface elevation at the end of the month.

- Ans
- ☒ A. 103.25 m
 - ☒ B. 102.5 m
 - ☒ C. 102.75 m
 - ☒ D. 103 m

Question ID : 97675518139

Q.20 Find out the degree of internal indeterminacy, external indeterminacy and total redundancy from the given rigid joint truss.



- Ans
- ☒ A. $I = 8, E = 4, T = 12$
 - ☒ B. $I = 9, E = 3, T = 12$
 - ☒ C. $I = 6, E = 6, T = 12$
 - ☒ D. $I = 7, E = 5, T = 12$

Question ID : 97675518136

Section : Discipline4

Q.1 Pick the correct statement with respect to municipal solid wastes.

Ans ☒ A.

Both The smaller size of the constituents aids in the faster decomposition of the waste; and The higher is the standard of living, the more is the waste produced.

☒ B.

The smaller size of the constituents aids in the faster decomposition of the waste.

☒ C.

The higher is the standard of living, the more is the waste produced.

☒ D.

The larger size of the constituents aids in the faster decomposition of the waste.

Question ID : 97675518168

Q.2 The current national ambient air quality standards in India were notified on _____ by the central pollution control board.

Ans ☒ A. 18 November 1904

☒ B. 18 November 1984

☒ C. 18 November 1994

☒ D. 18 November 2009

Question ID : 97675518162

Q.3 The nature of wastewater produced by mercerization operation is:

Ans ☒ A. with high BOD

☒ B. strongly alkaline

☒ C. strongly alkaline and with low BOD both

☒ D. with low BOD

Question ID : 97675518157

Q.4 Which of the following statements is/are correct with respect to carbon monoxide?

a) Carbon monoxide is a permanent pollutant.

b) Natural processes convert carbon monoxide to other compounds that are not harmful.

Ans ☒ A. Only statement a) is true.

☒ B. Both the statements are false.

☒ C. Only statement b) is true.

☒ D. Both the statements are true.

Question ID : 97675518163

Q.5 Which Indian standard code specifies the classification of precast concrete pipes?

Ans ☒ A. IS:801:1975

☒ B. IS:456:2000

☒ C. IS:458:2003

☒ D. IS:1343:2012

Question ID : 97675518154

Q.6 According to IRC, the maximum spacing between expansion joints should not exceed _____ for rough interior surface.

- Ans**
- ☒ A. 120 m
 - ☒ B. 140 m
 - ☒ C. 150 m
 - ☒ D. 110 m

Question ID : 97675518151

Q.7 As per IS 2296-1982, which category of surface water can be used as drinking water source without conventional treatment but after disinfection?

- Ans**
- ☒ A. Category B
 - ☒ B. Category C
 - ☒ C. Category D
 - ☒ D. Category A

Question ID : 97675518156

Q.8 Which of the following statements is/are correct with respect to dye wastes?

- Ans**
- ☒ A. COD : BOD ratio is very low.
 - ☒ B. COD : BOD ratio is very high.
 - ☒ C.
COD : BOD ratio is very high; and dye wastes not only come from dyes but also from the chemicals used in manufacturing industry.
 - ☒ D.
Dye wastes not only come from dyes but also from the chemicals used in manufacturing industry.

Question ID : 97675518158

Q.9 Read the following assertion and reason and select the correct option.

Assertion(A): Copper sulfate should not be used for the control of aquatic weeds, except for algae.

Reason(R): The concentration of copper sulfate required to destroy vegetation will assuredly kill any fish present in the water and probably exceed permissible levels in drinking water.

- Ans**
- ☒ A.
Both A and R are true and R is the correct explanation of A.
 - ☒ B.
Both A and R are true and R is not the correct explanation of A.
 - ☒ C. A is true but R is false.
 - ☒ D. A is false but R is true.

Question ID : 97675518159

Q.10 The compound responsible for causing permanent hardness is:

- Ans**
- ☒ A. $\text{Mg}(\text{HCO}_3)_2$
 - ☒ B. Both $\text{Ca}(\text{HCO}_3)_2$ and $\text{Mg}(\text{HCO}_3)_2$
 - ☒ C. $\text{Ca}(\text{HCO}_3)_2$
 - ☒ D. CaSO_4

Question ID : 97675518160

Q.11 What is the full form of RSPM?

- Ans ☒ A. Respiratory Suspended Particulate Matter
- ☒ B. Respiratory Small Particulate Matter
- ☒ C. Respiratory Solid Porous Material
- ☒ D. Respiratory Soluble Particulate Matter

Question ID : 97675518165

Q.12 Which of the following is an example of a primary air pollutant?

- Ans ☒ A. NO
- ☒ B. O₃
- ☒ C. PAN
- ☒ D. Formaldehydes

Question ID : 97675518161

Q.13 Under the wheel load stress, Goldbeck's formula for stress due to the corner load is given by:

- Ans ☒ A. $S_c = 5P/h^2$
- ☒ B. $S_c = 4P/h^2$
- ☒ C. $S_c = 3P/h^2$
- ☒ D. $S_c = 2P/h^2$

Question ID : 97675518153

Q.14 Under the design of dowel bars, for a design load being 5100 kg, IRC recommends 2.5 cm dowel bars of length 50 cm to be spaced at 30 cm in case of: _____.

- Ans ☒ A. 20 cm thick slab
- ☒ B. 25 cm thick slab
- ☒ C. 15 cm thick slab
- ☒ D. 30 cm thick slab

Question ID : 97675518152

Q.15 The largest potential market for the compost is the:

- Ans ☒ A. processing sector
- ☒ B. industrial sector
- ☒ C. textile industry
- ☒ D. agricultural sector

Question ID : 97675518167

Q.16 Under the design of rigid pavement, find the value of radius of relative stiffness of 15 cm thick cement concrete slab from the following data.

1. Modulus of elasticity of cement concrete (E) = 250000 kg/cm²
2. Poisson's ratio for concrete = 0.13
3. Modulus of subgrade reaction (K) = 0.3

Ans ☒ A. 60 cm
☒ B. 50 cm
☒ C. 70 cm
☒ D. 65 cm

Question ID : 97675518149

Q.17 Find the spacing of expansion joint (L_e) from the given data:

1. Half the joint width = 1.25 cm
2. Thermal expansion of concrete = 10×10^{-6} per °C
3. Temperature rise = 31 °C

Ans ☒ A. 39 m
☒ B. 38 m
☒ C. 42 m
☒ D. 40 m

Question ID : 97675518150

Q.18 Earthworms excrete the mucus-coated undigested matter as:

Ans ☒ A. wormcasts
☒ B. vermiculture
☒ C. compost
☒ D. vermicomposting

Question ID : 97675518166

Q.19 A border region between two adjacent air masses having different characteristics, such as temperature and humidity, is called:

Ans ☒ A. glaze
☒ B. non front
☒ C. turbulence
☒ D. front

Question ID : 97675518155

Q.20 Read the following assertion and reason and select the correct option.

Assertion (A): Alkenes (olefins) are found to be harmful.

Reason(R): Alkenes (olefins) are unsaturated and highly reactive in the atmosphere through photochemical reactions.

Ans ☒ A. A is true but R is false.

☒ B.

Both A and R are true and R is the correct explanation of A.

☒ C. A is false but R is true.

☒ D.

Both A and R are true and R is not the correct explanation of A.

Question ID : 97675518164

Section : Discipline5

Q.1 1 chain length of a gunter's chain is equal to:

Ans ☒ A. 68 ft

☒ B. 66 ft

☒ C. 58 ft

☒ D. 60 ft

Question ID : 97675518177

Q.2 Read the following assertion and reason and select the correct option.

Assertion(A): The nutrients present in the wormcast are easily soluble in water and thus readily available for plant growth.

Reason(R): Wormcasts consists of organic matter that has undergone physical and chemical breakdown through the muscular activity that grinds the material to a particle size of 1 to 3 micron.

Ans ☒ A. A is true but R is false.

☒ B.

Both A and R are true and R is not the correct explanation of A.

☒ C.

Both A and R are true and R is the correct explanation of A.

☒ D. A is false but R is true.

Question ID : 97675518169

Q.3 In case of the cycling infrastructure, a low traffic street that restricts cars to a slow speed and grants bicycle priority use of road is known as _____.

Ans ☒ A. traffic calming

☒ B. contraflow lane

☒ C. bicycle boulevard

☒ D. traffic reduction

Question ID : 97675518183

Q.4 A surveyor measured the distance between two points on the plan drawn to a scale of 1 cm = 50 m, and the result was 528 m. Later, however, he discovered that he used a scale on which 1 cm = 20 m. The true distance between the two points is:

- Ans**
- ☒ A. 826 m
 - ☒ B. 958 m
 - ☒ C. 1052 m
 - ☒ D. 1320 m

Question ID : 97675518178

Q.5 Under waterways infrastructure, a/an _____ is a long excavated chamber, having side walls, a semi-circular end wall and a floor.

- Ans**
- ☒ A. graving dock
 - ☒ B. marine railway
 - ☒ C. floating dock
 - ☒ D. lift dock

Question ID : 97675518187

Q.6 Which of the following is the correct equation that specifies the relation of sound pressure with total atmospheric pressure and Barometric pressure?

- Ans**
- ☒ A.
Sound pressure = total atmospheric pressure - Barometric pressure
 - ☒ B.
Sound pressure = total atmospheric pressure ÷ Barometric pressure
 - ☒ C.
Sound pressure = total atmospheric pressure + Barometric pressure
 - ☒ D.
Sound pressure = total atmospheric pressure × Barometric pressure

Question ID : 97675518172

Q.7 IS:4954-1968 (R2014) specifies:

- Ans**
- ☒ A.
code of practice for reduction in noise levels in industrial buildings
 - ☒ B.
Both acceptable outdoor noise levels in different types of residential areas and acceptable indoor noise levels in different types of residential areas
 - ☒ C.
acceptable indoor noise levels in different types of residential areas
 - ☒ D.
acceptable outdoor noise levels in different types of residential areas

Question ID : 97675518173

Q.8 An observer standing on the deck of a ship just sees a lighthouse.
The top of the lighthouse is 40 m above the sea level and the height of the observer's eye is 8 m above the sea level. If A is the position of the top of the lighthouse and B is the position of the observer's eye, the distance between A and B is:

- Ans**
- ☒ A. 35.29 m
 - ☒ B. 42.56 km
 - ☒ C. 42.56 m
 - ☒ D. 35.29 km

Question ID : 97675518176

Q.9 The rate of doing work by a travelling sound in the direction of the propagation of the wave is called:

- Ans**
- ☒ A. sound intensity
 - ☒ B. power of sound
 - ☒ C. sound pressure
 - ☒ D. spectra

Question ID : 97675518175

Q.10 Pick the correct sequence that is adapted for composting of municipal solid wastes in mechanised plants.

- A) Grinding or pulverising of refuse
- B) Segregation of refuse
- C) Receipt of refuse
- D) Digestion or fermentation of refuse

- Ans**
- ☒ A. B→C→A→D
 - ☒ B. C→B→A→D
 - ☒ C. A→B→C→D
 - ☒ D. C→A→B→D

Question ID : 97675518170

Q.11 In case of road infrastructure,
the seven-phase NHDP is being implemented by the National Highways Authority of India (NHAI) with a total estimated expenditure of _____.

- Ans**
- ☒ A. USD 86 billion
 - ☒ B. USD 92 billion
 - ☒ C. USD 76 billion
 - ☒ D. USD 81 billion

Question ID : 97675518186

Q.12 The long and short sides of a rectangle measure 8.28 m and 4.36 m, with error margins of ± 6 mm. The area to correct number of significant figures is = _____.

- Ans**
- ☒ A. 36.14 m²
 - ☒ B. 36.18 m²
 - ☒ C. 36.10 m²
 - ☒ D. 36.02 m²

Question ID : 97675518182

Q.13 A vertical circle that is at the right angles to the meridian and that therefore passes through the east and west points of the horizon is called:

- Ans
- ☐ A. The visible horizon
 - ☐ B. co-latitude
 - ☒ C. prime vertical
 - ☐ D. right ascension

Question ID : 97675518180

Q.14 In case of railway infrastructure, the thickness of ballast for high density broad gauge track is _____ and for medium density track is _____.

- Ans
- ☐ A. 350 mm, 300 mm
 - ☐ B. 250 mm, 200 mm
 - ☒ C. 300 mm, 250 mm
 - ☐ D. 200 mm, 150 mm

Question ID : 97675518185

Q.15 For a given frequency of 22 Hz, the second octave band would be from:

- Ans
- ☐ A. 175 Hz to 350 Hz
 - ☐ B. 88 Hz to 175 Hz
 - ☐ C. 22 Hz to 44 Hz
 - ☒ D. 44 Hz to 88 Hz

Question ID : 97675518174

Q.16 On the broad-gauge lines, a station platform with a minimum length of _____ is desirable.

- Ans
- ☐ A. 405 m
 - ☒ B. 305 m
 - ☐ C. 105 m
 - ☐ D. 205 m

Question ID : 97675518184

Q.17 The height of the peak sound pressure measured above or below zero pressure line is called:

- Ans
- ☐ A. spectra
 - ☐ B. octave band
 - ☐ C. frequency of the wave
 - ☒ D. amplitude of the wave

Question ID : 97675518171

Q.18 An instrument was set up at P, and the angle of elevation to a vane 4 m above the foot of the staff held at O was $10^{\circ}30'$. The horizontal distance between P and O was known to be 1500 m. What is the reduced level of the staff station Q given that the reduced level of the instrument axis was 2560.38 m?

- Ans
- ☒ A. 2687.89 m
 - ☒ B. 2834.54 m
 - ☒ C. 2568.56 m
 - ☒ D. 2786.23 m

Question ID : 97675518179

Q.19 A fluid in which the shear stress is directly proportional to the rate of shear strain is termed as:

- Ans
- ☒ A. Non-Newtonian fluid
 - ☒ B. Ideal fluid
 - ☒ C. Real fluid
 - ☒ D. Newtonian fluid

Question ID : 97675518188

Q.20 A section line AB appears to be 10.18 cm on photograph, for which the focal length is 18 cm. The corresponding line measures 2.68 cm on a map, which is to a scale of 1/50000. The terrain has an average elevation of 210 m above the sea level. The flying altitude of the aircraft above the sea level when the photo was taken is:

- Ans
- ☒ A. 2579.35 m
 - ☒ B. 2435.69 m
 - ☒ C. 2198.26 m
 - ☒ D. 2896.12 m

Question ID : 97675518181



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Test Date	27/09/2021
Test Time	4:30 PM - 6:30 PM
Subject	Assistant Engineer (Civil)

Section : General Ability

Q.1 Select the option pair that shares the same relation between its clusters as shared by the clusters given in question.

IRX : KUB :: ?

Ans ☒ A. MUD : OXH

☐ B. MHZ : KMA

☐ C. EQW : HVB

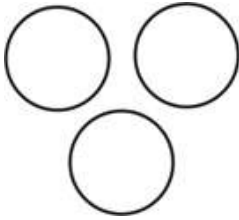
☐ D. NQE : PYH

Question ID : 97675518192

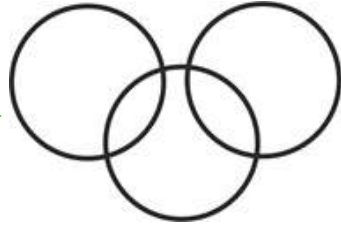
Q.2 Which of the following Venn diagrams best represents the relationship between brothers, sisters and doctors?

Ans

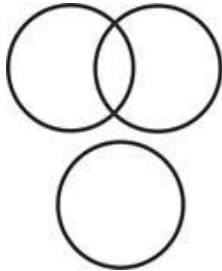
☒ A.



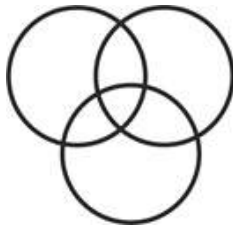
☒ B.



☒ C.



☒ D.



Question ID : 97675518202

Q.3 If A \$ B means A is the mother of B, A # B means A is the son of B and If A * B means A is the daughter of B, then what does P \$ Q * R # S mean?

Ans

☒ A. S is the grandfather of P

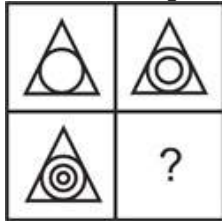
☒ B. S is the father-in-law of P

☒ C. S is the brother of P

☒ D. S is the father of P

Question ID : 97675518196

Q.4 Which answer figure will complete the pattern in the question figure?



Ans

✗ A.



✗ B.



✓ C.



✗ D.



Question ID : 97675518206

Q.5 If GULP is coded as JXOS, then what is the code for SLACK?

Ans ✗ A. YOFGN

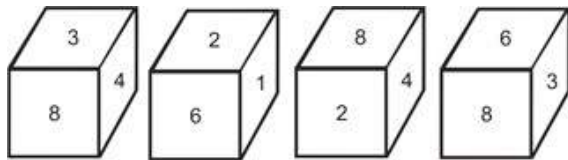
✓ B. VODFN

✗ C. XOCDM

✗ D. WOCEM

Question ID : 97675518194

Q.6 In the given question figure, four positions of the same dice are given. Which number is at the opposite face of number 8?



- Ans
- ☒ A. 4
 - ☒ B. 3
 - ☒ C. 2
 - ☒ D. 1

Question ID : 97675518208

Q.7 Select the option that is related to the third term on the same basis as the second term is related to the first term.

Insect : Larva :: Hen : ?

- Ans
- ☒ A. Cock
 - ☒ B. Egg
 - ☒ C. Mammal
 - ☒ D. Chick

Question ID : 97675518191

Q.8 The criteria for selecting a Branch Manager have been given as under:

The candidate must:

1. Be a graduate in any stream with at least 60% marks.
2. Be an MBA or hold a post-graduate diploma in any stream of management with 55% marks.
3. Be between 30 and 40 years old on the date of application.
4. Should have work experience of more than 3 years

The following exceptions apply:

- A. If a candidate meets all other criteria except 4 above, the candidate will be referred to the General Manager.
- B. A candidate whose age is more than 40 years but less than 50 years will be referred to the HR Head.

Manisha Agarwal is a B.Com graduate with post-graduation in Finance. She has scored more than 75% in graduation and 78% in post-graduation. She is 38 years of age. She has been the branch manager of the town branch of a reputed firm for 1 year.

What decision should be taken about this candidate?

- Ans
- ☒ A. The candidate should be referred to the HR Head.
 - ☒ B. The candidate should be referred to the General Manager.
 - ☒ C. The candidate should be selected.
 - ☒ D. The candidate should be rejected.

Question ID : 97675518197

Q.9 Select the option that is related to the third number on the same basis as the second number is related to the first number.

13 : 115 :: 23 : ?

- Ans
- ☒ A. 192
 - ☒ B. 196
 - ☒ C. 205
 - ☒ D. 208

Question ID : 97675518201

Q.10 Arrange the given words in the sequence in which they occur in the dictionary.

1. PRECODE
2. PRECISE
3. PREDICT
4. PRECEPT
5. PREDIAL

Ans ☒ A. 4,2,1,3,5
☒ B. 4,1,2,3,5
☒ C. 4,2,1,5,3
☒ D. 4,2,3,5,1

Question ID : 97675518189

Q.11 Manisha walks 5 km east, then turns right and walks 6 km, then turns right and walks 8 km, then turns right and walks 6 km. Where is she now with respect to her starting position?

Ans ☒ A. 3 km west
☒ B. 5 km east
☒ C. 5 km west
☒ D. 3 km east

Question ID : 97675518203

Q.12 Kishore walks 150 m east, then turns north and walks 350 m, then turns to his right and walks 250 m. At the same time, Anil walks 0.4 km east, then turns to his right and walks 0.4 km. Where is Anil now with respect to the position of Kishore?

Ans ☒ A. 750 m north
☒ B. 750 m south
☒ C. 5 km south
☒ D. 5 km north

Question ID : 97675518204

Q.13 Hina, Isha, Jessica, Kamini and Leela are sitting on a bench. Jessica is between Isha and Leela. Hima is to the right of Isha. Kamini is not next to Leela. Who is to the right of Hina?

Ans ☒ A. Isha
☒ B. Jessica
☒ C. Leela
☒ D. Kamini

Question ID : 97675518195

Q.14 In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1 : All parrots are carrots.
Statement 2 : All carrots are pigeons.

Conclusion I : Some parrots are carrots.
Conclusion II : All parrots are pigeons.

Ans ☒ A. Neither I nor II follows
☒ B. Both I and II follow
☒ C. Only conclusion II follows
☒ D. Only conclusion I follows

Question ID : 97675518198

Q.15 Find the wrong number in the following number series:
16, 32, 64, 128, 254

- Ans ☒ A. 32
☒ B. 254
☒ C. 128
☒ D. 64

Question ID : 97675518200

Q.16 Out of the given options, three are similar in a certain manner. However, one option is NOT like the other three. Select the option which is different from the rest.

Ans

☒ A.

3	16
4	9

☒ B.

3	4
2	9

☒ C.

2	12
6	4

☒ D.

2	10
5	4

Question ID : 97675518205

Q.17 In the question two statements are given, followed by three conclusions, I, II and III. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1 : All giraffes are jackals.

Statement 2 : No jackals are camels.

Conclusion I : Some camels are jackals.

Conclusion II : All jackals are camels.

Conclusion III : Some giraffes are camels.

- Ans ☒ A. None of the three conclusions follow
☒ B. Only conclusion I follows
☒ C. Only conclusion II follows
☒ D. Only conclusion III follows

Question ID : 97675518199

Q.18 If 23-27-32-36 is coded as 25-31-38-44, then what is the code for 13-11-15-17?

- Ans ☒ A. 15-16-20-22
☒ B. 15-15-21-25
☒ C. 15-14-18-20
☒ D. 15-13-17-19

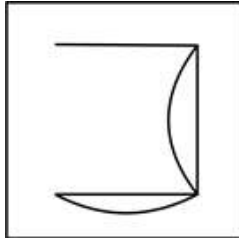
Question ID : 97675518193

Q.19 Find the missing term in the following series :
 U4W, _____, O12Q, L16N

- Ans ☒ A. Q6M
☒ B. R8T
☒ C. R10M
☒ D. P8Q

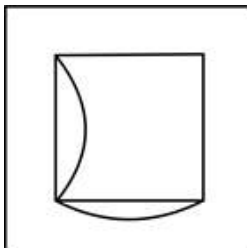
Question ID : 97675518190

Q.20 From the given answer figures, select the one in which the question figure is hidden/embedded.

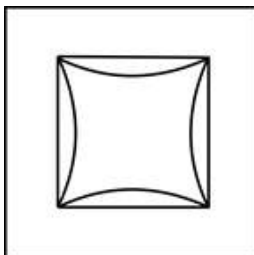


Ans

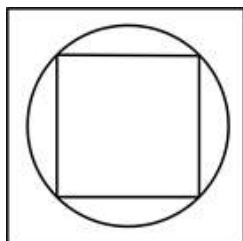
☒ A.



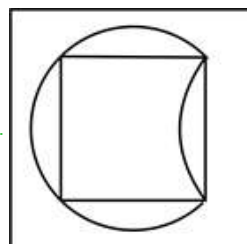
☒ B.



☒ C.



☒ D.



Question ID : 97675518207

Section : General Awareness

Q.1 As announced in the Budget 2021, _____ was allocated for Covid-19 vaccine by Indian Government.

- Ans**
- ☒ A. Rs 35,000 crores
 - ☐ B. Rs 40,000 crores
 - ☐ C. Rs 50,000 crores
 - ☐ D. Rs 20,000 crores

Question ID : 97675518211

Q.2 _____ law states that equal volume of all gases under the same conditions of temperature and pressure contain equal number of molecules.

- Ans**
- ☐ A. Bernoulli's
 - ☒ B. Avogadro's
 - ☐ C. Boyles's
 - ☐ D. Charles's

Question ID : 97675518215

Q.3 _____ was considered by the British to be the Father of Indian Unrest.

- Ans**
- ☐ A. Gopal Krishna Gokhale
 - ☐ B. Dadabhai Naoroji
 - ☐ C. Mahatma Gandhi
 - ☒ D. Bal Gangadhar Tilak

Question ID : 97675518221

Q.4 Aga Khan III and Moshin Mulk were involved in founding the Muslim League in _____.

- Ans**
- ☒ A. 1906
 - ☐ B. 1912
 - ☐ C. 1908
 - ☐ D. 1905

Question ID : 97675518219

Q.5 Who was the first Indian to win Olympic medals at two consecutive Olympic Games?

- Ans**
- ☐ A. Sania Mirza
 - ☐ B. K.D. Jadhav
 - ☒ C. Sushil Kumar
 - ☐ D. Saina Nehwal

Question ID : 97675518228

Q.6 Which of the following is the first bank to introduce ATM in India?

- Ans**
- ☒ A. HSBC Bank
 - ☐ B. HDFC Bank
 - ☐ C. ICICI Bank
 - ☐ D. SBI Bank

Question ID : 97675518212

Q.7 Makaravilakku festival is associated with which of the following states?

- Ans**
- ☒ A. Tamil Nadu
 - ☒ B. Madhya Pradesh
 - ☒ C. Karnataka
 - ☒ D. Kerala

Question ID : 97675518210

Q.8 Which among the following soils is also known as Usara soils?

- Ans**
- ☒ A. Forest
 - ☒ B. Arid
 - ☒ C. Saline
 - ☒ D. Laterite

Question ID : 97675518218

Q.9 Maruni, a famous dance form of Sikkim, is performed during _____.

- Ans**
- ☒ A. war
 - ☒ B. childbirth
 - ☒ C. funerals
 - ☒ D. festivals

Question ID : 97675518209

Q.10 31st Constitutional Amendment increased the number of Lok Sabha seats from _____ to 545.

- Ans**
- ☒ A. 532
 - ☒ B. 535
 - ☒ C. 525
 - ☒ D. 520

Question ID : 97675518226

Q.11 Who was defeated in the Battle of Chausa in 1539?

- Ans**
- ☒ A. Akbar
 - ☒ B. Shah Jahan
 - ☒ C. Humayun
 - ☒ D. Babur

Question ID : 97675518220

Q.12 No Limits: The Will to Succeed' is the autobiography of _____.

- Ans**
- ☒ A. Usain Bolt
 - ☒ B. Michael Phelps
 - ☒ C. Rafael Nadal
 - ☒ D. Vijay Hazare

Question ID : 97675518223

Q.13 Which of the following is the highest peak in the state of Maharashtra as of August 2021?

- Ans ☒ A. Kalsubai
☒ B. Anjaneri
☒ C. Mount Everest
☒ D. Lohagad

Question ID : 97675518217

Q.14 Part _____ of the Indian Constitution deals with Finance, Property, Contracts and Suits.

- Ans ☒ A. XI
☒ B. IX
☒ C. XII
☒ D. X

Question ID : 97675518225

Q.15 Which among the following will host 2021 Men's ICC T20 World Cup?

- Ans ☒ A. England
☒ B. Australia
☒ C. New Zealand
☒ D. UAE and Oman

Question ID : 97675518227

Q.16 The headquarters of World Intellectual Property Organization is located in _____.

- Ans ☒ A. Geneva
☒ B. Paris
☒ C. Vienna
☒ D. New York

Question ID : 97675518222

Q.17 _____ is the largest phylum of Animalia which includes insects.

- Ans ☒ A. Arthropoda
☒ B. Mollusca
☒ C. Echinodermata
☒ D. Platyhelminthes

Question ID : 97675518213

Q.18 What is the common name of Hansen's disease?

- Ans ☒ A. Chicken pox
☒ B. Plague
☒ C. Rabies
☒ D. Leprosy

Question ID : 97675518214

Q.19 Which among the following is the largest tributary of Indus?

- Ans ☒ A. Sutlej
☒ B. Beas
☒ C. Chenab
☒ D. Ravi

Question ID : 97675518216

Q.20 Who won the Best Playback Singer (Male) award in the 65th Filmfare Award 2020?

- Ans ☒ A. Nakash Aziz
☒ B. B Praak
☒ C. Arijit Singh
☒ D. Sachet Tandon

Question ID : 97675518224

Section : Arithmetic Ability

Q.1 Three church bells toll at intervals of 15, 20 and 10 seconds respectively. What is the time interval at which all the three bells toll together?

- Ans ☒ A. 2 minute
☒ B. 1 min
☒ C. 3 minute
☒ D. 5 minute

Question ID : 97675518233

Q.2 Solve: $12 + 12 \div 6 - 12\%$ of 100

- Ans ☒ A. 20
☒ B. 6
☒ C. 12
☒ D. 2

Question ID : 97675518231

Q.3 A cylindrical rice storage box has diameter 50 cm and height 56 cm. What is the maximum quantity of rice that can be stored in the container? [1000 cu cm = 1kg]

- Ans ☒ A. 110 kg
☒ B. 11 kg
☒ C. 100 kg
☒ D. 1100 kg

Question ID : 97675518243

Q.4 P and Q stand 300 m apart from each other. They start running towards each other at speeds of 12m/s and 18m/s respectively. At what distance from the starting point of P do they meet?

- Ans ☒ A. 120 m
☒ B. 180 m
☒ C. 100 m
☒ D. 200 m

Question ID : 97675518240

Q.5 Two years ago, the age of Adil and Mustafa was in the ratio 2 : 3. Adil is now 10 years old. What will their age ratio be 3 years later?

- Ans** ☒ A. 13 : 17
☒ B. 11 : 14
☒ C. 11 : 15
☒ D. 13 : 15

Question ID : 97675518238

Q.6 Which of the following digits are not divisible by 4?

- Ans** ☒ A. 432
☒ B. 680
☒ C. 456
☒ D. 342

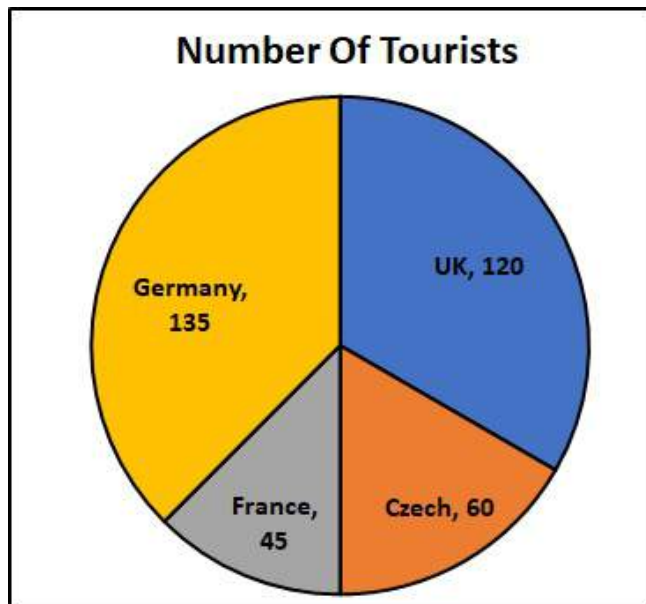
Question ID : 97675518230

Q.7 Ram and Mohan can complete a work in 18 days and 24 days respectively. They started working together alternatively starting with Mohan. In how many days the work will be completed?

- Ans** ☒ A. 18
☒ B. 25
☒ C. 21
☒ D. 20

Question ID : 97675518242

Q.8 The following pie chart shows the distribution of tourists from different nations in India in the year 2017.
 The number of tourists from Germany is what percent more than the number of tourists from the nation with the least number of tourists?



- Ans** ☒ A. 20%
☒ B. 100%
☒ C. 200%
☒ D. 2%

Question ID : 97675518246

Q.9 Simplify: $24 + 2 \times 3 - 16 \div 4 + 20\%$ of 200

- Ans ☒ A. 24
☒ B. 66
☒ C. 84
☒ D. 72

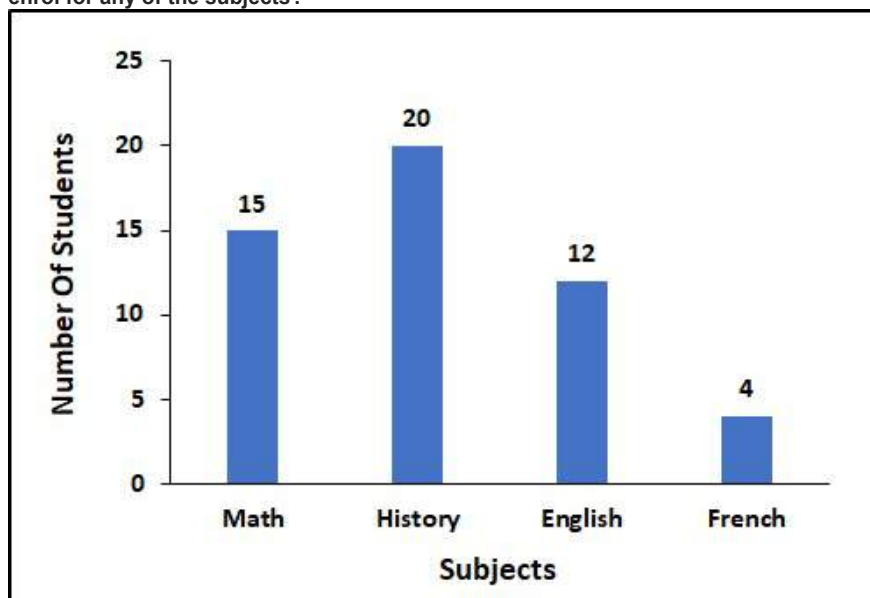
Question ID : 97675518229

Q.10 The value of three types of gold are in the ratio 2 : 1 : 3. If their worth increases by 10%, 20% and 5% in the market respectively, what will be the new ratio of their worth?

- Ans ☒ A. 44 : 24 : 63
☒ B. 44 : 24 : 32
☒ C. 22 : 24 : 63
☒ D. 22 : 24 : 33

Question ID : 97675518239

Q.11 The following graph shows the number of students in a class who enrolled for different elective subjects.
 If 20% of the students were enrolled in English, how many of the students did not enrol for any of the subjects?



- Ans ☒ A. 8
☒ B. 10
☒ C. 12
☒ D. 9

Question ID : 97675518248

Q.12 The HCF of two numbers is 12. What is the LCM of the two numbers if their product is 864?

- Ans ☒ A. 108
☒ B. 48
☒ C. 60
☒ D. 72

Question ID : 97675518232

Q.13 An art piece was sold at Rs 2700 after a discount of 10%. What was the marked price on the item?

- Ans ☒ A. Rs 2100
☒ B. Rs 2400
☒ C. Rs 1800
☒ D. Rs 3000

Question ID : 97675518237

Q.14 In a committee 40% members have less than 5 years of membership. 20 members have exactly 5 years of membership which is 80% less than the number of members having more than 5 years. How many members have less than 5 years of membership?

- Ans ☒ A. 120
☒ B. 80
☒ C. 40
☒ D. 100

Question ID : 97675518236

Q.15 Inside a cylinder of height 40 cm and radius 21 cm three spherical balls of radius 7 cm are kept. What is the volume of the empty space inside the cylinder?

- Ans ☒ A. 5000 cu cm
☒ B. 51128 cu cm
☒ C. 4500 cu cm
☒ D. 51120 cu cm

Question ID : 97675518244

Q.16 The table gives the data of the people living in a residential area. What approximate percent of males is below the age of 40?

GENDER	AGE		
	$\leq 20 < 40$	$\leq 40 \leq 60$	> 60
MEN	30	40	20
WOMEN	40	48	25
TOTAL	70	88	45

- Ans ☒ A. 40%
☒ B. 31%
☒ C. 33%
☒ D. 35%

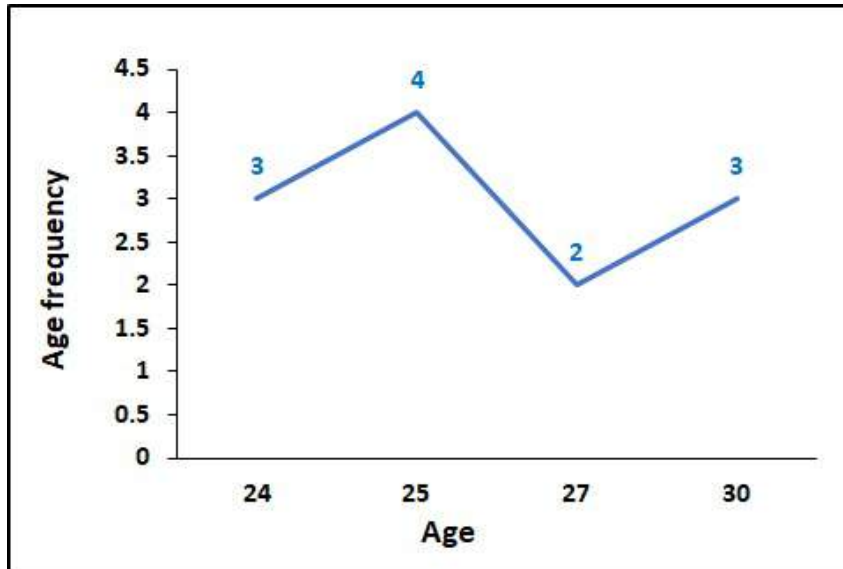
Question ID : 97675518245

Q.17 John gave all of his candies to Neil and Harry in the ratio 1 : 3. What percent of the candies was given to Harry?

- Ans ☒ A. 75%
☒ B. 57%
☒ C. 70%
☒ D. 60%

Question ID : 97675518235

Q.18 The graph below shows the age frequency distribution of the students in a class. What percent of the students are 24 years of age?



Ans ☒ A. 25%

☒ B. 20%

☒ C. 40%

☒ D. 10%

Question ID : 97675518247

Q.19 The average of 4 numbers is 20. If the number 10 is also included, what is the new average?

Ans ☒ A. 18

☒ B. 16

☒ C. 12

☒ D. 15

Question ID : 97675518234

Q.20 Seema travels from Bombay to Pune at an average speed of 40 km/h and on return she was travelling at a speed of 60 km/h. What was her average speed in the entire journey?

Ans ☒ A. 50 km/h

☒ B. 54 km/h

☒ C. 36km/h

☒ D. 48km/h

Question ID : 97675518241

Q.1 Fill in the blank with the appropriate word.

It struck her that the short length of the broom made the sweepers almost double down from the waist and retain that posture for hours on end all their working life, leading to _____ spinal pain.

- Ans ☒ A. chronic
☐ B. rogue
☐ C. epidemic
☐ D. viral

Question ID : 97675518253

Q.2 Select the most appropriate meaning of the given idiom.

"That's the last straw"

- Ans ☐ A. Getting out of options
☐ B. Straw is a metaphor of ideas of life
☐ C. Last chance to do something
☒ D. The patience has run out

Question ID : 97675518262

Q.3 Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.

It was

P: after 6 hours of chase

Q: quite challenging but

R: as he had not

S: the police caught and arrested him obeyed the law.

- Ans ☐ A. SPQR
☒ B. QPSR
☐ C. PSRQ
☐ D. RQPS

Question ID : 97675518255

Q.4 Select the most appropriate 'one word ' for the expression given below.

"to completely satisfy yourself or a need, especially with food or pleasure, so that you could not have any more"

- Ans ☐ A. elucidate
☐ B. nauseate
☐ C. conciliate
☒ D. satiate

Question ID : 97675518263

Q.5 Select the most appropriate meaning of the given idiom.

"Let the cat out of the bag"

- Ans ☐ A. To be ready for a discussion
☐ B. To have an upset stomach
☒ C. To reveal a secret
☐ D. To discuss an important matter

Question ID : 97675518261

Q.6 Fill in the blank with the appropriate word.

I did have _____ about how the book would be received, particularly as there had been a misogynistic controversy over the protagonist.

- Ans
- ☐ A. coalition
 - ☐ B. Yarborough
 - ☐ C. agastopia
 - ☒ D. apprehensions

Question ID : 97675518254

Q.7 Select the most appropriate 'one word ' for the expression given below.

A state, period, or place of isolation in which people or animals that have arrived from elsewhere or been exposed to infectious or contagious disease are placed.

- Ans
- ☐ A. Integrate
 - ☐ B. Combine
 - ☒ C. Quarantine
 - ☐ D. Turpentine

Question ID : 97675518251

Q.8 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

His commitment on national integrity / in the newly independent country / was total and uncompromising.

- Ans
- ☐ A. No error
 - ☒ B. His commitment on national integrity
 - ☐ C. was total and uncompromising.
 - ☐ D. in the newly independent country

Question ID : 97675518250

Q.9 The sentence below has been divided into three parts. Select the part of the sentence that has an error. If the sentence has no error, select the option 'No Error'.

Foreigners, especially / Greeks, began to dominating / the country.

- Ans
- ☐ A. the country.
 - ☐ B. Foreigners, especially
 - ☒ C. Greeks, began to dominating
 - ☐ D. No error

Question ID : 97675518249

Q.10 Select the most appropriate 'one word ' for the expression given below.

"to mix up someone's mind or ideas, or to make something difficult to understand"

- Ans
- ☐ A. bumbershoots
 - ☒ B. bumfuzzle
 - ☐ C. bumble
 - ☐ D. bumpkinish

Question ID : 97675518252

Q.11 Some parts of a sentence have been jumbled up, and labelled P, Q, R and S. Select the option that gives the correct sequence in which these parts can be rearranged to form a meaningful and grammatically correct sentence.

Every adult

P: a gang of minors abusing their classmate, it is time to

Q: but when we read about a youngster stabbed for his mobile phone or

R: generation feels some inadequacy in dealing with

S: the next generation,
stop and think.

- Ans ☒ A. SQPR
☒ B. PQRS
☒ C. SQRP
☒ D. RSQP

Question ID : 97675518256

Q.12 Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word.

- Ans ☒ A. MANUVERE
☒ B. MANOEUVRE
☒ C. MANOUVER
☒ D. MANOUVRE

Question ID : 97675518260

Q.13 Select the word that is closest in meaning (SYNONYM) to the word given below.

Reconnaissance

- Ans ☒ A. Survey
☒ B. Coagulation
☒ C. Cessation
☒ D. Reconcile

Question ID : 97675518258

Q.14 Select the word that is the opposite meaning (ANTONYM) to the word given below.

"Lamentable"

- Ans ☒ A. Desirable
☒ B. Dependable
☒ C. Unpalatable
☒ D. Detestable

Question ID : 97675518257

Q.15 Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word.

- Ans ☒ A. PHARAFERNELIA
☒ B. PARAERNELIA
☒ C. PARAPHERNALIA
☒ D. PARAERNALIA

Question ID : 97675518259

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

In 1919 the British made a new law named the Rowlatt Act. Under this law, the government got many powers, including the ability to arrest people and keep them in prisons without a trial. They also obtained the power to stop newspapers from reporting and printing news. The people called this act the Black Act. Indians protested against this law in many places.

The positive impact of reform was seriously undermined in 1919 by the Rowlatt Act, named after the recommendations made the previous year to the Imperial Legislative Council by the Rowlatt Commission, which had been appointed to investigate "seditious conspiracy." The Rowlatt Act, also known as the Black Act, vested the Viceroy's government with extraordinary powers to quell sedition by silencing the press, detaining political activists without trial, and arresting any individuals suspected of sedition or treason without a warrant. In protest, a nationwide cessation of work (hartal) was called, marking the beginning of widespread, although not nationwide, popular discontent.

The agitation reached a peak in Amritsar (Punjab, India). In Amritsar, on 13th April 1919, about 10,000 Indians had assembled to protest against the Rowlatt Act. The British military commander, Brigadier-General Reginald Dyer ordered his troops to fire at the civilians without any warning. The troops fired 1,650 times. Some historians estimate that the troops killed 379 and injured about 1,137 people. This incident came to be known as the Jallianwala Bagh massacre. With this killing of innocent people, the British lost the trust of the Indian people. Congress forced Britishers to investigate massacre of Jallianwala later, a tehkikat committee was made by congress.

SubQuestion No : 16

Q.16 The powers of Rowlatt act had the power to:

A: detain political activists without trial

B: fire at civilians

C: silence the press

Ans ☒ A. B and C

☒ B. A and C

☒ C.

Only A

☒ D. A, B and C

Question ID : 97675518267

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

In 1919 the British made a new law named the Rowlatt Act. Under this law, the government got many powers, including the ability to arrest people and keep them in prisons without a trial. They also obtained the power to stop newspapers from reporting and printing news. The people called this act the Black Act. Indians protested against this law in many places.

The positive impact of reform was seriously undermined in 1919 by the Rowlatt Act, named after the recommendations made the previous year to the Imperial Legislative Council by the Rowlatt Commission, which had been appointed to investigate "seditious conspiracy." The Rowlatt Act, also known as the Black Act, vested the Viceroy's government with extraordinary powers to quell sedition by silencing the press, detaining political activists without trial, and arresting any individuals suspected of sedition or treason without a warrant. In protest, a nationwide cessation of work (hartal) was called, marking the beginning of widespread, although not nationwide, popular discontent.

The agitation reached a peak in Amritsar (Punjab, India). In Amritsar, on 13th April 1919, about 10,000 Indians had assembled to protest against the Rowlatt Act. The British military commander, Brigadier-General Reginald Dyer ordered his troops to fire at the civilians without any warning. The troops fired 1,650 times. Some historians estimate that the troops killed 379 and injured about 1,137 people. This incident came to be known as the Jallianwala Bagh massacre. With this killing of innocent people, the British lost the trust of the Indian people. Congress forced Britishers to investigate massacre of Jallianwala later, a tehkikat committee was made by congress.

SubQuestion No : 17

Q.17 Read the below mention statements from the passage and choose the correct option.

A: In Jallianwala Bagh Massacre the troops killed 379 and injured about 1,137 people.

B: In 1919 the British made a new law named the Rowlatt Act.

- Ans**
- ☒ A. A and B have no relation
 - ☒ B. A happened before B
 - ☒ C. A happened as a result of B
 - ☒ D. B was a consequence of A

Question ID : 97675518269

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

In 1919 the British made a new law named the Rowlatt Act. Under this law, the government got many powers, including the ability to arrest people and keep them in prisons without a trial. They also obtained the power to stop newspapers from reporting and printing news. The people called this act the Black Act. Indians protested against this law in many places.

The positive impact of reform was seriously undermined in 1919 by the Rowlatt Act, named after the recommendations made the previous year to the Imperial Legislative Council by the Rowlatt Commission, which had been appointed to investigate "seditious conspiracy." The Rowlatt Act, also known as the Black Act, vested the Viceroy's government with extraordinary powers to quell sedition by silencing the press, detaining political activists without trial, and arresting any individuals suspected of sedition or treason without a warrant. In protest, a nationwide cessation of work (hartal) was called, marking the beginning of widespread, although not nationwide, popular discontent.

The agitation reached a peak in Amritsar (Punjab, India). In Amritsar, on 13th April 1919, about 10,000 Indians had assembled to protest against the Rowlatt Act. The British military commander, Brigadier-General Reginald Dyer ordered his troops to fire at the civilians without any warning. The troops fired 1,650 times. Some historians estimate that the troops killed 379 and injured about 1,137 people. This incident came to be known as the Jallianwala Bagh massacre. With this killing of innocent people, the British lost the trust of the Indian people. Congress forced Britishers to investigate massacre of Jallianwala later, a tehkikat committee was made by congress.

SubQuestion No : 18

Q.18 What is the meaning of seditious as derived from the passage?

- Ans ☒ A. Making loud promises and not fulfilling them.
- ☒ B. Quietly making decisions that would affect a larger group.
- ☒ C. May or may not having a reason to respond.
- ☒ D. Causing people to rebel against the authority of a state.

Question ID : 97675518268

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

In 1919 the British made a new law named the Rowlatt Act. Under this law, the government got many powers, including the ability to arrest people and keep them in prisons without a trial. They also obtained the power to stop newspapers from reporting and printing news. The people called this act the Black Act. Indians protested against this law in many places.

The positive impact of reform was seriously undermined in 1919 by the Rowlatt Act, named after the recommendations made the previous year to the Imperial Legislative Council by the Rowlatt Commission, which had been appointed to investigate "seditious conspiracy." The Rowlatt Act, also known as the Black Act, vested the Viceroy's government with extraordinary powers to quell sedition by silencing the press, detaining political activists without trial, and arresting any individuals suspected of sedition or treason without a warrant. In protest, a nationwide cessation of work (hartal) was called, marking the beginning of widespread, although not nationwide, popular discontent.

The agitation reached a peak in Amritsar (Punjab, India). In Amritsar, on 13th April 1919, about 10,000 Indians had assembled to protest against the Rowlatt Act. The British military commander, Brigadier-General Reginald Dyer ordered his troops to fire at the civilians without any warning. The troops fired 1,650 times. Some historians estimate that the troops killed 379 and injured about 1,137 people. This incident came to be known as the Jallianwala Bagh massacre. With this killing of innocent people, the British lost the trust of the Indian people. Congress forced Britishers to investigate massacre of Jallianwala later, a tehkikat committee was made by congress.

SubQuestion No : 19

Q.19 The Rowlatt Act was also called _____.

- Ans ☒ A. The dog's act
- ☒ B. The black act
- ☒ C. The British reform
- ☒ D. The full stop

Question ID : 97675518265

Comprehension:

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives.

In 1919 the British made a new law named the Rowlatt Act. Under this law, the government got many powers, including the ability to arrest people and keep them in prisons without a trial. They also obtained the power to stop newspapers from reporting and printing news. The people called this act the Black Act. Indians protested against this law in many places.

The positive impact of reform was seriously undermined in 1919 by the Rowlatt Act, named after the recommendations made the previous year to the Imperial Legislative Council by the Rowlatt Commission, which had been appointed to investigate "seditious conspiracy." The Rowlatt Act, also known as the Black Act, vested the Viceroy's government with extraordinary powers to quell sedition by silencing the press, detaining political activists without trial, and arresting any individuals suspected of sedition or treason without a warrant. In protest, a nationwide cessation of work (hartal) was called, marking the beginning of widespread, although not nationwide, popular discontent.

The agitation reached a peak in Amritsar (Punjab, India). In Amritsar, on 13th April 1919, about 10,000 Indians had assembled to protest against the Rowlatt Act. The British military commander, Brigadier-General Reginald Dyer ordered his troops to fire at the civilians without any warning. The troops fired 1,650 times. Some historians estimate that the troops killed 379 and injured about 1,137 people. This incident came to be known as the Jallianwala Bagh massacre. With this killing of innocent people, the British lost the trust of the Indian people. Congress forced Britishers to investigate massacre of Jallianwala later, a tehkikat committee was made by congress.

SubQuestion No : 20

Q.20 What made the Indians lose trust on the Britishers ?

- Ans
- ☒ A. The powers of the government
 - ☒ B. The Seditious conspiracy
 - ☒ C. The Rowlatt Act
 - ☒ D. The Jallianwala Bagh Massacre

Question ID : 97675518266

Section : General Hindi

Q.1 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द के लिए सही बहुव्रीहि समास के विग्रह का विकल्प हो।
निशाचर

- Ans
- ☒ A. निशा में विचरण करने वाला
 - ☒ B. निशा और विचरण
 - ☒ C. विचरण है निशा में
 - ☒ D. निशा का विचरण

Question ID : 97675518270

Q.2 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए वाक्य के लिए वृत्ति के भेद का सबसे अच्छा विकल्प है।
अगर अच्छी नौकरी मिल जाएगी तो मैं नया घर खरीद लूँगा।

- Ans
- ☒ A. विध्यर्थ
 - ☒ B. निश्चयार्थ
 - ☒ C. संकेतार्थ
 - ☒ D. संदेहार्थ

Question ID : 97675518278

Q.3 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द का तत्सम रूप हो।
मच्छर

- Ans ☒ A. मशक
☒ B. मिष्ट
☒ C. मक्षिका
☒ D. महार्घ

Question ID : 97675518273

Q.4 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो सही वाक्य भेद का विकल्प हो।
वह सुबह काम पर गया और शाम को लौट आया।

- Ans ☒ A. सरल वाक्य
☒ B. संयुक्त वाक्य
☒ C. मिश्र वाक्य
☒ D. निषेधवाचक वाक्य

Question ID : 97675518280

Q.5 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे का सही अर्थ वाला विकल्प है।
हजामत बनाना -

- Ans ☒ A. मदद करना
☒ B. दशा सुधरना
☒ C. ठगना
☒ D. हार मान लेना

Question ID : 97675518282

Q.6 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस सही विकल्प का चयन करें जो वाक्यांशों के लिए एक शब्द का विकल्प हो।
जो कठिनाई से प्राप्त हो

- Ans ☒ A. निरर्थक
☒ B. दत्तक
☒ C. अगम्य
☒ D. दुर्लभ

Question ID : 97675518277

Q.7 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस सही विकल्प का चयन करें जो दिए गए शब्द-युग्म के अर्थ का सही विकल्प हो।
अणु और अनु

- Ans ☒ A. कंथा और आग
☒ B. शत्रु और पीछे
☒ C. कण और शीघ्र
☒ D. कण और पीछे

Question ID : 97675518276

Q.8 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द के समानार्थी शब्द का विकल्प नहीं है।

बालू -

- Ans ☒ A. रेत
☒ B. सैकत
☒ C. बालुका
☒ D. आसव

Question ID : 97675518275

Q.9 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दी गई लोकोक्ति का सही अर्थ वाला विकल्प है।

अपना मकान कोट सामान -

- Ans ☒ A. अपनी वस्तु को ही संभल कर रखना
☒ B. अपना घर सबसे सुरक्षित स्थान होता है
☒ C. अपना फायदा करके लेना
☒ D. दुसरे के भरोसे रहना

Question ID : 97675518284

Q.10 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए मुहावरे का सही अर्थ वाला विकल्प है।

हाथ को हाथ न सूझना -

- Ans ☒ A. पछताना
☒ B. मांगना
☒ C. घना अंधकार होना
☒ D. अपने वश में करना

Question ID : 97675518283

Q.11 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो प्रत्यय से बने शब्द का सही विकल्प हो।

- Ans ☒ A. बिकाऊ
☒ B. निरापद
☒ C. प्रसव
☒ D. समग्र

Question ID : 97675518272

Q.12 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो उपसर्ग से बने शब्द का सही विकल्प हो।

- Ans ☒ A. आराधना
☒ B. तैराक
☒ C. खंडहर
☒ D. चंदन

Question ID : 97675518271

Q.13 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो शुद्ध शब्द का सही विकल्प है।

- Ans ☒ A. सहधर्मिणी
☐ B. शाधर्मिणी
☐ C. स्थर्मिणी
☐ D. सहधार्मिणी

Question ID : 97675518274

Q.14 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए वाक्य के लिए पक्ष के भेद का सबसे अच्छा विकल्प है।
अब मैं काफी काम कर चुकी हूँ!

- Ans ☒ A. पूर्णताद्योतक
☐ B. आरंभद्योतक
☐ C. सातप्यबोधक
☐ D. प्रगतिद्योतक

Question ID : 97675518279

Q.15 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो विराम चिह्न युक्त वाक्य का सही विकल्प हो।

- Ans ☐ A. साधु ने कहा तू चिंता मत कर मेरे साथ चला
☒ B. साधु ने कहा, "तू चिंता मत कर, मेरे साथ चला"
☐ C. साधु ने कहा तू चिंता मत कर, मेरे साथ चला
☐ D. साधु ने कहा, तू चिंता मत कर, मेरे साथ चला

Question ID : 97675518281

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।
शिक्षा केवल तभी बच्चों के आत्मिक जीवन का एक अंश बनती है, जब कि ज्ञान सक्रिय कार्यों के साथ अभिन्न रूप से जुड़ा हो। बच्चों से यह आशा नहीं की जा सकती कि पहाड़े या समकोण चतुर्भुज का क्षेत्रफल निकालने के नियम उन्हें आकर्षित करेंगे। जब बच्चा यह देखता है कि ज्ञान सृजन के या श्रम के लक्ष्यों की प्राप्ति का साधन है, तभी वह ज्ञान पाने की इच्छा उनके मन में जागती है। मैं यह चेष्टा करता था कि छोटी आयु में ही शारीरिक श्रम में बच्चों को अपनी होशियारी और कुशाग्र बुद्धि का परिचय देने का अवसर मिले। स्कूल का एक सर्वाधिक महत्वपूर्ण कार्यभार है- बच्चों को ज्ञान का प्रयोग करना सिखाना। छोटी कक्षाओं में यह खतरा सबसे ज्यादा होता है कि ज्ञान निरर्थक बोझ बनकर रह जाएगा, क्योंकि इस आयु में बौद्धिक श्रम नई-नई बातें सीखने से ही सम्बंधित होता है।

SubQuestion No : 16

Q.16 इनमें से कौन - सा सक्रिय का पर्यायवाची नहीं है?

- Ans ☐ A. फुर्तीला
☐ B. क्रियाशील
☒ C. निष्क्रिय
☐ D. कर्मठ

Question ID : 97675518289

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

शिक्षा केवल तभी बच्चों के आत्मिक जीवन का एक अंश बनती है, जब कि ज्ञान सक्रिय कार्यों के साथ अभिन्न रूप से जुड़ा हो। बच्चों से यह आशा नहीं की जा सकती कि पहाड़े या समकोण चतुर्भुज का क्षेत्रफल निकालने के नियम उन्हें आकर्षित करेंगे। जब बच्चा यह देखता है कि ज्ञान सृजन के या श्रम के लक्ष्यों की प्राप्ति का साधन है, तभी वह ज्ञान पाने की इच्छा उनके मन में जागती है। मैं यह चेष्टा करता था कि छोटी आयु में ही शारीरिक श्रम में बच्चों को अपनी होशियारी और कुशाग्र बुद्धि का परिचय देने का अवसर मिले। स्कूल का एक सर्वाधिक महत्वपूर्ण कार्यभार है- बच्चों को ज्ञान का प्रयोग करना सिखाना। छोटी कक्षाओं में यह खतरा सबसे ज्यादा होता है कि ज्ञान निरर्थक बोझ बनकर रह जाएगा, क्योंकि इस आयु में बौद्धिक श्रम नई-नई बातें सीखने से ही सम्बंधित होता है।

SubQuestion No : 17

Q.17 गद्यांश में लेखक के अनुसार -

- Ans ☒ A. शारीरिक श्रम ही एकमात्र महत्वपूर्ण तत्व है
- ☒ B. शारीरिक श्रम में तेज बुद्धि की आवश्यकता नहीं होती
- ☒ C. शारीरिक श्रम में समझदारी और तेज बुद्धि की भी आवश्यकता होती है
- ☒ D. शारीरिक श्रम बच्चों को कम होशियार बनाता है

Question ID : 97675518287

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

शिक्षा केवल तभी बच्चों के आत्मिक जीवन का एक अंश बनती है, जब कि ज्ञान सक्रिय कार्यों के साथ अभिन्न रूप से जुड़ा हो। बच्चों से यह आशा नहीं की जा सकती कि पहाड़े या समकोण चतुर्भुज का क्षेत्रफल निकालने के नियम उन्हें आकर्षित करेंगे। जब बच्चा यह देखता है कि ज्ञान सृजन के या श्रम के लक्ष्यों की प्राप्ति का साधन है, तभी वह ज्ञान पाने की इच्छा उनके मन में जागती है। मैं यह चेष्टा करता था कि छोटी आयु में ही शारीरिक श्रम में बच्चों को अपनी होशियारी और कुशाग्र बुद्धि का परिचय देने का अवसर मिले। स्कूल का एक सर्वाधिक महत्वपूर्ण कार्यभार है- बच्चों को ज्ञान का प्रयोग करना सिखाना। छोटी कक्षाओं में यह खतरा सबसे ज्यादा होता है कि ज्ञान निरर्थक बोझ बनकर रह जाएगा, क्योंकि इस आयु में बौद्धिक श्रम नई-नई बातें सीखने से ही सम्बंधित होता है।

SubQuestion No : 18

Q.18 गद्यांश के अनुसार ज्ञान कब निरर्थक बोझ बन जाता है?

- Ans ☒ A. जब उसे कक्षाओं तक ही सीमित न कर दिया जाए
- ☒ B. जब उसका सक्रिय प्रयोग न किया जाए
- ☒ C. जब उसे शारीरिक श्रम से न जोड़ा जाए
- ☒ D. जब उस पर पूर्णतः अधिकार न किया जाए

Question ID : 97675518288

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।

शिक्षा केवल तभी बच्चों के आत्मिक जीवन का एक अंश बनती है, जब कि ज्ञान सक्रिय कार्यों के साथ अभिन्न रूप से जुड़ा हो। बच्चों से यह आशा नहीं की जा सकती कि पहाड़े या समकोण चतुर्भुज का क्षेत्रफल निकालने के नियम उन्हें आकर्षित करेंगे। जब बच्चा यह देखता है कि ज्ञान सृजन के या श्रम के लक्ष्यों की प्राप्ति का साधन है, तभी वह ज्ञान पाने की इच्छा उनके मन में जागती है। मैं यह चेष्टा करता था कि छोटी आयु में ही शारीरिक श्रम में बच्चों को अपनी होशियारी और कुशाग्र बुद्धि का परिचय देने का अवसर मिले। स्कूल का एक सर्वाधिक महत्वपूर्ण कार्यभार है- बच्चों को ज्ञान का प्रयोग करना सिखाना। छोटी कक्षाओं में यह खतरा सबसे ज्यादा होता है कि ज्ञान निरर्थक बोझ बनकर रह जाएगा, क्योंकि इस आयु में बौद्धिक श्रम नई-नई बातें सीखने से ही सम्बंधित होता है।

SubQuestion No : 19

Q.19 लेखक के अनुसार शिक्षा का अर्थ है?

- Ans ☒ A. विषय पर अधिकार प्राप्त करना
- ☒ B. ज्ञान का प्रयोग करना
- ☒ C. श्रम करना
- ☒ D. कम ज्ञान प्राप्त करना

Question ID : 97675518286

Comprehension:

नीचे दिए गये गद्यांश के बाद 5 प्रश्न दिए गये हैं। इस गद्यांश को ध्यानपूर्वक पढ़ें और चार विकल्पों में से प्रत्येक प्रश्न का सर्वोत्तम उत्तर चुनें।
शिक्षा केवल तभी बच्चों के आत्मिक जीवन का एक अंश बनती है, जब कि ज्ञान सक्रिय कार्यों के साथ अभिन्न रूप से जुड़ा हो। बच्चों से यह आशा नहीं की जा सकती कि पहाड़े या समकोण चतुर्भुज का क्षेत्रफल निकालने के नियम उन्हें आकर्षित करेंगे। जब बच्चा यह देखता है कि ज्ञान सृजन के या श्रम के लक्ष्यों की प्राप्ति का साधन है, तभी वह ज्ञान पाने की इच्छा उनके मन में जागती है। मैं यह चेष्टा करता था कि छोटी आयु में ही शारीरिक श्रम में बच्चों को अपनी होशियारी और कुशाग्र बुद्धि का परिचय देने का अवसर मिले। स्कूल का एक सर्वाधिक महत्वपूर्ण कार्यभार है- बच्चों को ज्ञान का प्रयोग करना सिखाना। छोटी कक्षाओं में यह खतरा सबसे ज्यादा होता है कि ज्ञान निरर्थक बोझ बनकर रह जाएगा, क्योंकि इस आयु में बौद्धिक श्रम नई-नई बातें सीखने से ही सम्बंधित होता है।

SubQuestion No : 20

Q.20 इस अनुच्छेद का कोई उपयुक्त शीर्षक-

- Ans ☒ A. शारीरिक श्रम
☒ B. बुद्धि की आवश्यकता
☒ C. ज्ञान का सक्रिय प्रयोग
☒ D. निष्क्रिय ज्ञान

Question ID : 97675518290

Section : Discipline1

Q.1 Velocity defect is defined as the:

- Ans ☒ A. Product of maximum velocity and local velocity at any point
☒ B. Difference between maximum velocity and local velocity at any point
☒ C. Ratio of maximum velocity and local velocity at any point
☒ D. sum of maximum velocity and local velocity at any point

Question ID : 97675518306

Q.2 A Flat plate 1.5m x 1.5m moves at 50km/hr in stationary air of density 1.15 kg per cubic meter. If the coefficient of lift is 0.75 , determine the lift force.

- Ans ☒ A. 470.50N
☒ B. 208.96N
☒ C. 100.58N
☒ D. 187.20N

Question ID : 97675518310

Q.3 Water is flowing through a horizontal pipe of diameter 200mm at a velocity of 3m/s. A circular solid plate of diameter 150mm is placed in the pipe to obstruct the flow. Find the loss of head due to obstruction in the pipe if coefficient of contraction is 0.62.

- Ans ☒ A. 3.311m
☒ B. 1.125m
☒ C. 5.742m
☒ D. 2.451m

Question ID : 97675518307

Q.4 _____ are used for removing grit and sand in preliminary treatment of sewage.

- Ans
- ☐ A. Screenings
 - ☐ B. Skimming tanks
 - ☐ C. Vacuators
 - ☒ D. Detritus tanks

Question ID : 97675518294

Q.5 _____ refers to the action of cutting and tearing of solid waste

- Ans
- ☐ A. Pulverisation
 - ☒ B. Shredding
 - ☐ C. Incineration
 - ☐ D. Composting

Question ID : 97675518302

Q.6 A 25cm diameter pipe carries oil of specific gravity 0.9 at a velocity of 3m/s. At another section the diameter is 20cm. Find the mass rate of flow of oil.

- Ans
- ☐ A. 145.89kg/s
 - ☐ B. 125.48kg/s
 - ☒ C. 132.23kg/s
 - ☐ D. 180.50kg/s

Question ID : 97675518304

Q.7 Calculate the diameter of a circular sewer laid at a slope of 1 in 400 when it is running half full, and with a velocity of 1.9m/s. (n in Manning's formula = 0.012).

- Ans
- ☐ A. 3.05m
 - ☒ B. 1.23m
 - ☐ C. 5.20m
 - ☐ D. 4.42m

Question ID : 97675518295

Q.8 Hydraulic gradient line is defined as:

- Ans
- ☐ A. The line representing the sum of pressure head and suction head with respect to some reference line
 - ☒ B. The line representing the sum of pressure head and datum head with respect to some reference line
 - ☐ C. The line representing the sum of pressure head, datum head and velocity head with respect to some reference line
 - ☐ D. The line representing the sum of pressure head, datum head and suction head with respect to some reference line

Question ID : 97675518308

Q.9 As per IS 10500: 2012, the permissible limit of Free residual chlorine in the absence of alternate source in drinking water is:

- Ans**
- ☐ A. 0.3mg/l
 - ☐ B. 1.5mg/l
 - ☒ C. 1.0mg/l
 - ☐ D. 0.2mg/l

Question ID : 97675518291

Q.10 As per IS 4954-1968, the acceptable indoor noise level (in dB(A)) for Restaurants is

- Ans**
- ☐ A. 25-30
 - ☐ B. 35-40
 - ☒ C. 50-55
 - ☐ D. 30-35

Question ID : 97675518300

Q.11 The distance measured perpendicular to the boundary of solid body, by which the boundary should be displaced to compensate for the reduction in flow rate on account of boundary layer formation is known as:

- Ans**
- ☐ A. Energy thickness
 - ☐ B. Boundary layer thickness
 - ☐ C. Momentum thickness
 - ☒ D. Displacement thickness

Question ID : 97675518309

Q.12 As per IS 4954-1968, the acceptable indoor noise level (in dB(A)) for Hospitals is:

- Ans**
- ☐ A. 40-45
 - ☐ B. 25-30
 - ☐ C. 30-35
 - ☒ D. 35-40

Question ID : 97675518298

Q.13 _____ is a Primary air pollutant.

- Ans**
- ☐ A. Formaldehyde
 - ☒ B. Sulphur dioxide
 - ☐ C. Ozone
 - ☐ D. Sulphuric acid

Question ID : 97675518296

Q.14 _____ are those solids which remain floating in sewage.

- Ans ☒ A. Suspended solids
☒ B. Colloidal solids
☒ C. Settleable solids
☒ D. Dissolved solids

Question ID : 97675518292

Q.15 A 2% solution of a sewage sample is incubated for 5 days at 20 degree Celsius. The depletion of oxygen was found to be 4ppm. Determine the BOD of the sewage.

- Ans ☒ A. 350ppm
☒ B. 100ppm
☒ C. 200ppm
☒ D. 400ppm

Question ID : 97675518293

Q.16 1 Atmospheric pressure is equal to _____ mm of Hg.

- Ans ☒ A. 590
☒ B. 300
☒ C. 450
☒ D. 760

Question ID : 97675518299

Q.17 In composting of refuse, the final end product which is a brown coloured odourless innocuous powdery mass is called as:

- Ans ☒ A. Leachate
☒ B. Sludge
☒ C. Solid waste
☒ D. Humus

Question ID : 97675518303

Q.18 A sound pressure level on reference scale of _____ (in micro Pascal), is usually adopted to express sound levels in decibels.

- Ans ☒ A. 2
☒ B. 200
☒ C. 2000
☒ D. 20

Question ID : 97675518297

Q.19 _____ is characterized by a change of sound pressure of at least 40 dB within 0.5 second with a duration of less than one second.

- Ans**
- ☒ A. Uninterrupted noise
 - ☒ B. Intermittent noise
 - ☒ C. Continuous noise
 - ☒ D. Impulse noise

Question ID : 97675518301

Q.20 The flow in which fluid moves radially inwards towards a point where it disappears at a constant rate is known as:

- Ans**
- ☒ A. Sink flow
 - ☒ B. Source flow
 - ☒ C. Uniform flow
 - ☒ D. Superimposed flow

Question ID : 97675518305

Section : Discipline2

Q.1 The field capacity and permanent wilting point for a given 0.8m root zone soil are 35 and 10 percent respectively. At a given time, the soil moisture in the given soil is 20 percent when a farmer irrigates the soil with 250mm depth of water. Assuming bulk specific gravity of the soil as 1.6, determine the amount of water wasted from the consideration of irrigation.

- Ans**
- ☒ A. 33.54%
 - ☒ B. 10.45%
 - ☒ C. 40.70%
 - ☒ D. 23.20%

Question ID : 97675518321

Q.2 Bulk modulus is defined as:

- Ans**
- ☒ A. Ratio of direct stress and volumetric strain
 - ☒ B. Difference of direct stress and volumetric strain
 - ☒ C. Product of direct stress and volumetric strain
 - ☒ D. Sum of direct stress and volumetric strain

Question ID : 97675518324

Q.3 A 20m chain used for a survey was found to be 20.10m at the beginning and 20.30m at the end of work. The area of the plan drawn to a scale of 1cm = 8m was measured with the help of planimeter and was found to be 32.56 sq.cm. Find the true area of the field.

- Ans**
- ☒ A. 1094 sq.m
 - ☒ B. 3541 sq. m
 - ☒ C. 5112 sq. m
 - ☒ D. 2126 sq. m

Question ID : 97675518330

Q.4 Error may rise due to want of perfection of human sight in observing and of touch in manipulating instruments is known as:

- Ans
- ☐ A. Instrumental error
 - ☐ B. Accidental error
 - ☒ C. Personal error
 - ☐ D. Natural error

Question ID : 97675518329

Q.5 _____ is a Non-recording rain gauge.

- Ans
- ☐ A. Weighing bucket rain gauge
 - ☐ B. Siphon's rain gauge
 - ☐ C. Tipping bucket rain gauge
 - ☒ D. Symon's rain gauge

Question ID : 97675518316

Q.6 A Lysimeter is used to measure:

- Ans
- ☒ A. Potential evapotranspiration
 - ☐ B. Runoff
 - ☐ C. Precipitation
 - ☐ D. Evaporation

Question ID : 97675518322

Q.7 The diameters of an impeller of a centrifugal pump at inlet and outlet are 30cm and 60cm respectively. Determine the minimum starting speed of the pump if it works against a head of 30m.

- Ans
- ☐ A. 704.56 rpm
 - ☐ B. 400.59 rpm
 - ☐ C. 307.52 rpm
 - ☒ D. 891.80 rpm

Question ID : 97675518314

Q.8 _____ is the direct runoff hydrograph resulting from one centimetre of excess rainfall generated uniformly over a catchment area at a constant rate for an effective duration.

- Ans
- ☐ A. S-curve
 - ☐ B. Hyetograph
 - ☒ C. Unit Hydrograph
 - ☐ D. Mass curve analysis

Question ID : 97675518318

Q.9 A surveyor measured the distance between two points on the plan drawn to a scale of 1cm = 40m and the result was 468m. Later however, he discovered that he used a scale of 1cm = 20m. Find the true distance between the points.

- Ans ☒ A. 504m
☒ B. 936m
☒ C. 1052m
☒ D. 748m

Question ID : 97675518328

Q.10 Find the minimum diameter of a steel wire, which is used to raise a load of 4000 N if the stress in the rod is not to exceed 95MN/ sq. meter.

- Ans ☒ A. 3.54 mm
☒ B. 7.32 mm
☒ C. 10.40 mm.
☒ D. 5.47 mm

Question ID : 97675518323

Q.11 Let M be the order number of relevant flood and N be the total number of annual floods, then the probability P of each flood being equalled or exceeded is given by

- Ans ☒ A. $P = m / (N+1)$
☒ B. $P = m/N$
☒ C. $P = m / (N-1)$
☒ D. $P = m - N$

Question ID : 97675518319

Q.12 The ratio of the power available at the shaft of the turbine to the power delivered to the Runner is known as

- Ans ☒ A. Overall efficiency
☒ B. Volumetric efficiency
☒ C. Mechanical efficiency
☒ D. Hydraulic efficiency

Question ID : 97675518312

Q.13 _____ is equal to the product of mass and acceleration of the flowing fluid and acts in the direction opposite to the direction of acceleration.

- Ans ☒ A. Pressure force
☒ B. Viscous force
☒ C. Inertia force
☒ D. Gravity force

Question ID : 97675518315

Q.14 If the Froude number is less than one, then the flow in open channel is said to be:

- Ans
- ☐ A. Torrential flow
 - ☒ B. Sub-critical
 - ☐ C. Critical
 - ☐ D. Super critical

Question ID : 97675518311

Q.15 An isohyet is a contour of:

- Ans
- ☐ A. Equal evaporation
 - ☐ B. Equal transpiration
 - ☒ C. Equal rainfall
 - ☐ D. Equal depth

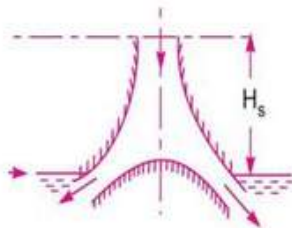
Question ID : 97675518317

Q.16 A cantilever of length 2.5m carries a uniformly distributed load of 16.4kN per meter length over the entire length. If the moment inertia of the beam is 79500000 mm^4 and value of $E = 200000 \text{ N / sq. milli meters}$, determine the deflection at the free end.

- Ans
- ☐ A. 4.78mm
 - ☐ B. 7.84mm
 - ☒ C. 5.03mm
 - ☐ D. 2.56mm

Question ID : 97675518325

Q.17 Identify the type of draft tube.



- Ans
- ☐ A. Simple elbow tube
 - ☐ B. Conical draft tube
 - ☒ C. Moody spreading tube
 - ☐ D. Draft tube with circular inlet and rectangular outlet

Question ID : 97675518313

Q.18 Guest's theory is also known as:

- Ans
- ☐ A. Maximum principal stress theory
 - ☐ B. Maximum shear strain theory
 - ☐ C. Maximum principal strain theory
 - ☒ D. Maximum shear stress theory

Question ID : 97675518327

Q.19 A FALSE statement regarding the assumptions made in the derivation of shear stress produced in a circular shaft subjected to torsion.

- Ans
- ☐ A. The material of the shaft is uniform throughout
 - ☐ B. The shaft is of uniform circular section throughout
 - ☒ C. The twist along the shaft is non-uniform
 - ☐ D.

Cross sections of the shaft, which are plane before twist remain plain after twist

Question ID : 97675518326

Q.20 _____ is a crop of Rabi season.

- Ans
- ☐ A. Maize
 - ☒ B. Wheat
 - ☐ C. Rice
 - ☐ D. Cotton

Question ID : 97675518320

Section : Discipline3

Q.1 The systematic departure of the declination from its mean value during a period of 24 hrs is known as:

- Ans
- ☐ A. Irregular variation
 - ☐ B. Secular variation
 - ☐ C. Annual variation
 - ☒ D. Diurnal variation

Question ID : 97675518333

Q.2 Find the combined correction for curvature and refraction for distance of 3400m.

- Ans
- ☐ A. 5.784m
 - ☐ B. 3.124m
 - ☐ C. 1.457m
 - ☒ D. 0.778m

Question ID : 97675518335

Q.3 Which method is used to locate the contours in case of hilly terrain?

- Ans
- ☐ A. Squares method
 - ☒ B. Tacheometric method
 - ☐ C. Estimation method
 - ☐ D. Direct method

Question ID : 97675518334

Q.4 For ultimate limit states, the code specifies a partial safety factor of steel as:

- Ans
- ☒ A. 1.15
 - ☐ B. 2
 - ☐ C. 1
 - ☐ D. 1.5

Question ID : 97675518339

Q.5 An offset is laid out 2 degree from its true direction on the field. If the scale of the plotting is 10m to 1cm, find the maximum length of the offset so that the displacement of the point on the paper may not exceed 0.25mm.

- Ans
- ☐ A. 4.51m
 - ☐ B. 5.77m
 - ☒ C. 7.16m
 - ☐ D. 2.74m

Question ID : 97675518331

Q.6 As per IS 456: 2000, for prismatic beams of rectangular sections and slabs of uniform thickness and spans up-to 10m, the basic span to depth ratio for continuous spans is

- Ans
- ☐ A. 10
 - ☐ B. 7
 - ☐ C. 20
 - ☒ D. 26

Question ID : 97675518347

Q.7 If the whole circle bearing (WCB) is between 180° and 270° , then the Reduced bearing (RB) is:

- Ans
- ☐ A. $RB = 180^\circ - WCB$
 - ☐ B. $RB = WCB$
 - ☒ C. $RB = WCB - 180^\circ$
 - ☐ D. $RB = 360^\circ - WCB$

Question ID : 97675518332

Q.8 _____ are conducted to collect data on the number of vehicles and or pedestrians that pass a point on a highway facility during a specified time period.

- Ans
- ☒ A. Spot speed studies
 - ☒ B. Parking studies
 - ☒ C. Volume studies
 - ☒ D. Travel time and delay studies

Question ID : 97675518349

Q.9 Calculate the modular ratio for M30 grade concrete if the permissible Compressive stress of concrete in bending is 10 MPa.

- Ans
- ☒ A. 9.33
 - ☒ B. 8.11
 - ☒ C. 6.44
 - ☒ D. 7.18

Question ID : 97675518340

Q.10 _____ is the operation of lifting a weight from one location and moving it to another location which is at a reasonable distance and then dumping it.

- Ans
- ☒ A. Pile driving
 - ☒ B. Hoisting
 - ☒ C. Hauling
 - ☒ D. Conveying

Question ID : 97675518336

Q.11 A False statement regarding the assumptions made in the design of riveted joints.

- Ans
- ☒ A. Stress in a plate is assumed to be uniform
 - ☒ B. Rivets are assumed to be stressed unequally
 - ☒ C. Bending of rivet is neglected
 - ☒ D. Friction between the plates is neglected

Question ID : 97675518344

Q.12 The part of the delay during which the vehicle is at the rest is known as

- Ans
- ☒ A. Operational delay
 - ☒ B. Travel time delay
 - ☒ C. Fixed delay
 - ☒ D. Stopped time delay

Question ID : 97675518350

Q.13 The speed value that occurs most frequently in a sample of spot speeds is known as

- Ans
- ☒ A. Modal speed
 - ☐ B. i th percentile spot speed
 - ☐ C. Average speed
 - ☐ D. Median speed

Question ID : 97675518348

Q.14 A tie bar 50mm x 8mm is to carry a load of 80KN. A specimen of the same quality steel of cross sectional area 250 sq. mm was tested in the laboratory. The maximum load carried by the specimen was 125KN. Find the factor of safety in the design.

- Ans
- ☐ A. 1.5
 - ☒ B. 2.5
 - ☐ C. 1
 - ☐ D. 2

Question ID : 97675518346

Q.15 A False statement regarding the conveyors in construction.

- Ans
- ☐ A. There are no waiting periods
 - ☐ B. Conveyors facilitates continuity in operation
 - ☐ C. Conveyors results in time saving
 - ☒ D. Conveyors decreases the output

Question ID : 97675518337

Q.16 In columns, Effective length factor is defined as

- Ans
- ☒ A. Ratio of effective length to unsupported length
 - ☐ B. Sum of effective length and unsupported length
 - ☐ C. Difference of effective length and unsupported length
 - ☐ D. Product of effective length and unsupported length

Question ID : 97675518342

Q.17 What is the maximum slenderness ratio for a strut connected by a single rivet at each end?

- Ans
- ☐ A. 350
 - ☐ B. 250
 - ☒ C. 180
 - ☐ D. 300

Question ID : 97675518345

Q.18 The distance measured from the exposed concrete surface to the nearest surface of the reinforcing bar is known as

- Ans ☒ A. Clear cover
☐ B. Normal cover
☐ C. Effective cover
☐ D. Nominal cover

Question ID : 97675518341

Q.19 In which type of organization structure, an attempt is made to preserve the strong points of both the line personnel and staff personnel?

- Ans ☐ A. Line organization
☐ B. Functional organization
☐ C. Line and staff organization
☒ D. Matrix organization

Question ID : 97675518338

Q.20 What is the value of impact factor (in %) for frames supporting lifts and hoists?

- Ans ☐ A. 20
☐ B. 50
☐ C. 40
☒ D. 100

Question ID : 97675518343

Section : Discipline4

Q.1 Two forces of magnitude 10N and 8N are acting at a point. If the angle between the two forces is 60° . Determine the magnitude of the resultant force.

- Ans ☐ A. 5.48N
☒ B. 15.62N
☐ C. 11.78N
☐ D. 22.47N

Question ID : 97675518359

Q.2 The SI unit for moment of force is

- Ans ☐ A. Joule
☐ B. Watt
☐ C. Pascal
☒ D. Newton metre

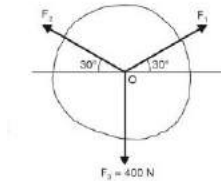
Question ID : 97675518358

Q.3 The elevation of two points A and B on an aerial photograph are 500ft and 565ft respectively. The scales at these points on the photograph are 1:10000 and 1:9870 respectively. Determine the elevation at point C, if the scale at the C is 1:8000.

- Ans**
- ☒ A. 1500ft
 - ☐ B. 3000ft
 - ☐ C. 1200ft
 - ☐ D. 800ft

Question ID : 97675518353

Q.4 Three forces F_1 , F_2 and F_3 are acting on a body as shown in figure. and the body is in equilibrium. If the magnitude of force F_3 is 400N. Find the magnitude of force F_1 .



- Ans**
- ☐ A. 250N
 - ☐ B. 150N
 - ☐ C. 100N
 - ☒ D. 400N

Question ID : 97675518360

Q.5 Which type of drains are used to relieve pore pressures at slopes of cuts and embankments on the highway?

- Ans**
- ☐ A. Longitudinal drains
 - ☐ B. Transverse drains
 - ☒ C. Horizontal drains
 - ☐ D. Drainage blankets

Question ID : 97675518355

Q.6 The distance travelled by a vehicle between the time, the driver observes an object in the vehicle's path and the time the vehicle actually comes to rest is longer than the braking distance is known as

- Ans**
- ☐ A. Passing sight distance
 - ☐ B. Braking distance
 - ☐ C. Displacement
 - ☒ D. Stopping sight distance

Question ID : 97675518357

Q.7 Fluidised bed incinerators can be controlled more effectively to achieve

- Ans**
- ☐ A. Less consistent
 - ☐ B. Higher air emissions
 - ☒ C. Less residual ash
 - ☐ D. Lower energy conversion efficiency

Question ID : 97675518365

Q.8 A False statement regarding the objectives of incineration.

- Ans
- ☐ A. Recovery of energy from waste
 - ☐ B. Stabilization of wastes
 - ☐ C. sterilisation of waste
 - ☒ D. Non reduction of volume

Question ID : 97675518370

Q.9 _____ is a non proprietary technology that requires the composting mixture to be placed in piles that are mechanically in the presence of air.

- Ans
- ☒ A. Aerated static pile composting
 - ☐ B. Anaerated static pile composting
 - ☐ C. Vermicomposting
 - ☐ D. In vessel composting system

Question ID : 97675518369

Q.10 A longitudinal system used to prevent an errant vehicle from crossing the portion of a divided highway separating the travelled ways for traffic in opposite direction is known as:

- Ans
- ☐ A. Gutters
 - ☒ B. Median barriers
 - ☐ C. Curb
 - ☐ D. Guard rails

Question ID : 97675518354

Q.11 What is the mode of action of Jaw crushers (size reduction equipment) ?

- Ans
- ☒ A. Breaking
 - ☐ B. Slicing
 - ☐ C. Mashing
 - ☐ D. Grinding

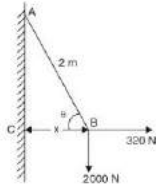
Question ID : 97675518368

Q.12 In which phase of the study in the highway location process, the positions of the feasible routes are set as closely as possible by establishing all the control points and determining preliminary vertical and horizontal alignments for each?

- Ans
- ☐ A. Final location survey
 - ☐ B. Office study of existing information
 - ☐ C. Reconnaissance survey
 - ☒ D. Preliminary location survey

Question ID : 97675518352

Q.13 A body weighing 2000N is suspended with a chain AB 2m long. It is pulled by a horizontal force of 320N as shown in figure. Find the force in the chain.



- Ans
- ☒ A. 5074N
 - ☒ B. 3457N
 - ☒ C. 1485N
 - ☒ D. 202.5N

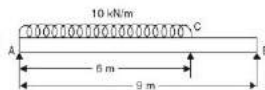
Question ID : 97675518361

Q.14 A driver with a perception - reaction time of 2.5sec is driving at 65mi/h when she observes that an accident has blocked the road ahead. Determine the distance the vehicle would move before the driver could activate the brakes. The vehicle will continue to move at 65mi/h during the perception - reaction time of 2.5sec.

- Ans
- ☒ A. 477.58ft
 - ☒ B. 378.55ft
 - ☒ C. 238.9ft
 - ☒ D. 500.74ft

Question ID : 97675518356

Q.15 A simply supported beam AB of length 9m , carries a uniformly distributed load of 10kN/m for a distance of 6m from the left end. Calculate the reaction at A.



- Ans
- ☒ A. 35KN
 - ☒ B. 15KN
 - ☒ C. 40KN
 - ☒ D. 10KN

Question ID : 97675518362

Q.16 The centre of gravity of a parallelogram lies at

- Ans
- ☒ A. A point where its diagonals meet each other
 - ☒ B. Ends
 - ☒ C. 1/3rd from the base
 - ☒ D. 2/3rd from the base

Question ID : 97675518364

Q.17 Which method of land filling involves the deposition of waste within preconstructed bounded area?

- Ans ☐ A. Trench method
☐ B. Depression
☐ C. Area method
☒ D. Cell method

Question ID : 97675518366

Q.18 Select the False statement regarding the laws of solid friction.

- Ans ☐ A.
The force of friction is equal to the force applied to the surface, so long as the surface is at rest
☒ B.
The limiting frictional force depends upon the shape and areas of the surfaces in contact
☐ C.
The limiting frictional force bears a constant ratio to the normal reaction between two surfaces
☐ D.
The force of friction acts in the opposite direction in which surface is having tendency to move

Question ID : 97675518363

Q.19 A False statement regarding the benefits of compaction is

- Ans ☐ A.
Reduction in the quantity of materials to be handled at the disposal site
☒ B. Decrease in efficiency of collection and disposal of wastes
☐ C. Increased life of landfills
☐ D. Economically viable waste management system

Question ID : 97675518367

Q.20 The total number of vehicles that park in a study area during a specific length of time, usually a day is known as

- Ans ☐ A. Parking accumulation
☒ B. Parking volume
☐ C. Parking load
☐ D. Parking duration

Question ID : 97675518351

Section : Discipline5

Q.1 As per IS 67-2001 the sign that is used to caution the driver of the danger of side winds which endanger the lives of travellers is:

- Ans ☐ A. Lane closures
☒ B. Sudden side winds
☐ C. Series of bends
☐ D. Reduced carriageway

Question ID : 97675518385

Q.2 The minimum allowable factor of safety against sliding in the case of cantilever retaining wall is

- Ans**
- ☐ A. 2
 - ☒ B. 1.5
 - ☐ C. 2.5
 - ☐ D. 3

Question ID : 97675518377

Q.3 Rigidity factor is defined as

- Ans**
- ☐ A. Sum of contact pressure and Tyre pressure
 - ☐ B. Product of contact pressure and Tyre pressure
 - ☐ C. Difference between contact pressure and Tyre pressure
 - ☒ D. Ratio of contact pressure and Tyre pressure

Question ID : 97675518383

Q.4 A sample of sand has a volume of 1000ml in its natural state. Its minimum volume when compacted is 840ml. When gently poured in a measuring cylinder, its maximum volume is 1370ml. Determine the relative density.

- Ans**
- ☐ A. 47.52%
 - ☐ B. 82.41%
 - ☐ C. 54.77%
 - ☒ D. 69.81%

Question ID : 97675518373

Q.5 A beaker is filled with 1L liquid & weight of the same was found to be 6N. What is the specific weight of the liquid ?

- Ans**
- ☐ A. $0.6 \times 10^{-3} \text{ N/m}^3$
 - ☐ B. $6 \times 10^{-3} \text{ N/m}^3$
 - ☒ C. $6 \times 10^3 \text{ N/m}^3$
 - ☐ D. $0.6 \times 10^3 \text{ N/m}^3$

Question ID : 97675518388

Q.6

Which is the conjugate beam for the real beam shown in the figure.



Ans

✓ A.



✗ B.



✗ C.



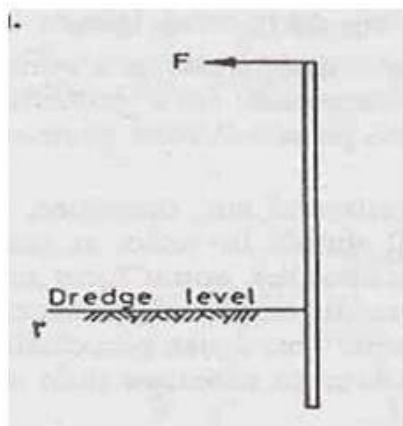
✗ D.



Question ID : 97675518380

Q.7

Identify the type of pile.



Ans

✗ A. Fixed earth support pile

✓ B. Free cantilever sheet pile

✗ C. Free earth support pile

✗ D. Anchored sheet pile

Question ID : 97675518376

Q.8 Calculate the equivalent radius of resisting section of 20cm slab, given that the radius of contact area wheel load is 15cm.

- Ans**
- ☒ A. 20.41cm
 - ☒ B. 24.78cm
 - ☒ C. 30.74cm
 - ☒ D. 14.07cm

Question ID : 97675518384

Q.9 The number of buckets of Pelton wheel is 25m and diameter of pitch is 1.5 m. What is the diameter of the jet ?

- Ans**
- ☒ A. 0.5m
 - ☒ B. 1m
 - ☒ C. 0.075m
 - ☒ D. 2m

Question ID : 97675518390

Q.10 Estimate the capillary rise in a soil with a void ratio of 0.60 and an effective size of 0.01mm. Take $C = 15 \text{ sq. mm}$

- Ans**
- ☒ A. 1470mm
 - ☒ B. 3114mm
 - ☒ C. 5025mm
 - ☒ D. 2500mm

Question ID : 97675518374

Q.11 Which method for mat foundations is based on the assumption that the soil behaves like an infinite number of individual independent elastic springs?

- Ans**
- ☒ A. Simplified elastic method
 - ☒ B. Non linear elastic method
 - ☒ C. Rigid beam method
 - ☒ D. Elastic method

Question ID : 97675518378

Q.12 A False statement regarding the assumptions made for the analysis of trusses.

- Ans**
- ☒ A. All members are connected only at their ends by frictionless ball and socket joints in space trusses
 - ☒ B. The centroidal axis of each member does not coincide with the line connecting the centres of the adjacent joints
 - ☒ C. All members are connected only at their ends by frictionless in plane trusses
 - ☒ D. All loads and support reactions are applied only at the joints

Question ID : 97675518379

Q.13 In soil stabilization, _____ is a semi hardened or unhardened mixture of water, Portland cement and finely crushed soil and this mixture has less cement content.

- Ans
- ☒ A. Plastic soil cement
 - ☒ B. Cement modified soil
 - ☒ C. Soil cement
 - ☒ D. Cement stabilized soil

Question ID : 97675518386

Q.14 _____ can be used to determine the quantitative influence lines.

- Ans
- ☒ A. Flexibility matrix method
 - ☒ B. Stiffness method
 - ☒ C. Maxwell's reciprocal theorem
 - ☒ D. Muller Breslau's principle

Question ID : 97675518381

Q.15 A False statement regarding the assumptions of Coulomb's wedge theory.

- Ans
- ☒ A. The sliding wedge itself acts as a rigid body
 - ☒ B. The slip surface is a plane surface which passes through the heel of the wall
 - ☒ C. The backfill is dry, cohesionless and homogeneous
 - ☒ D. The wall surface is smooth

Question ID : 97675518375

Q.16 _____ is a force method.

- Ans
- ☒ A. Slope deflection method
 - ☒ B. Kani's method
 - ☒ C. Consistent deformation method
 - ☒ D. Stiffness matrix method

Question ID : 97675518382

Q.17 The most accurate method for the determination of water content in the laboratory is

- Ans
- ☒ A. oven drying method
 - ☒ B. Pycnometer method
 - ☒ C. Sand bath method
 - ☒ D. Calcium carbide method

Question ID : 97675518372

Q.18 What is the hydraulic mean depth of a rectangular duct having 5m width and 3m depth

- Ans
- ☐ A. 3.2m
 - ☐ B. 2m
 - ☒ C. 1.3m
 - ☐ D. 4m

Question ID : 97675518387

Q.19 The Mass of solids per unit total volume of soil mass is known as

- Ans
- ☒ A. Dry mass density
 - ☐ B. Submerged mass density
 - ☐ C. Bulk mass density
 - ☐ D. Saturated mass density

Question ID : 97675518371

Q.20 Francis tube is a:

- Ans
- ☐ A. Impulse turbine
 - ☐ B. Turgo turbine
 - ☒ C. Reaction turbine
 - ☐ D. Screw turbine

Question ID : 97675518389