GOVT. OF NCT OF DELHI
Delhi Subordinate Services Selection Board
FC-18, Institutional Area, Karkardooma, Delhi – 110092.
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Participant ID	
Participant Name	
Test Center Name	iON Digital Zone iDZ 1 GT Karnal Road
Test Date	29/06/2022
Test Time	12:30 PM - 2:30 PM
Subject	Junior Engineer (Civil) or Section Officer (Civil)

Section : **Mental Ability**

Q.1 **Two statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.**

Statement:
No senior is junior.
All officers are seniors.

Conclusions:
I. No officer is junior.
II. Some officers are juniors.

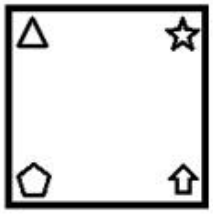
Ans
✗ A. Either conclusion I or II follows
✓ B. Only Conclusion I follows
✗ C. Only Conclusion II follows
✗ D. Both conclusions I and II follow

Question ID : **1841223698**

Q.2 Three of the following four option figures are similar in a certain manner while one is different. Choose the odd one out.

Ans

✗ A.



✓ B.

✗ C.

✗ D.

Question ID : **1841223709**

Q.3 If
A + B means 'A is the sister of B'
A = B means 'A is the mother of B'
A & B means 'A is the son of B'

What is the meaning of the expression 'M + T = R & K'?

Ans

✗ A. M is the sister of K's son.

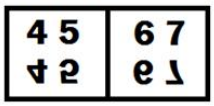
✓ B. M is the sister of K's wife.

✗ C. M is the daughter of K's son.

✗ D. M is the mother of K's son.

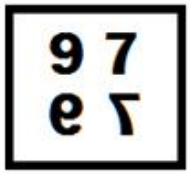
Question ID : **1841223703**

Q.4 Select the figure amongst the option figures which has the same characteristics as the two figures given below.



Ans

✗ A.



✗ B.

✗ C.

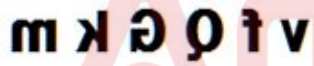
✓ D.

Question ID : **1841223710**

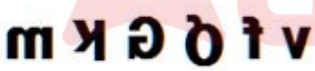
Q.5 Select the correct mirror image of the given combination when the mirror is placed at 'PQ' as shown below.

Ans

✓ A.

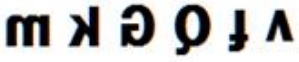


✗ B.



✗ C.

✗ D.



Question ID : **1841223711**

Q.6 एक कथन के बाद दो कल्पनाएं क्रमांकित I और II दी गई हैं। कथन में दी गई सभी बातों को सत्य मानते हुए, निर्णय लीजिए कि कौन सी कल्पना/कल्पनाएं कथन में निहित है/हैं?

कथन:
खाद्य निरीक्षक ने खाद्य मानकों का पालन न करने पर कुछ मिठाई की दुकानों पर रोक लगा दी है और प्रत्येक दुकान पर बीस हजार रुपये का जुर्माना लगाया है।

कल्पनाएं:
I. प्रमाणित खाद्य संबंधी मानदंडों का पालन न करने वाली मिठाई की दुकानों की संख्या मुख्य रूप से त्योहारों के मौसम में बढ़ जाती है।
II. खाद्य निरीक्षकों को उन मामलों में मिठाई की दुकानों पर जुर्माना लगाने का अधिकार है जहां खाद्य मानकों का अनुपालन नहीं किया जाता है।

Ans
✔ A. केवल II निहित है।
✘ B. केवल I निहित है।
✘ C. I और II, दोनों निहित हैं।
✘ D. न तो I और न ही II निहित हैं।

Question ID : **1841223707**

Q.7 Which number in the following series is wrong?

17, 18, 38, 117, 472, 2375

Ans
✘ A. 117
✔ B. 2375
✘ C. 38
✘ D. 472

Question ID : **1841223714**

Q.8 Three of the following four letter-clusters are alike in some manner and one is different. Identify the one which is different.

Ans
✔ A. SWY
✘ B. NRU
✘ C. TXA
✘ D. QUX

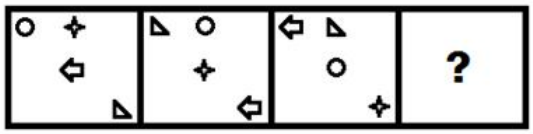
Question ID : **1841223705**

Q.9 If T < H = K < L = P > E > D = S then which of the following conclusions is NOT correct?

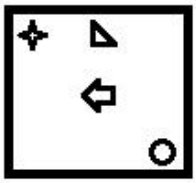
Ans
✘ A. D < P
✘ B. P > H
✔ C. P < T
✘ D. T < L

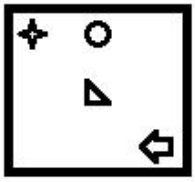
Question ID : **1841223699**

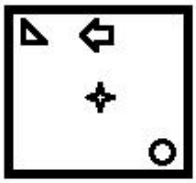
Q.10 Select the figure that will replace the question mark (?) in the following figure series.

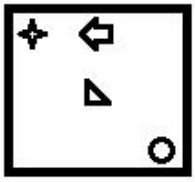


Ans

✗ A. 

✗ B. 

✗ C. 

✓ D. 

Question ID : **1841223708**

Q.11 Which two numbers should be interchanged to make the given equation correct?

$35 - 55 + 28 \div 4 \times 16 = 132$

Ans

✗ A. 16 and 28

✓ B. 35 and 55

✗ C. 32 and 28

✗ D. 35 and 16

Question ID : **1841223716**

Q.12 **In a class of 40 students, Divya scores 11th rank from the top. Agatha scores 21st rank from the bottom. How many students score lesser marks than Divya but more marks than Agatha?**

Ans

✗ A. 7

✗ B. 10

✓ C. 8

✗ D. 9

Question ID : **1841223697**

Q.13 **Which number will replace the question mark (?) in the following series?**

7, 15, 42, 106, 231, ?

Ans
✗ A. 296
✗ B. 317
✗ C. 348
✓ D. 447

Question ID : **1841223713**

Q.14 **Select the option that is related to the third term in the same way as the second term is related to the first term.**

OMD-11 : QPH-127 :: KSV-15 : _____

Ans
✓ A. MVZ-231
✗ B. MUZ-231
✗ C. MVA-221
✗ D. MVY-235

Question ID : **1841223704**

Q.15 **Swapnil starts walking from his home and goes 45 m north then he turns left and walks 40 m. After that, he turns left again and walks 75 m to reach an ATM. What is the shortest distance between his home and the ATM?**

Ans
✗ A. 40 m
✗ B. 45 m
✓ C. 50 m
✗ D. 35 m

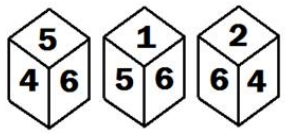
Question ID : **1841223702**

Q.16 **Three of the following four letter-cluster pairs are alike in some manner and one is different. Identify the one which is different.**

Ans
✗ A. COPE : FRRG
✗ B. MIST : UULQ
✓ C. SORT : UTSV
✗ D. DECK : LEHH

Question ID : **1841223706**

Q.17 Three different positions of the same dice are shown, the six faces of which are numbered from 1 to 6. Select the number that will be on the face opposite to the one showing '5'.



Ans
- ✗ A. 6
- ✓ B. 2
- ✗ C. 3
- ✗ D. 4

Question ID : **1841223712**

Q.18 **In a code language, MANGO is written as 250, SPY is written as 180. How FASTER would be written as in the same language?**

Ans
- ✗ A. 386
- ✗ B. 144
- ✓ C. 414
- ✗ D. 318

Question ID : **1841223701**

Q.19 **Three of the following four number triads are alike in some manner and one is different. Identify the one which is different.**

Ans
- ✗ A. (25, 106, 9)
- ✓ B. (10, 186, 14)
- ✗ C. (15, 79, 8)
- ✗ D. (19, 163, 12)

Question ID : **1841223715**

Q.20 **Select the letter cluster that is wrong in the following series.**

TH-9, YL-15, BP-25, FT-36, JX-49

Ans
- ✗ A. JX-49
- ✗ B. BP-25
- ✗ C. FT-36
- ✓ D. YL-15

Question ID : **1841223700**

Section : **General Awareness**

Q.1 Inland waterways authority was set up in the year?

Ans
✗ A. 1966
✓ B. 1986
✗ C. 1976
✗ D. 1996

Question ID : **1841223732**

Q.2 The western disturbances primarily originate in _____.

Ans
✓ A. Mediterranean Sea
✗ B. Bay of Bengal
✗ C. South China Sea
✗ D. Arabian Sea

Question ID : **1841223733**

Q.3 Asian Development Bank was established in the year?

Ans
✗ A. 1982
✗ B. 1978
✗ C. 1985
✓ D. 1966

Question ID : **1841223730**

Q.4 Alauddin Khalji ruled Delhi Sultanat from:

Ans
✗ A. 1320 - 1330 AD
✗ B. 1315 - 1330 AD
✓ C. 1296 - 1316 AD
✗ D. 1280 - 1320 AD

Question ID : **1841223724**

Q.5 चीनी का रौजा स्मारक कहां स्थित है?

Ans
✓ A. आगरा
✗ B. अजमेर
✗ C. हिसार
✗ D. नई दिल्ली

Question ID : **1841223727**

Q.6 Which article of the Constitution deals with transfer of a judge from one high court to another?

Ans
✗ A. 230
✗ B. 215
✓ C. 222
✗ D. 220

Question ID : **1841223736**

Q.7 The James Web Space Telescope was launched in December 2021 through.

Ans
✗ A. Arian 4 rocket
✓ B. Arian 5 rocket
✗ C. Arian 1 rocket
✗ D. Arian 2 rocket

Question ID : **1841223718**

Q.8 What was the rural literacy rate as per the census 2011?

Ans
✗ A. 55 percent
✓ B. 67.8 percent
✗ C. 62.3 percent
✗ D. 60.6 percent

Question ID : **1841223731**

Q.9 निम्नलिखित में से किसने स्वतंत्रता संग्राम के दौरान उत्तरी अमेरिका में '*फ्री हिंदुस्तान*' प्रकाशित किया था?

Ans
✗ A. भगत सिंह
✓ B. तारक नाथ दास
✗ C. लाला लाजपत राय
✗ D. सुभाष चंद्र बोस

Question ID : **1841223725**

Q.10 In which year Sports Authority of India (SAI) was set up?

Ans
✗ A. 1980
✓ B. 1984
✗ C. 1995
✗ D. 1991

Question ID : **1841223722**

Q.11 निशागंधी नृत्य महोत्सव कहां मनाया जाता है?

Ans
✗ A. पंजाब
✗ B. राजस्थान
✗ C. उतार प्रदेश
✓ D. केरल

Question ID : **1841223729**

Q.12 At which place A super computer made in India, named 'PARAM Ganga' 1.66 petaflops was installed in March 2022?

Ans
✓ A. IIT Roorkee
✗ B. IIM Bengaluru
✗ C. MNIT Jaipur
✗ D. IIT Jodhpur

Question ID : **1841223717**

Q.13 निम्नलिखित में से कौन-सा बहुकोशिकीय जीव होता है?

Ans
✗ A. अमीबा
✓ B. कवक
✗ C. जीवाणु
✗ D. पैरामीशियम

Question ID : **1841223734**

Q.14 In which year Central Social Welfare Board was established?

Ans
✗ A. 1959
✓ B. 1953
✗ C. 1978
✗ D. 1963

Question ID : **1841223721**

Q.15 संविधान के किस अनुच्छेद में उल्लेख है कि "किसी भी अपराध के आरोपी व्यक्ति को अपने खिलाफ गवाह बनने के लिए मजबूर नहीं किया जाएगा"?

Ans
✓ A. 20 (3)
✗ B. 22 (4)
✗ C. 19 (5)
✗ D. 23 (2)

Question ID : **1841223735**

Q.16 In which year 'Science and Technology of Yoga and Meditation' (SATYAM) program was conceptualized?

Ans
✗ A. 2008
✗ B. 2010
✗ C. 2013
✓ D. 2015

Question ID : **1841223719**

Q.17 In which year during freedom struggle Trade Union act was passed?

Ans
✗ A. 1916
✓ B. 1926
✗ C. 1932
✗ D. 1930

Question ID : **1841223726**

Q.18 Central Institute of Himalayan Culture Studies (CIHCS) is situated in _____.

Ans
✗ A. Nagalnd
✓ B. Arunachal Pradesh
✗ C. Himachal Pradesh
✗ D. Manipur

Question ID : **1841223728**

Q.19 How many times Indian cricket team has won ICC Under 19 World Cup till March 2022?

Ans
✓ A. Five times
✗ B. Seven times
✗ C. Three times
✗ D. Two times

Question ID : **1841223723**

Q.20 'Nai Manzil' a scheme to benefit the minority youth who do not have formal school leaving certificate was launched in the year?

Ans
✗ A. 2011
✗ B. 2013
✓ C. 2015
✗ D. 2008

Question ID : **1841223720**

Section : **Arithmetic Ability**

Q.1 When we increase both the numerator and denominator by 5, a fraction changes to 7/8. Find the original fraction.

Ans
✗ A. 3/2
✓ B. 2/3
✗ C. 1/4
✗ D. 1/3

Question ID : **1841223742**

Q.2 A ball of diameter 14 cm is floating so that the top of ball is 6 cm above the smooth surface of the pond. What is the circumference in centimeters of the circle formed by the contact of the water surface with the ball?

Ans
✗ A. $5\pi\sqrt{10}$ cm
✗ B. $4\pi\sqrt{20}$ cm
✗ C. $2\pi\sqrt{10}$ cm
✓ D. $4\pi\sqrt{10}$ cm

Question ID : **1841223751**

Q.3 3 liters of pure spirit is added to 5 litres of a spirit solution contains 20% spirit. What is the concentration of the spirit in the resultant solution?

Ans
✗ A. 60%
✗ B. 65%
✓ C. 50%
✗ D. 55%

Question ID : **1841223749**

Q.4 तालिका को पढ़िए और निम्नलिखित प्रश्न का उत्तर दीजिए।

व्यावसायिक पाठ्यक्रमों के अनुसार ABC में छात्रों का वितरण।

क्र.सं	पाठ्यक्रम	छात्र			
		अभियांत्रिकी		गैर-अभियांत्रिकी	
		लड़कियाँ	लड़के	लड़कियाँ	लड़के
1	प्रबंधन विज्ञान	20	42	20	55
2	कंप्यूटर	25	168	22	30
3	वित्त	23	110	15	56
4	अन्य	18	102	5	8

सभी पाठ्यक्रमों को मिलाने पर, लड़कों की संख्या लड़कियों की संख्या से कितने प्रतिशत अधिक है?

Ans
✗ A. 287.5
✗ B. 286.5
✗ C. 284.5
✓ D. 285.8

Question ID : **1841223755**

Q.5 What will be the remainder when $(57^{57} + 57)$ is divided by 58.

Ans
✗ A. 58
✗ B. 55
✓ C. 56
✗ D. 57

Question ID : **1841223737**

Q.6 एक त्रिभुज की दो भुजाएँ 5 cm और 6 cm हैं जो एक दूसरे के लंबवत हैं, तो त्रिभुज के क्षेत्रफल के लिए, निम्नलिखित में से कौन-सी असमानता सर्वाधिक सटीक है?

Ans
✗ A. <15
✗ B. ≠15
✗ C. >15
✓ D. =15

Question ID : **1841223752**

Q.7 Two persons are walking with the speed A and B respectively. If the first person takes 5min less to cover a distance, what is the time taken by the second person to cover the same distance provided A : B = 4 : 3.

Ans
✗ A. 16 min
✓ B. 20 min
✗ C. 21 min
✗ D. 18 min

Question ID : **1841223746**

Q.8 According to Boyle's law, at a constant temperature pressure of a definite mass of gas is inversely proportional to the volume. If the pressure is reduced by 25%, find the respective change in volume.

Ans
✗ A. 33.7%
✗ B. 34.2%
✗ C. 31.2%
✓ D. 33.3%

Question ID : **1841223741**

Q.9 A papaya is cut into two pieces in the ratio of 3 : 4 by weight. The bigger of the two is further cut in the ratio of 4 : 5 by weight. Find the ratio of each of the three pieces.

Ans
✗ A. 25 : 16 : 20
✗ B. 27 : 16 : 25
✗ C. 27 : 15 : 20
✓ D. 27 : 16 : 20

Question ID : **1841223743**

Q.10 At Simple interest a sum of money amounts to four times its original value in 4 years. Find rate of interest.

Ans
✗ A. 77%
✗ B. 78%
✓ C. 75%
✗ D. 76%

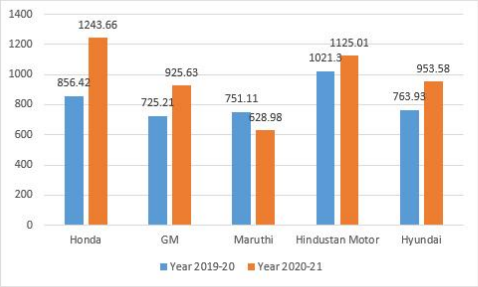
Question ID : **1841223744**

Q.11 2 liters of pure milk is added to 8 liters of a milk solution containing 8% milk. Find the percentage concentration of the resultant solution.

Ans
✓ A. 26.4%
✗ B. 26.8%
✗ C. 27%
✗ D. 27.4%

Question ID : **1841223750**

Q.12 Study the following bar chart carefully and answer the question.



What is the percentage change in the overall sales turnover of the five companies together between 2019-20 to 2020-21.

Ans
- ✗ A. 18.7
- ✗ B. 18.1
- ✓ C. 18.4
- ✗ D. 18.8

Question ID : **1841223756**

Q.13 **The diameter of a road roller is 36 cm and its length is 84 cm. it takes 300 complete revolutions moving once over to level the stretch of the road. If the cost of leveling is ₹80 per m^2, then the total cost of leveling works out to.**

Ans
- ✓ A. ₹22,809.6
- ✗ B. ₹21,635.6
- ✗ C. ₹21,506.6
- ✗ D. ₹21,809.6

Question ID : **1841223754**

Q.14 **The height of a cone is 25 cm. A small cone is cutoff at the top by a plane parallel to the base. The volume of this smaller cone 1/8^{th} of the given cone. What is the height of the smaller cone?**

Ans
- ✗ A. 11.5 cm
- ✗ B. 12 cm
- ✓ C. 12.5 cm
- ✗ D. 11 cm

Question ID : **1841223753**

Q.15 **In a kilometer race Ravi beats Rahul by 150 m and Rahul beats Rakesh by 240 m. By how many meters does Ravi beat Rakesh in the same race.**

Ans
- ✗ A. 352 m
- ✓ B. 354 m
- ✗ C. 353 m
- ✗ D. 351 m

Question ID : **1841223748**

Q.16 A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 142 seconds, B in 208 seconds and C in 96 seconds all started at the same point. After what time will they meet again at the starting point?

Ans
✗ A. 1476.28 min
✗ B. 1376.8 min
✗ C. 1576.8 min
✓ D. 1476.8 min

Question ID : **1841223739**

Q.17 The difference of two numbers is 1067. On dividing the larger number by the smaller we get 4 as a quotient and 11 as remainder. Find the smaller number.

Ans
✗ A. 354
✗ B. 353
✓ C. 352
✗ D. 351

Question ID : **1841223738**

Q.18 When the speed of a train is increased by 25%, it takes 25 min less to cover the same distance. What is the time taken to cover the same distance with the actual speed?

Ans
✗ A. 47 min
✗ B. 46 min
✓ C. 60 min
✗ D. 49 min

Question ID : **1841223747**

Q.19 यात्रियों से भरी एक ट्रेन चलना शुरू करती है। पहले स्टेशन पर यात्रियों का $\frac{1}{5}$ (एक-पाँचवाँ) हिस्सा उतर जाता है तथा 320 और यात्री चढ़ जाते हैं। दूसरे स्टेशन पर नए लोगों का $\frac{3}{5}$ हिस्सा उतर जाता है तथा 10 और यात्री चढ़ जाते हैं। तीसरे स्टेशन पर पहुँचने पर पता चलता है कि इसमें 250 यात्री सवार हैं। शुरुआत में यात्रियों की संख्या ज्ञात कीजिए।

Ans
✗ A. 111
✓ B. 100
✗ C. 121
✗ D. 101

Question ID : **1841223740**

Q.20 A man takes a loan of Rs. 25,000 and pays back Rs. 27,040 after 2 years. What is the rate of compound interest?

Ans
✗ A. 2%
✗ B. 3%
✓ C. 4%
✗ D. 6%

Question ID : **1841223745**

Section : **General English**

Q.1 **Select the correctly spelt word.**

Ans
- ✗ A. excead
- ✗ B. categary
- ✗ C. forein
- ✓ D. whether

Question ID : **1841223768**

Q.2 **Fill in the blank with the most appropriate word.**

I feel that I _____ a turning point in my life.

Ans
- ✗ A. reached
- ✓ B. have reached
- ✗ C. reach
- ✗ D. was reaching

Question ID : **1841223761**

Q.3 **Select the correct antonym of the given word.**

immense

Ans
- ✓ A. small
- ✗ B. sharp
- ✗ C. infinite
- ✗ D. blunt

Question ID : **1841223763**

Q.4 **Select the correct meaning of the given idiom.**

Break fresh ground

Ans
- ✓ A. to do or discover something new
- ✗ B. to prepare the soil for sowing crops
- ✗ C. to dig in a fresh space
- ✗ D. to bury something underground

Question ID : **1841223766**

Q.5 **Select the correct meaning of the given idiom.**

sell like hot cakes

Ans
- ✗ A. to sell bad quality products
- ✗ B. to sell good quality products
- ✗ C. to be sold at a loss
- ✓ D. to be sold quickly and in large quantities

Question ID : **1841223765**

Q.6 **Fill in the blank with the most appropriate word.**

He made tall _____ of his achievements.

Ans
✗ A. Requests
✗ B. Please
✗ C. Demands
✓ D. Claims

Question ID : **1841223770**

Q.7 **Fill in the blank with the most appropriate word.**

Our _____ is a man of _____.

Ans
✗ A. principle, principal
✓ B. principal, principle
✗ C. principal, principal
✗ D. principle, principle

Question ID : **1841223764**

Q.8 **Select the correct meaning of the given proverb.**

a bird in hand is worth two in the bush

Ans
✗ A. one rare bird is valued more than two common ones
✗ B. a bird that is caught warns others on the tree
✓ C. what you already possess is better than what you might possess
✗ D. what you cannot achieve appears to be more precious

Question ID : **1841223767**

Q.9 **Identify the grammatically correct sentence.**

Ans
✗ A. Doing this job from evening till morning quite tired I am of monotonous.
✗ B. This monotonous job quite tired of I am doing from morning till evening.
✗ C. I am quite monotonous of doing this tired job from evening till morning.
✓ D. I am quite tired of doing this monotonous job from morning till evening.

Question ID : **1841223769**

Q.10 **Fill in the blank with the most appropriate word.**

He waited _____ for me at the gate.

Ans
✗ A. slowly
✗ B. slightly
✗ C. strictly
✓ D. patiently

Question ID : **1841223759**

Q.11 Select the correct synonym of the given word.

havoc

Ans
✗ A. boon
✓ B. chaos
✗ C. peace
✗ D. calm

Question ID : **1841223762**

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

The man narrated an _____ tale of valour.

Ans
✓ A. Incredible
✗ B. Optimum
✗ C. Efficient
✗ D. Auspicious

Question ID : **1841223771**

Q.13 Fill in the blank with the most appropriate word.

My dress _____ after one wash.

Ans
✗ A. shrink
✗ B. was shrinking
✗ C. shrinks
✓ D. shrunk

Question ID : **1841223760**

Q.14 Fill in the blank with the most appropriate word.

Her face is familiar _____ us.

Ans
✗ A. with
✓ B. to
✗ C. at
✗ D. by

Question ID : **1841223757**

Q.15 Fill in the blank with the most appropriate word.

I enquired _____ him about his date of travel.

Ans
✗ A. into
✗ B. off
✗ C. from
✓ D. of

Question ID : **1841223758**

Comprehension:

Read the passage and answer the questions that follow.

Jane Goodall was born in London on April 3, 1934. On her second birthday, her father gave her a toy chimpanzee named Jubilee. Jubilee was named after a baby chimp in the London Zoo and seemed to foretell the course that Jane's life would take.
In July 1960, Jane arrived at Gombe National Park, Tanzania to study the chimpanzees in the wild. Jane faced many challenges as she began her work. The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory. But she was very patient and remained focussed on her goal.
At first, she was able to watch the chimpanzees only from a great distance, using binoculars. As time passed, she moved closer to them while still using camouflage. Eventually, she was able to sit among them, touching, patting, and even feeding them. It was an amazing accomplishment for Jane and a breakthrough in the study of animals in the wild. Jane named all the chimpanzees that she studied, stating that she felt each had a unique personality.
One of the first significant observations that Jane made was that chimpanzees make and use tools, much like humans do, to help them get food. Also, that chimps eat meat as well as plants and fruits. In many ways, she has helped us to see how chimpanzees and humans are similar.
The study started by Jane Goodall in 1960 is now the longest field study of any animal species in their natural habitat. Dr Jane Goodall is now the world's most renowned authority on chimpanzees, having studied their behaviour for nearly 40 years. She has published many scientific articles. She has written two books and has won numerous awards for her ground-breaking work.

SubQuestion No : 16

Q.16 Which of the given statements is true?

1. Jane named all the chimpanzees that she studied.
2. Jane felt each chimpanzee had a unique personality.

Ans

✗ A. Statement 1 is the cause of statement 2

✗ B. Statement 2 is the effect of statement 1

✗ C. Statement 1 is not related to statement 2

✓ D. Statement 2 is the cause of statement 1

Question ID : **1841223777**

Comprehension:

Read the passage and answer the questions that follow.

Jane Goodall was born in London on April 3, 1934. On her second birthday, her father gave her a toy chimpanzee named Jubilee. Jubilee was named after a baby chimp in the London Zoo and seemed to foretell the course that Jane's life would take.
In July 1960, Jane arrived at Gombe National Park, Tanzania to study the chimpanzees in the wild. Jane faced many challenges as she began her work. The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory. But she was very patient and remained focussed on her goal.
At first, she was able to watch the chimpanzees only from a great distance, using binoculars. As time passed, she moved closer to them while still using camouflage. Eventually, she was able to sit among them, touching, patting, and even feeding them. It was an amazing accomplishment for Jane and a breakthrough in the study of animals in the wild. Jane named all the chimpanzees that she studied, stating that she felt each had a unique personality.
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SubQuestion No : 17

Q.17 Which of these is NOT a similarity between humans and chimpanzees?

Ans

✗ A. Using tools to procure food

✓ B. Using camouflage for survival

✗ C. Eating meat as well as plants

✗ D. Making tools

Question ID : **1841223775**

Comprehension:

Read the passage and answer the questions that follow.

Jane Goodall was born in London on April 3, 1934. On her second birthday, her father gave her a toy chimpanzee named Jubilee. Jubilee was named after a baby chimp in the London Zoo and seemed to foretell the course that Jane's life would take.
In July 1960, Jane arrived at Gombe National Park, Tanzania to study the chimpanzees in the wild. Jane faced many challenges as she began her work. The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory. But she was very patient and remained focussed on her goal.
At first, she was able to watch the chimpanzees only from a great distance, using binoculars. As time passed, she moved closer to them while still using camouflage. Eventually, she was able to sit among them, touching, patting, and even feeding them. It was an amazing accomplishment for Jane and a breakthrough in the study of animals in the wild. Jane named all the chimpanzees that she studied, stating that she felt each had a unique personality.
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SubQuestion No : 18

Q.18 At first, Jane observed the chimps from a distance because:

Ans

✗ A. she could observe them better through the binoculars

✓ B. the chimps were not comfortable with her presence

✗ C. she had no access to the deep forests

✗ D. she was attacked by them and had to remain hidden

Question ID : **1841223773**

Comprehension:

Read the passage and answer the questions that follow.

Jane Goodall was born in London on April 3, 1934. On her second birthday, her father gave her a toy chimpanzee named Jubilee. Jubilee was named after a baby chimp in the London Zoo and seemed to foretell the course that Jane's life would take.
In July 1960, Jane arrived at Gombe National Park, Tanzania to study the chimpanzees in the wild. Jane faced many challenges as she began her work. The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory. But she was very patient and remained focussed on her goal.
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SubQuestion No : 19

Q.19 What can be regarded as an achievement of Jane Goodall?

Ans

✗ A. publishing articles and books on chimpanzees

✗ B. watching chimpanzees from a great distance

✓ C. touching, petting and feeding chimpanzees

✗ D. naming all the chimpanzees that she was studying

Question ID : **1841223774**

Comprehension:

Read the passage and answer the questions that follow.

Jane Goodall was born in London on April 3, 1934. On her second birthday, her father gave her a toy chimpanzee named Jubilee. Jubilee was named after a baby chimp in the London Zoo and seemed to foretell the course that Jane's life would take.
In July 1960, Jane arrived at Gombe National Park, Tanzania to study the chimpanzees in the wild. Jane faced many challenges as she began her work. The chimpanzees did not accept her right away, and it took months for them to get used to her presence in their territory. But she was very patient and remained focussed on her goal.
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One of the first significant observations that Jane made was that chimpanzees make and use tools, much like humans do, to help them get food. Also, that chimps eat meat as well as plants and fruits. In many ways, she has helped us to see how chimpanzees and humans are similar.
The study started by Jane Goodall in 1960 is now the longest field study of any animal species in their natural habitat. Dr Jane Goodall is now the world's most renowned authority on chimpanzees, having studied their behaviour for nearly 40 years. She has published many scientific articles. She has written two books and has won numerous awards for her ground-breaking work.

SubQuestion No : 20

Q.20 The word 'breakthrough' as used in the passage means:

Ans

✗ A. a short vacation for rejuvenation

✗ B. a forced or dictated action

✗ C. a gap or shortcoming in a theory

✓ D. a sudden, important discovery

Question ID : **1841223776**

Section : **General Hindi**

Q.1 वाक्य विन्यास की दृष्टि से अशुद्ध वाक्य है-

Ans

✗ A. गुलाब के फूल–जैसा शिशु का मुख किसे मुग्ध नहीं करता?

✗ B. दारोगा गुस्से में बड़े ज़ोरों से दाँत पीसता हुआ जा रहा था।

✓ C. नाच के समय खुलकर फैल जाते हैं मोर के बहुत बड़े पंखे जैसे पंख।

✗ D. न जाने कितने लोग इस बार भी बाढ़ के पेट में समा गए।

Question ID : **1841223789**

Q.2 'वह ऐसे ही लिखता रहे तो उसकी किताब पूरी ही हो जाए।' वाक्य उदाहरण है-

Ans

✗ A. सामान्य भविष्य का

✗ B. संभाव्य भविष्य का

✗ C. संभाव्य वर्तमान का

✓ D. हेतुहेतुमद्भविष्य का

Question ID : **1841223788**

Q.3 'कृदन्त' का संधि विच्छेद होगा-

Ans
✗ A. कृद्य + अंत
✗ B. कृत्य + अंत
✓ C. कृत् + अंत
✗ D. कृद् + अंत

Question ID : **1841223782**

Q.4 'अन्वय' में संधि है-

Ans
✗ A. दीर्घ संधि
✗ B. गुण संधि
✓ C. यण् संधि
✗ D. अयादि संधि

Question ID : **1841223781**

Q.5 वाक्य विन्यास की दृष्टि से शुद्ध वाक्य है-

Ans
✗ A. टुकड़े-टुकड़े कर दिए मेघा ने पन्ने फाड़ कर पुस्तक के।
✗ B. मेघा ने पन्ने फाड़ कर पुस्तक के टुकड़े-टुकड़े दिए कर।
✗ C. पुस्तक के पन्ने फाड़ कर टुकड़े-टुकड़े कर दिए मेघा ने।
✓ D. मेघा ने पुस्तक के पन्ने फाड़ कर टुकड़े-टुकड़े कर दिए।

Question ID : **1841223790**

Q.6 उचित शब्द से वाक्य का रिक्त स्थान भरें-

प्रयोगशाला में मैंने गंधक का _____ देखा था।

Ans
✗ A. अमल
✓ B. अम्ल
✗ C. अमूल
✗ D. अमूल्य

Question ID : **1841223791**

Q.7 'भारत हमेशा से विश्व-शांति का आकांक्षी रहा है।' वाक्य उदाहरण है-

Ans
✓ A. तात्कालिक वर्तमान का
✗ B. सम्भाव्य वर्तमान का
✗ C. सामान्य वर्तमान का
✗ D. संदिग्ध वर्तमान का

Question ID : **1841223787**

Q.8 निम्न शब्दों में से संख्यावाचक विशेषण का उदाहरण नहीं है-

Ans
✗ A. तिगुना
✗ B. एक
✓ C. चौकोर
✗ D. सब

Question ID : **1841223780**

Q.9 'तीर से बाघ मार दिया गया।' वाक्य में कारक है-

Ans
✗ A. कर्ता कारक
✗ B. अपादान कारक
✓ C. करण कारक
✗ D. सम्प्रदान कारक

Question ID : **1841223778**

Q.10 निम्न में से रीतिवाचक क्रियाविशेषण शब्द नहीं है-

Ans
✗ A. नहीं
✗ B. भर
✓ C. कुछ
✗ D. क्यों

Question ID : **1841223779**

Q.11 सर्वोचित शब्द से रिक्त स्थान भरें-

कई बार रस्सी से साँप का _____ होता है।

Ans
✓ A. आभास
✗ B. अभ्यास
✗ C. आवास
✗ D. आयास

Question ID : **1841223792**

Q.12 निम्न में से 'घोड़े' का पर्यायवाची शब्द है-

Ans
✗ A. कंज
✗ B. केशरी
✗ C. उरग
✓ D. सैंधव

Question ID : **1841223783**

Q.13 निम्न में से कौन-सा विलोम युग्म सुमेलित नहीं है-

Ans
✗ A. लघु – दीर्घ

✓ B. मुनाफा – नफा

✗ C. विपत्ति – सम्पत्ति

✗ D. मुख – प्रतिमुख

Question ID : **1841223784**

Q.14 मुहावरे के प्रयोगात्मक रूप से वाक्य पूर्ण करें-

मैं जानता था कि इस बदमाश की हरकतें किसी दिन _____।

Ans
✗ A. नाच नचाएँगी

✗ B. नज़र बदलेंगी

✓ C. रंग लाएँगी

✗ D. बखिया उधेड़ेंगी

Question ID : **1841223785**

Q.15 'चट मँगनी पट ब्याह' लोकोक्ति का अर्थ है-

Ans
✗ A. बहुत कंजूसी

✗ B. किसी के कहने पर विपत्ति में पड़ना

✓ C. तत्काल कार्य होना

✗ D. पसंद की शादी करना

Question ID : **1841223786**

Comprehension:

दिए गए गद्यांश के आधार पर प्रश्न के उत्तर दीजिए।

बहिष्कार आंदोलन केवल विलायती वस्तुओं के उपयोग तक सीमित नहीं था बल्कि इसका स्वरूप बहुत व्यापक था और उसमें ब्रिटिश सरकार द्वारा दी हुई उपाधियों और सरकारी पदों का त्याग और कौंसिलों तथा स्कूलों का बहिष्कार भी शामिल था। इस आंदोलन का उद्देश्य सरकार को बंगाल के विभाजन को समाप्त करने तथा दमन को रोकने के लिए बाध्य करना था। वस्तुत: बहिष्कार आंदोलन का उद्देश्य लोगों के अंदर स्वराज्य प्राप्त करने के लिए एक जुझारू संकल्प पैदा करना था। इस आंदोलन के पुरस्कर्ताओं का त्याग और बलिदान इतना बड़ा था कि वह जनता के आदर्श और घर-घर में परिचित नाम बन गए थे। इनमें से तिलक तो स्वतंत्रता के लिए लड़ने वाले और राजनीतिक दमन के प्रतीक बन गए थे। विभाजन के विरोध में छिड़े अभियान में स्वराज, स्वदेशी, बहिष्कार और राष्ट्रीय शिक्षा के नारे भी लगाये गये। सरकार ने इसका दमन करने के लिए कड़े क़दम उठाये। नेताओं, सम्पादकों, प्रचारकों और संगठन कर्ताओं को जेल भेज दिया गया। इस दमन के विरोध में बंगाल, महाराष्ट्र और पंजाब में आतंकवादी गतिविधियाँ भी तेज़ हो गयीं। 1907 में कांग्रेस में उदारवादियों और जुझारू राष्ट्रवादियों में विभाजन हो गया। इसके बाद सरकारी दमन और भी तेज़ हो गया। 1907 में 'सेडिशस मीटिंग ऐक्ट' और 1910 में 'इण्डियन प्रेस ऐक्ट' लागू किए गये। पर दमनात्मक कार्रवाइयों के बावजूद आंदोलन समाप्त नहीं हुआ। इसके प्रभाव को कम करने के लिए सरकार ने 1909 में मार्ले-मिंटो रिफार्म लागू किये। इसका नरमपंथियों ने स्वागत किया।

SubQuestion No : 16

Q.16 ब्रिटिश सरकार द्वारा बहिष्कार आंदोलन को कुचलने के लिए निम्न में से क्या कार्य नहीं किया गया?

Ans
✗ A. सेडिशस मीटिंग ऐक्ट लगाया गया

✓ B. कांग्रेस में विभाजन करा दिया गया।

✗ C. सम्पादकों, नेताओं, प्रचारकों आदि को जेल में डाल दिया गया।

✗ D. प्रेस ऐक्ट लागू किया गया।

Question ID : **1841223797**

Comprehension:

दिए गए गद्यांश के आधार पर प्रश्न के उत्तर दीजिए।

बहिष्कार आंदोलन केवल विलायती वस्तुओं के उपयोग तक सीमित नहीं था बल्कि इसका स्वरूप बहुत व्यापक था और उसमें ब्रिटिश सरकार द्वारा दी हुई उपाधियों और सरकारी पदों का त्याग और कौंसिलों तथा स्कूलों का बहिष्कार भी शामिल था। इस आंदोलन का उद्देश्य सरकार को बंगाल के विभाजन को समाप्त करने तथा दमन को रोकने के लिए बाध्य करना था। वस्तुत: बहिष्कार आंदोलन का उद्देश्य लोगों के अंदर स्वराज्य प्राप्त करने के लिए एक जुझारू संकल्प पैदा करना था। इस आंदोलन के पुरस्कर्ताओं का त्याग और बलिदान इतना बड़ा था कि वह जनता के आदर्श और घर-घर में परिचित नाम बन गए थे। इनमें से तिलक तो स्वतंत्रता के लिए लड़ने वाले और राजनीतिक दमन के प्रतीक बन गए थे। विभाजन के विरोध में छिड़े अभियान में स्वराज, स्वदेशी, बहिष्कार और राष्ट्रीय शिक्षा के नारे भी लगाये गये। सरकार ने इसका दमन करने के लिए कड़े क़दम उठाये। नेताओं, सम्पादकों, प्रचारकों और संगठन कर्ताओं को जेल भेज दिया गया। इस दमन के विरोध में बंगाल, महाराष्ट्र और पंजाब में आतंकवादी गतिविधियाँ भी तेज़ हो गयीं। 1907 में कांग्रेस में उदारवादियों और जुझारू राष्ट्रवादियों में विभाजन हो गया। इसके बाद सरकारी दमन और भी तेज़ हो गया। 1907 में 'सेडिशस मीटिंग ऐक्ट' और 1910 में 'इण्डियन प्रेस ऐक्ट' लागू किए गये। पर दमनात्मक कार्रवाइयों के बावजूद आंदोलन समाप्त नहीं हुआ। इसके प्रभाव को कम करने के लिए सरकार ने 1909 में मार्ले-मिंटो रिफार्म लागू किये। इसका नरमपंथियों ने स्वागत किया।

SubQuestion No : 17

Q.17 बहिष्कार आंदोलन के संदर्भ में असत्य कथन है-

Ans

✗ A. बहिष्कार आंदोलन बंगाल विभाजन के विरोध स्वरूप चलाया गया।

✗ B. इसका उद्देश्य लोगों के अंदर स्वराज प्राप्ति के लिए जुझारू संकल्प पैदा करना था।

✓ C. इस आंदोलन में अंग्रेज़ों से पूरी तरह स्वतंत्रता प्राप्त करने के लिए संघर्ष किया गया।

✗ D. इसमे विलायती वस्तुओं के साथ ही सरकारी नौकरियों, स्कूलों आदि का भी बहिष्कार शामिल था।

Question ID : **1841223798**

Comprehension:

दिए गए गद्यांश के आधार पर प्रश्न के उत्तर दीजिए।

बहिष्कार आंदोलन केवल विलायती वस्तुओं के उपयोग तक सीमित नहीं था बल्कि इसका स्वरूप बहुत व्यापक था और उसमें ब्रिटिश सरकार द्वारा दी हुई उपाधियों और सरकारी पदों का त्याग और कौंसिलों तथा स्कूलों का बहिष्कार भी शामिल था। इस आंदोलन का उद्देश्य सरकार को बंगाल के विभाजन को समाप्त करने तथा दमन को रोकने के लिए बाध्य करना था। वस्तुत: बहिष्कार आंदोलन का उद्देश्य लोगों के अंदर स्वराज्य प्राप्त करने के लिए एक जुझारू संकल्प पैदा करना था। इस आंदोलन के पुरस्कर्ताओं का त्याग और बलिदान इतना बड़ा था कि वह जनता के आदर्श और घर-घर में परिचित नाम बन गए थे। इनमें से तिलक तो स्वतंत्रता के लिए लड़ने वाले और राजनीतिक दमन के प्रतीक बन गए थे। विभाजन के विरोध में छिड़े अभियान में स्वराज, स्वदेशी, बहिष्कार और राष्ट्रीय शिक्षा के नारे भी लगाये गये। सरकार ने इसका दमन करने के लिए कड़े क़दम उठाये। नेताओं, सम्पादकों, प्रचारकों और संगठन कर्ताओं को जेल भेज दिया गया। इस दमन के विरोध में बंगाल, महाराष्ट्र और पंजाब में आतंकवादी गतिविधियाँ भी तेज़ हो गयीं। 1907 में कांग्रेस में उदारवादियों और जुझारू राष्ट्रवादियों में विभाजन हो गया। इसके बाद सरकारी दमन और भी तेज़ हो गया। 1907 में 'सेडिशस मीटिंग ऐक्ट' और 1910 में 'इण्डियन प्रेस ऐक्ट' लागू किए गये। पर दमनात्मक कार्रवाइयों के बावजूद आंदोलन समाप्त नहीं हुआ। इसके प्रभाव को कम करने के लिए सरकार ने 1909 में मार्ले-मिंटो रिफार्म लागू किये। इसका नरमपंथियों ने स्वागत किया।

SubQuestion No : 18

Q.18 पुरस्कर्ता का अर्थ है-

Ans

✗ A. चयनित

✓ B. अगुआ

✗ C. अंतिम

✗ D. उपकृत

Question ID : **1841223794**

Comprehension:

दिए गए गद्यांश के आधार पर प्रश्न के उत्तर दीजिए।

बहिष्कार आंदोलन केवल विलायती वस्तुओं के उपयोग तक सीमित नहीं था बल्कि इसका स्वरूप बहुत व्यापक था और उसमें ब्रिटिश सरकार द्वारा दी हुई उपाधियों और सरकारी पदों का त्याग और कौंसिलों तथा स्कूलों का बहिष्कार भी शामिल था। इस आंदोलन का उद्देश्य सरकार को बंगाल के विभाजन को समाप्त करने तथा दमन को रोकने के लिए बाध्य करना था। वस्तुत: बहिष्कार आंदोलन का उद्देश्य लोगों के अंदर स्वराज्य प्राप्त करने के लिए एक जुझारू संकल्प पैदा करना था। इस आंदोलन के पुरस्कर्ताओं का त्याग और बलिदान इतना बड़ा था कि वह जनता के आदर्श और घर-घर में परिचित नाम बन गए थे। इनमें से तिलक तो स्वतंत्रता के लिए लड़ने वाले और राजनीतिक दमन के प्रतीक बन गए थे। विभाजन के विरोध में छिड़े अभियान में स्वराज, स्वदेशी, बहिष्कार और राष्ट्रीय शिक्षा के नारे भी लगाये गये। सरकार ने इसका दमन करने के लिए कड़े क़दम उठाये। नेताओं, सम्पादकों, प्रचारकों और संगठन कर्ताओं को जेल भेज दिया गया। इस दमन के विरोध में बंगाल, महाराष्ट्र और पंजाब में आतंकवादी गतिविधियाँ भी तेज़ हो गयीं। 1907 में कांग्रेस में उदारवादियों और जुझारू राष्ट्रवादियों में विभाजन हो गया। इसके बाद सरकारी दमन और भी तेज़ हो गया। 1907 में 'सेडिशस मीटिंग ऐक्ट' और 1910 में 'इण्डियन प्रेस ऐक्ट' लागू किए गये। पर दमनात्मक कार्रवाइयों के बावजूद आंदोलन समाप्त नहीं हुआ। इसके प्रभाव को कम करने के लिए सरकार ने 1909 में मार्ले-मिंटो रिफार्म लागू किये। इसका नरमपंथियों ने स्वागत किया।

SubQuestion No : 19

Q.19 इण्डियन प्रेस ऐक्ट कब लागू हुआ?

Ans

✗ A. 1810

✓ B. 1910

✗ C. 1807

✗ D. 1907

Question ID : **1841223795**

Comprehension:

दिए गए गद्यांश के आधार पर प्रश्न के उत्तर दीजिए।

बहिष्कार आंदोलन केवल विलायती वस्तुओं के उपयोग तक सीमित नहीं था बल्कि इसका स्वरूप बहुत व्यापक था और उसमें ब्रिटिश सरकार द्वारा दी हुई उपाधियों और सरकारी पदों का त्याग और कौंसिलों तथा स्कूलों का बहिष्कार भी शामिल था। इस आंदोलन का उद्देश्य सरकार को बंगाल के विभाजन को समाप्त करने तथा दमन को रोकने के लिए बाध्य करना था। वस्तुत: बहिष्कार आंदोलन का उद्देश्य लोगों के अंदर स्वराज्य प्राप्त करने के लिए एक जुझारू संकल्प पैदा करना था। इस आंदोलन के पुरस्कर्ताओं का त्याग और बलिदान इतना बड़ा था कि वह जनता के आदर्श और घर-घर में परिचित नाम बन गए थे। इनमें से तिलक तो स्वतंत्रता के लिए लड़ने वाले और राजनीतिक दमन के प्रतीक बन गए थे। विभाजन के विरोध में छिड़े अभियान में स्वराज, स्वदेशी, बहिष्कार और राष्ट्रीय शिक्षा के नारे भी लगाये गये। सरकार ने इसका दमन करने के लिए कड़े क़दम उठाये। नेताओं, सम्पादकों, प्रचारकों और संगठन कर्ताओं को जेल भेज दिया गया। इस दमन के विरोध में बंगाल, महाराष्ट्र और पंजाब में आतंकवादी गतिविधियाँ भी तेज़ हो गयीं। 1907 में कांग्रेस में उदारवादियों और जुझारू राष्ट्रवादियों में विभाजन हो गया। इसके बाद सरकारी दमन और भी तेज़ हो गया। 1907 में 'सेडिशस मीटिंग ऐक्ट' और 1910 में 'इण्डियन प्रेस ऐक्ट' लागू किए गये। पर दमनात्मक कार्रवाइयों के बावजूद आंदोलन समाप्त नहीं हुआ। इसके प्रभाव को कम करने के लिए सरकार ने 1909 में मार्ले-मिंटो रिफार्म लागू किये। इसका नरमपंथियों ने स्वागत किया।

SubQuestion No : 20

Q.20 बहिष्कार आंदोलन में निम्न में से किसका बहिष्कार नहीं किया गया?

Ans

✗ A. ब्रिटिश सरकार द्वारा दी गई उपाधियाँ

✗ B. विलायती वस्तुओं

✗ C. सरकारी पदों का

✓ D. सरकारी चिकित्सालय

Question ID : **1841223796**

Section : **Discipline1**

Q.1 Rectilinear motion of a particle is defined by the relation $s=t^3-4t^2+20t-3$. Calculate the velocity when time (t) = 5 sec. consider that value 's' is measure in meters.

Ans

✗ A. 78 m/sec

✗ B. 122 m/sec

✓ C. 55 m/sec

✗ D. 156 m/sec

Question ID : **1841223812**

Q.2 **Consider the below statements with respect to work and power and identify correct answer.**
Statement A : The product of the displacement and the component of force in the direction of displacement is referred to as work done.
Statement B : Power has direction component as it is a vector quantity.

Ans

✗ A. Statement B is correct and A is incorrect

✗ B. Both statements are incorrect

✓ C. Statement A is correct and B is incorrect

✗ D. Both satements are correct

Question ID : **1841223813**

Q.3 **Consider the below statements with respect to Kirchoff's Law and identify correct answer.**
Statement A : At any node (junction) in a circuit the product of currents entering and leaving a node at any instant of time must be equal to zero.
Statement B : In a closed circuit, the algebraic sum of all source voltages must be equal to the algebraic sum of all the voltage drops.

Ans

✗ A. Both statements are incorrect

✗ B. Statement A is correct and B is incorrect

✗ C. Both satements are correct

✓ D. Statement B is correct and A is incorrect

Question ID : **1841223800**

Q.4 **How many thermometers are used in Searle's Apparatus which is used to find the thermal conductivity of a good conductor?**

Ans

✗ A. 1

✓ B. 4

✗ C. 3

✗ D. 2

Question ID : **1841223801**

Q.5 **Which of the following is the correct expression according to parallel axis theorem used for finding moment of inertia of plane figures?**
Where,
'I_{1-1}' is the moment of inertia of plane figure about an axis 1-1 which not passing through centroid of plane figure.
I_{x-x} is the moment of inertia of plane figure about an axis x-x passing through centroid which is parallel to axis 1-1.
A is the area of considered plane figure
h is the perpendicular distance between axis 1-1 and axis x-x.

Ans
✗ A. $I_{1-1} = I_{X-X} + A^2h$

✗ B. $I_{1-1} = I_{X-X}^2 + Ah^2$

✓ C. $I_{1-1} = I_{X-X} + Ah^2$

✗ D. $I_{1-1} = I_{X-X}^2 + A^2h$

Question ID : **1841223811**

Q.6 **Which of the following theorem states that "a linear two-terminal circuit can be replaced by an equivalent circuit consisting of a current source IN in parallel with a resistor R_N" where I_N is the short-circuit current through the terminals and R_N is the input or equivalent resistance at the terminals when the independent sources are turned off?**

Ans
✗ A. Maximum Power Transfer Theorem

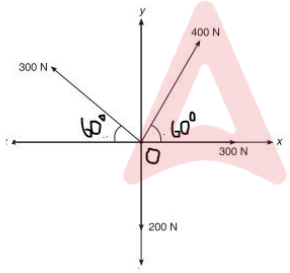
✗ B. Superposition Theorem

✓ C. Norton's Theorem

✗ D. Thevenin's theorem

Question ID : **1841223816**

Q.7 Four concurrent forces are acting at a point O as shown in figure. What would be the component of the resultant force in the X direction?



Ans
✗ A. 400 N

✗ B. 450 N

✗ C. 300 N

✓ D. 350 N

Question ID : **1841223808**

Q.8 **A block of weight 500 N resting on a horizontal surface is subjected to a horizontal push of 600 N force, calculate the coefficient of static friction at the contact surface between two materials, if the limiting friction force developed is 200 N.**

Ans
- ✗ A. 0.3
- ✗ B. 0.2
- ✓ C. 0.4
- ✗ D. 0.5

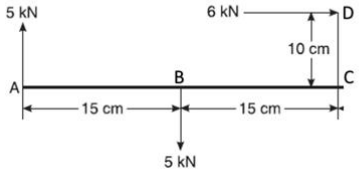
Question ID : **1841223814**

Q.9 **Consider the below statements with respect to series circuit and Identify the correct answer.**
Statement A: The same current flows through each resistors in series.
Statement B: In a series circuit, the voltage drop across each resistor will be directly proportional to the capacity of the resistor.

Ans
- ✗ A. Statement B is correct and A is incorrect
- ✗ B. Both statements are incorrect
- ✗ C. Statement A is correct and B is incorrect
- ✓ D. Both satements are correct

Question ID : **1841223815**

Q.10 A bracket ABCD is subjected to 3 forces as shown in below figure, calculate the shortest distance measured from point 'A' to the line of action of resultant force for the given force system, using Varignon's theorem.



Ans
- ✗ A. 5 cm
- ✓ B. 10 cm
- ✗ C. 15 cm
- ✗ D. 20 cm

Question ID : **1841223809**

Q.11 **Consider the below statements with respect to "Earthing system and protection in low voltage installations" and Identify the correct answer.**
Statement A : More number of earth electrodes in soil (Separate earth electrode for Separate equipment), better is the system.
Statement B: According to IS 3043 : 2018, the terms Earthing and Grounding have different meanings.

Ans
- ✗ A. Both statements are correct
- ✗ B. Statement B is correct and A is incorrect
- ✗ C. Both statements are incorrect
- ✓ D. Statement A is correct and B is incorrect

Question ID : **1841223817**

Q.12 Pitting corrosion in metals is a _____.

Ans
✗ A. Metallurgically influenced corrosion
✗ B. Uniform corrosion
✗ C. General corrosion
✓ D. Localized corrosion

Question ID : **1841223805**

Q.13 The arithmetic mean between two numbers is 75 and their geometric mean is 21. Find the numbers.

Ans
✗ A. 63 and 87
✗ B. 73 and 77
✓ C. 3 and 147
✗ D. 133 and 17

Question ID : **1841223806**

Q.14 Which of the following is not the property of an equipotential surface?

Ans
✗ A. Work done in moving a charge over an equipotential surface is zero
✗ B. The spacing between equipotential surfaces helps to identify regions of strong fields
✓ C. The electric field is always parallel to an equipotential surface
✗ D. The spacing between equipotential surfaces helps to identify regions of weak fields

Question ID : **1841223799**

Q.15 As per IS 10500 : 2012, permissible limit for the turbidity of drinking water in the absence of alternate source is _____.

Ans
✗ A. 3 NTU
✗ B. 10 NTU
✓ C. 5 NTU
✗ D. 1 NTU

Question ID : **1841223804**

Q.16 Two solutions of a substance (non electrolyte) with a different values of molarity (M) are mixed, volume of first solution is 400 mL with 1.5 M and volume of second solution is 500 mL with 1 M second solution. Calculate the molarity of the final mixture?

Ans
✗ A. 0.95 M
✗ B. 1.39 M
✗ C. 1.56 M
✓ D. 1.22 M

Question ID : **1841223802**

Q.17 **Identify incorrect statement with respect to crossbelt drive used to transmit power from one shaft to another.**

Ans
✗ A. In case of cross belt drive, belt wears very fast.

✗ B. Since power transmitted by this type of belt drive is due to the friction, belt drive is subjected to slip and creep.

✓ C. In case of cross belt drive, the pulleys rotate in the same direction.

✗ D. In case of cross belt drive, the angle of contact of belt on both the pulleys is equal.

Question ID : **1841223818**

Q.18 **The tangent to the curve $y = e^{2x}$ at the point (0, 1) meets x -axis at:**

Ans
✗ A. (0, 2)

✓ B. (-1/2, 0)

✗ C. (2, 0)

✗ D. (0, 1)

Question ID : **1841223807**

Q.19 **Consider the below statements with respect to dissolved oxygen and temperature and identify correct answer.**
Statement A: Cold water can hold more dissolved oxygen than warm water.
Statement B: Dissolved-oxygen concentration is independent of temperature of water.

Ans
✗ A. Both satements are correct

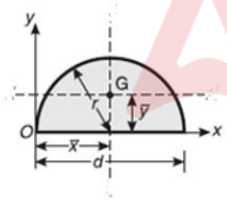
✓ B. Statement A is correct and B is incorrect

✗ C. Statement B is correct and A is incorrect

✗ D. Both statements are incorrect

Question ID : **1841223803**

Q.20 A semi circular lamina with radius r = 30 mm is shown in figure. The location of the centroid G of the lamina with respect to the axis passing through the diameter (OX) is at a distance of _____ mm.



Ans
✓ A. $\frac{40}{\pi}$

✗ B. 40π

✗ C. 30π

✗ D. $\frac{30}{\pi}$

Question ID : **1841223810**

Section : **Discipline2**

Q.1 **The type of stairs, where steps radiate from the centre and they do not have either any landing or any intermediate newel post is known as _____.**

Ans
- ✔ A. Helical Stairs
- ✘ B. Quarter Turning stairs
- ✘ C. Three quarter turn stairs
- ✘ D. Straight stairs

Question ID : **1841223827**

Q.2 **As per National Building code of India ,which of the following type of building comes under Group G based on occupancy?**

Ans
- ✘ A. Mercentile buildings.
- ✘ B. Storage buildings
- ✔ C. Industrial buildings
- ✘ D. Hazardus Buildings

Question ID : **1841223821**

Q.3 **Pick odd one out with respect to classification of boilers according to contents in tubes.**

Ans
- ✔ A. Stirling boiler
- ✘ B. Lancashire boiler
- ✘ C. Conchran boiler
- ✘ D. Cornish boiler

Question ID : **1841223819**

Q.4 **Identify the general principle to be used in case of all the Damp-proofing methods.**

Ans
- ✘ A. At the corners the damp-proofing course should be discontinuos
- ✔ B. Damp proofing course may be horizontal or vertical
- ✘ C. The damp-proofing course should be kept exposed on the wall surface
- ✘ D. Damp proofing course must be inclined

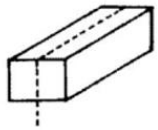
Question ID : **1841223826**

Q.5 **As per IS 8112 : 2013, If the final setting time of ordinary Portland cement-grade 43 is greater than _____, such cement should be rejected**

Ans
- ✘ A. 6 hours
- ✔ B. 10 hours
- ✘ C. 4 hours
- ✘ D. 8 hours

Question ID : **1841223838**

Q.6 The type of closer in a brick obtained by cutting the brick longitudinally into two equal parts as shown in figure is called _____.



Ans
✗ A. King closer
✓ B. Queen closer
✗ C. Bevelled closer
✗ D. Metered closer

Question ID : **1841223822**

Q.7 **What is the ratio of surface tension between hollow bubble and liquid droplet?**

Ans
✗ A. 0.25
✗ B. 0.125
✗ C. 2
✓ D. 0.5

Question ID : **1841223830**

Q.8 **The external curve(convex side) of an arch is called as ____.**

Ans
✗ A. Soffit
✗ B. Haunch
✓ C. Extrados
✗ D. Ring

Question ID : **1841223824**

Q.9 **The discharge equation for a triangular V-notch with coefficient of discharge 0.6 is given by_____.**
where, Q = discharge through triangular V notch and H = Head of water above V notch.

Ans
✗ A. $Q = 1.417H^{1/2}$
✓ B. $Q = 1.417H^{5/2}$
✗ C. $Q = 1.417H^{2/3}$
✗ D. $Q = 1.417H^{3/2}$

Question ID : **1841223833**

Q.10 **Considering the zones in the vertical distribution of water occurs in soil, identify the zone in which Phreatic water exists.**

Ans
✗ A. Unsatuarted zone
✗ B. Zone of aeration
✓ C. Zone of saturation
✗ D. Vadose zone

Question ID : **1841223828**

Q.11 **Identify the incorrect statement with respect to parts of internal combustion (IC) engines.**

Ans ✔ A. Fuel injector is fitted on the cylinder head of petrol engine to spray metered quantity of fuel.

✘ B. The inside diameter of the cylinder used in IC engines is called as “bore”

✘ C. Flywheel is mounted on the crankshaft of the engine to maintain uniform rotation of the crankshaft.

✘ D. Valves are used to control the flow of the intake and exhaust gases to and from the engine cylinder, in case of 4 stroke engines.

Question ID : **1841223820**

Q.12 **As per IS 6198 : 1992, thickness of top and bottom ledges of a Ledged type of wooden doors shall be _____.**

Ans ✘ A. 50 mm

✘ B. 5 mm

✔ C. 25 mm

✘ D. 80 mm

Question ID : **1841223825**

Q.13 **If Wheat requires about 8 cm of water every 28 days, and the base period for wheat is 140 days, determine the water requirement (delta) of Wheat in cm.”**

Ans ✘ A. 20 cm

✘ B. 80 cm

✔ C. 40 cm

✘ D. 60 cm

Question ID : **1841223829**

Q.14 **Linux operating system is invented by _____.**

Ans ✘ A. Linux churi

✘ B. Linux Ritche

✘ C. Linus madam

✔ D. Linus Torvalds

Question ID : **1841223835**

Q.15 **Which of the following type of computer is comparatively most powerful in terms of speed and accuracy?**

Ans ✘ A. Mini-computer

✘ B. Mainframe

✔ C. Super computer

✘ D. Personal computer

Question ID : **1841223836**

Q.16 A most economical rectangular channel of width 4 m is having a bed slope of 1 in 1600. find the hydraulic depth.

Ans
✗ A. 0.25 m
✗ B. 1 m
✗ C. 4 m
✓ D. 2 m

Question ID : **1841223834**

Q.17 Which of the following loop is an entry controlled loop?

Ans
✗ A. Mailing loop
✗ B. Do- while loop
✗ C. Linus loop
✓ D. While loop

Question ID : **1841223837**

Q.18 If a partition wall consist of a framework of timber within which half – brick partitions are fitted are called as _____.

Ans
✗ A. Reinforced brick partitions
✗ B. Plain brick partitions
✓ C. Bricknogged partitions
✗ D. Concrete partitions

Question ID : **1841223823**

Q.19 A rectangular tank of 20 m^2 area filled with water to a height of 5 m, calculate the total water pressure (F) at the bottom of the tank.

Ans
✗ A. 98100 Newtons
✗ B. 9810000 Newtons
✓ C. 981000 Newtons
✗ D. 9810 Newtons

Question ID : **1841223831**

Q.20 Which of the following is correct regarding Piezometer?

Ans
✗ A. used to estimate the rate of flow of liquid through a pipe
✓ B. used for measureing gauge pressure of a liquid in pipe
✗ C. used to control the flow of water for outlets of lakes
✗ D. used for measuring flow rate of liquid

Question ID : **1841223832**

Section : **Discipline3**

Q.1 **Identify the effect on the property of concrete due to reduction in water cement ratio, with all other parameters remain constant, and ensuring proper compaction and placing of concrete.**

Ans
- ✔ A. Strength of concrete increases
- ✘ B. Workability of concrete increases
- ✘ C. Strength concrete decreases
- ✘ D. Change of water cement ratio doesnot affect the hardened and fresh concrete properties

Question ID : **1841223841**

Q.2 **Which of the following is not the assumption made in the analysis of trusses?**

Ans
- ✘ A. The members of trusses are straight
- ✘ B. Forces are acting only at joints
- ✔ C. Members are not rigid
- ✘ D. Cross sectional area of members of truss is same through out their length

Question ID : **1841223853**

Q.3 **While finding capacity distribution of reservoir, mass curve is drawn, The steepness in the mass curve of demand indicates _____.**

Ans
- ✘ A. Higher the storage capacity
- ✔ B. Higher the Rate of demand
- ✘ C. Lower the rate of demand
- ✘ D. Lower the storage capacity

Question ID : **1841223854**

Q.4 **Consider below statements with respect to workability of concrete and identify correct answer.**
Statement A: Use of rounded aggregates makes the concrete harsh when compared to angular shaped aggregates.
Statement B: Higher aggregate cement ratio make the concrete mix cohesive and fatty to give better workability

Ans
- ✘ A. Statement A is correct and B is incorrect
- ✘ B. Both satements are correct
- ✔ C. Both statements are incorrect
- ✘ D. Statement B is correct and A is incorrect

Question ID : **1841223844**

Q.5 **Which of the following is the correct expression for the calculation of power transmitted by a rotating shaft from one of its end to another?**

Ans ✗ A.

$\frac{\pi NT}{100}$ kW. Where, N is the number of revolutions per minute and T is average torque in kN-m.

✓ B.

$\frac{\pi NT}{30}$ kW. Where, N is the number of revolutions per minute and T is average torque in kN-m.

✗ C.

$\frac{\pi NT}{360}$ kW. Where, N is the number of revolutions per minute and T is average torque in kN-m.

✗ D.

$\frac{\pi NT}{80}$ kW. Where, N is the number of revolutions per minute and T is average torque in kN-m.

Question ID : **1841223851**

Q.6 **At what pH value "Trichloramines" are formed in disinfection process of water?**

Ans ✗ A. between 1 to 3

✓ B. between 6 to 8

✗ C. between 9 to 11

✗ D. greater than 7.0

Question ID : **1841223857**

Q.7 **A cantilever beam of length 3 m carries a gradually varying load, with an intensity zero at free end (B) to 2 kN/m at fixed end (A). Calculate the value of shear force at A.**

Ans ✓ A. -3 kN

✗ B. -6 kN

✗ C. -4 kN

✗ D. -2 kN

Question ID : **1841223847**

Q.8 **Following the IS standards, the permissible limit of total dissolved solids for drinking water in the absence of alternate source is _____.**

Ans ✗ A. 500 mg/l

✗ B. 200 mg/l

✓ C. 2000 mg/l

✗ D. 5000 mg/l

Question ID : **1841223856**

Q.9 **Which of the following product of cement hydration is responsible of flash setting?**

Ans ✓ A. Tricalcium aluminate

✗ B. Tetracalcium aluminoferrite

✗ C. Di-calcium silicate

✗ D. Tri-calcium silicate

Question ID : **1841223839**

Q.10 **A rectangular strut of width 150 mm and thickness 120 mm carries a load of 180 kN. Calculate the minimum stress in the section if the load is eccentric by 20 mm in the direction of width and concentric in the direction of thickness. Ignore the self weight of the strut.**

Ans
- ✗ A. 8 MPa
- ✗ B. 6 MPa
- ✗ C. 4 MPa
- ✓ D. 2 MPa

Question ID : **1841223850**

Q.11 **A rectangular beam 200 mm wide and 400 mm deep is simply supported over a span of 5 meters. If the beam is subjected to a uniformly distributed load of 4 kN/m, find the maximum bending stress in the beam.**

Ans
- ✗ A. 1251.64 kN/m^2
- ✗ B. 3564.79 kN/m^2
- ✗ C. 3156.72 kN/m^2
- ✓ D. 2343.89 kN/m^2

Question ID : **1841223848**

Q.12 **Efficient transfer of stress between matrix and fibers in fiber reinforced concrete doesnot depend up on _____.**

Ans
- ✓ A. Intensity of applied load
- ✗ B. Fiber geometry
- ✗ C. Size and shape of the aggregates
- ✗ D. Type of fiber

Question ID : **1841223843**

Q.13 **Consider below statements with respect to poisson's ratio and identify correct answer.**
Statement A: When the deformation of the member is within the elastic limit, it is found that the ratio of lateral strain to longitudinal strain is constant for a given material.
Statement B: When the deformation of the member is plastic in nature, it is found that the ratio of lateral strain to longitudinal strain is constant for a given material.

Ans
- ✗ A. Both statements are incorrect
- ✗ B. Statement B is correct and A is incorrect
- ✓ C. Statement A is correct and B is incorrect
- ✗ D. Both satements are correct

Question ID : **1841223846**

Q.14 **Large number of cutoff valves are required under which type of below mentioned distribution system?**

Ans
- ✗ A. Radial system
- ✓ B. Reticular system
- ✗ C. Tree system
- ✗ D. Dead end system

Question ID : **1841223858**

Q.15 **Identify the incorrect statement with respect to various types of admixtures used in making concrete.**

Ans
✗ A. Addition of Superplasticizers in making concrete increases the workability of concrete for a given water cement ratio.

✗ B. Accelerating admixtures are added to concrete to increase the rate of early strength development in concrete.

✗ C. Use of retarders in making concrete allows the concrete to be plastic and workable for a longer time than concrete without retarders.

✓ D. Addition of Superplasticizers in making concrete increases the water cement ratio required to attain a particular degree of workability.

Question ID : **1841223845**

Q.16 **Consider below statements with respect to Euler's column theory and identify correct answer.**
Statement A: The effect of direct stresses are neglected in the equation derived by Euler which is used study the stability of long columns.
Statement B: Euler's formula can be used in the case of short columns.

Ans
✗ A. Statement B is correct and A is incorrect

✗ B. Both statements are incorrect

✗ C. Both satements are correct

✓ D. Statement A is correct and B is incorrect

Question ID : **1841223852**

Q.17 **Consider below statements with respect to shear stress distribution in a symmetrical I sections due to bending action, and identify correct answer.**
Statement A: Shear stress developed in a I section will be maximum at the junction of flange and web.
Statement B: Shear stress developed in a I section will be maximum at its neutral axis.

Ans
✓ A. Statement B is correct and A is incorrect

✗ B. Both statements are incorrect

✗ C. Statement A is correct and B is incorrect

✗ D. Both satements are correct

Question ID : **1841223849**

Q.18 **An intake commonly used to obtain supply from lake is called as ____.**

Ans
✗ A. Exposed intake

✓ B. Submerged intake

✗ C. Dry intake

✗ D. Reservior intake

Question ID : **1841223855**

Q.19 **Which of the following equipment is more suitable for transportation of concrete over a long distance, like 10 to 15 kms?**

Ans
✗ A. Belt conveyors

✓ B. Transit mixers

✗ C. Skip and hoist

✗ D. Pumps and pipelne

Question ID : **1841223842**

Q.20 **Which of the following condition should be satisfied, if an aggregate is said to be Elongated aggregate?**

Ans ✗ A. The smallest dimension (thickness) of aggregate is smaller than 0.9 times their mean dimension (mean dimension referes to mean of sieve size through which a particular aggregate passing through and retainied on)

✗ B. The greatest dimension (length) of aggregate is greater than 2.5 times their mean dimension (mean dimension referes to mean of sieve size through which a particular aggregate passing through and retainied on)

✗ C. The smallest dimension (thickness) of aggregate is smaller than 0.6 times their mean dimension (mean dimension referes to mean of sieve size through which a particular aggregate passing through and retainied on)

✓ D. The greatest dimension (length) of aggregate is greater than 1.8 times their mean dimension (mean dimension referes to mean of sieve size through which a particular aggregate passing through and retainied on)

Question ID : **1841223840**

Section : **Discipline4**

Q.1 **The type of oil paint where Aluminium powder is used as base is _____.**

Ans ✗ A. Copper paints

✓ B. Aluminium paints

✗ C. Iron Paints

✗ D. Lead paints

Question ID : **1841223864**

Q.2 **Which of the following is NOT a suggested consideration in ethical analysis and resolution?**

Ans ✓ A. Determination of the key participants involved, based on the theoretical perspective of the client.

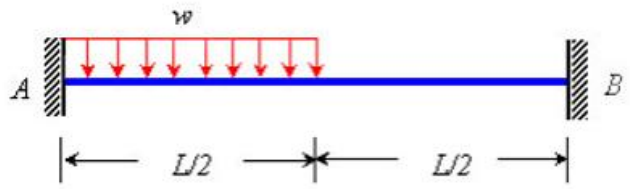
✗ B. Determination of the key participants involved, based on the cultural values of the client.

✗ C. Collect relevant cultural information.

✗ D. Use relational methods to reach an agreement on potential courses of action

Question ID : **1841223878**

Q.3 Calculate the static indeterminacy of a fixed beam shown in below figure.



Ans ✓ A. 3

✗ B. 2

✗ C. 4

✗ D. 1

Question ID : **1841223871**

Q.4 **To carry out risk assessment and control in a construction industry, which of the following expression should be used in accordance with IS 18001 : 2007?**

Ans

✗ A. Risk level = Exposure X Probability

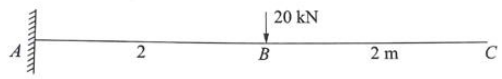
✓ B. Risk level = Consequence X Exposure X Probability

✗ C. Risk level = Consequence X Probability

✗ D. Risk level = Consequence X Exposure

Question ID : **1841223874**

Q.5 Calculate the slope at free end of a cantilever beam of length 4 m shown in below figure. Take EI as constant throughout its length.



Ans

✓ A. $-\frac{40}{EI}$

✗ B. $-\frac{60}{EI}$

✗ C. $-\frac{25}{EI}$

✗ D. $-\frac{15}{EI}$

Question ID : **1841223869**

Q.6 **According to minimum wages act 1948, cost of living index number is related to _____.**

Ans

✗ A. Minimum rates of wages for unscheduled employment

✓ B. Minimum rates of wages for scheduled employment

✗ C. Maximum rates of wages for scheduled employment

✗ D. Maximum rates of wages for unscheduled employment

Question ID : **1841223875**

Q.7 **In consolidation of soil, the Secondary consolidation of soil leads to _____.**

Ans

✗ A. Greater amount of settlement compared to primary consolidation

✗ B. Expansion of soil particles

✗ C. Dissipation of pore water pressure

✓ D. Compression and rearrangement of particles

Question ID : **1841223868**

Q.8 In the manufacture of cement by wet process, what is the temperature at which the nodules formed are converted into clinker?"

Ans
✗ A. 1800 – 2000 ℃
✓ B. 1500 – 1600 ℃
✗ C. 800 – 1200 ℃
✗ D. 1000 – 1200 ℃

Question ID : **1841223861**

Q.9 According to IS-1077 (specifications common burnt clay building bricks), what is the limiting Percentage of water absorption for class 25 bricks?

Ans
✗ A. 7%
✓ B. 15%
✗ C. 10%
✗ D. 5%

Question ID : **1841223860**

Q.10 According to IS : 712 classification of lime, Class B lime is known as ____.

Ans
✓ A. Semi-Hydraulic lime
✗ B. Magnesium lime
✗ C. Fat lime
✗ D. Dolomitic lime

Question ID : **1841223862**

Q.11 Identify the acid type of Igneous rock, from the below list rocks.

Ans
✓ A. Rhyolite
✗ B. Dolerite
✗ C. Peridotite
✗ D. Gabbro

Question ID : **1841223859**

Q.12 After kiln seasoning/drying of wood, the loss in the strength of the wood usually should not be more than _____.

Ans
✗ A. 25%
✓ B. 10%
✗ C. 40%
✗ D. 2%

Question ID : **1841223863**

Q.13 **The employee state insurance ACT, 1948 is to provide certain benefits related to _____.**

Ans
- ✗ A. maternity and employment injury only
- ✓ B. sickness, maternity and employment injury
- ✗ C. sickness and employment injury only
- ✗ D. sickness and maternity only

Question ID : **1841223876**

Q.14 **A symmetrical parabolic three hinded arch of span 30 m and rise 5 m carries a uniformly distributed load of intensity 20 kN/m starting from the central hinge and runs over for 10 m towards right hinge. Calculate the support reaction at left support developed in vertical direction.**

Ans
- ✗ A. 85.8 kN
- ✗ B. 133.3 kN
- ✗ C. 114.2 kN
- ✓ D. 66.7 kN

Question ID : **1841223873**

Q.15 **If the liquid limit and plastic limit of fine grained soil sample are found to be 44 and 21 respectively. Identify the type of soil based on unified soil classification system.**

Ans
- ✗ A. ML
- ✓ B. CL
- ✗ C. CI
- ✗ D. MI

Question ID : **1841223867**

Q.16 **Type of Soil, deposited at the bottom of lakes are called as?**

Ans
- ✗ A. Peat
- ✗ B. Loess
- ✗ C. Alluvial soils
- ✓ D. Lacustrine soils

Question ID : **1841223865**

Q.17 **Consider below statements with respect to carry over factor used in moment distribution method and identify correct answer.**
Statement A: The carry over factor is always 1/2 for a prismatic section, when the far end is fixed.
Statement B: For a member with a pinned end opposite (where there are no other members connected to that pin) the carry over factor is zero.

Ans
- ✗ A. Statement B is correct and A is incorrect
- ✗ B. Statement A is correct and B is incorrect
- ✓ C. Both satements are correct
- ✗ D. Both statements are incorrect

Question ID : **1841223872**

Q.18 Calculate the apparent specific gravity of a soil sample, if its bulk unit weight = 16 kN/m^3, dry unit weight is 14 kN/m^3 and the unit weight of water = 10 kN/m^3

Ans
✗ A. 1.3
✗ B. 1.4
✗ C. 1.5
✓ D. 1.6

Question ID : **1841223866**

Q.19 According to ISO 9004, considering diversity is an action to consider when addressing competitive factors comes under _____.

Ans
✗ A. Partners
✓ B. People
✗ C. Pricing
✗ D. Processes

Question ID : **1841223877**

Q.20 Two wheel loads of magnitude 100 kN (Leading load) and 200 kN spaced at 2 m apart move on a simply supported girder beam of span 16 m from left to right. Calculate the maximum negative and positive shear force at a section 4 m from the left end support.

Ans
✗ A. 50 kN, 150 kN
✗ B. 25 kN, 200 kN
✗ C. 62.5 kN, 215.5 kN
✓ D. 50 kN, 212.5 kN

Question ID : **1841223870**

Section : **Discipline5**

Q.1 Calculated the quantity of earthwork by mid sectional area method for a 100 meter length cutting for a portion of canal in an uniform ground the depth of cut at the two ends being 1.8 m and 2.2 m. The bed width is 5 meter and side slopes 2H : 1V and no transvers slope.

Ans
✗ A. 1700.00 cu m
✗ B. 1500.00 cu m
✓ C. 1800.00 cu m
✗ D. 2400.00 cu m

Question ID : **1841223895**

Q.2 A person purchased a machinery at a cost of Rs. 50,000, Calculate the total amount of sinking fund to be accumulated at the end of 10 years, if the scrap value of the said machinery is 10%.

Ans
✗ A. Rs. 50,000
✗ B. Rs. 4000
✓ C. Rs. 45,000
✗ D. Rs. 20,000

Question ID : **1841223898**

Q.3 **The keyboard shortcut used to measure the distance in AutoCADD software is ____.**

Ans
- ✔ A. DI
- ✘ B. DA
- ✘ C. DS
- ✘ D. DE

Question ID : **1841223880**

Q.4 **Consider below statements with respect to Double Lines for drawing plans in Autocadd and identify correct answer.**
Statement A: double lines can be drawn as straight segments.
Statement B: double lines cannot be drawn as arc segments.

Ans
- ✔ A. Statement A is correct and B is incorrect
- ✘ B. Statement B is correct and A is incorrect
- ✘ C. Both satements are correct
- ✘ D. Both statements are incorrect

Question ID : **1841223881**

Q.5 **Which of the following is the correct unit of measurement for "expansion, contration or construction joint"?**

Ans
- ✘ A. Cubic meter
- ✘ B. Numbers
- ✘ C. Square meter
- ✔ D. Running meter

Question ID : **1841223894**

Q.6 **According to IS 800 : 2007, under classication of cross-sections, Class 1 sections are also called as ____.**

Ans
- ✔ A. Plastic
- ✘ B. compact
- ✘ C. Semi compact
- ✘ D. slender

Question ID : **1841223888**

Q.7 **Which of the following type of foundation is classified as deep footing/foundation?**

Ans
- ✘ A. Stepped isolated footing
- ✘ B. Mat foundation
- ✔ C. Caisson foundation
- ✘ D. Combined footing

Question ID : **1841223886**

Q.8 **Which of the following type of estimate is a detailed estimate?**

Ans
- ✗ A. Approximate quantity method estimate
- ✗ B. Plinth area estimate
- ✓ C. Revised estimate
- ✗ D. Cube rate estimate

Question ID : **1841223893**

Q.9 **A building requires 5 RCC beams of size 0.5 m depth, 0.2 m thickness and 5 m length. Estimate the quantity of steel reinforcement required, if the steel reinforcement to be provided is 1% by their gross volume. Consider that mass density of steel as 7850 kg/m^3.**

Ans
- ✓ A. 1.9625 quintal
- ✗ B. 0.956 quintal
- ✗ C. 1.248 quintal
- ✗ D. 2.789 quintal

Question ID : **1841223896**

Q.10 **According to IS 800 : 2007, the maximum effective slenderness ratio for a member carrying compressive loads resulting from dead loads and imposed loads is _____.**

Ans
- ✗ A. 340
- ✗ B. 100
- ✗ C. 230
- ✓ D. 180

Question ID : **1841223891**

Q.11 **Anti corrosion coating to dowel bars used at the location of construction joints, provided in rigid pavements can be done using _____.**

Ans
- ✗ A. Alkyed coating
- ✗ B. Thermoplastic coating
- ✓ C. Epoxy coating
- ✗ D. Vinyl resin coating

Question ID : **1841223885**

Q.12 **Sliding length of rubber shoe in friction coefficient test on Coarse aggregate is _____.**

Ans
- ✗ A. 55 mm
- ✗ B. 85 mm
- ✗ C. 65 mm
- ✓ D. 75 mm

Question ID : **1841223884**

Q.13 According to IS 800 : 2007, in the design of tension members, for preliminary sizing, the rupture strength of net section is approximated as $T_{dn} = \alpha . A_n f_u / \gamma_{m1}$. The value of co-efficient α to be used for one or two bolts is _____ Where, A_n = net area of the total cross-section; f_u = ultimate stress of the material; γ_{m1} = partial safety factor for failure at ultimate stress.

Ans
- ✗ A. 0.1
- ✗ B. 0.3
- ✓ C. 0.6
- ✗ D. 1.5

Question ID : **1841223890**

Q.14 The phenomenon of lamellar tearing occurs at which type of connections?

Ans
- ✓ A. Welded steel connection
- ✗ B. Bolted steel connection
- ✗ C. Pre-stressed concrete connection
- ✗ D. Reinforced cement concrete connection

Question ID : **1841223889**

Q.15 Consider below statements with respect to terms used in valuation and identify correct answer.
Statement A: The value of a property at the end of the utility period without being dismantled is known as salvage value.
Statement B: The amount value which can be obtained at any particular time from the open market if the property is put for sale is known as market value.

Ans
- ✗ A. Statement A is correct and B is incorrect
- ✓ B. Both satements are correct
- ✗ C. Both statements are incorrect
- ✗ D. Statement B is correct and A is incorrect

Question ID : **1841223897**

Q.16 Secondary road system as per 3rd 20 year road plan in India consists of _____.

Ans
- ✗ A. State Highway and Other District Roads
- ✓ B. State Highway and Major District Roads
- ✗ C. National & State Highways
- ✗ D. Express ways and state Highways

Question ID : **1841223882**

Q.17 Stopping sight distance value recommended by IRC for a Design speed of 80 Kmph is _____.

Ans
- ✓ A. 120 m
- ✗ B. 90 m
- ✗ C. 180 m
- ✗ D. 110 m

Question ID : **1841223883**

Q.18 **Indian standard rolled steel angle sections, used as compression members comes under which of the follwoing buckling class?**

Ans

✗ A. Class b

✓ B. Class c

✗ C. Class a

✗ D. Class d

Question ID : **1841223892**

Q.19 **In an Autocadd software the command used for snap grid points is _____.**

Ans

✓ A. Snap to grid

✗ B. Polar snap

✗ C. Object snap

✗ D. Show to grid

Question ID : **1841223879**

Q.20 **According to IS 800 : 2007, the value of poission's ratio to be considered irrespective of grade of steel is _____.**

Ans

✗ A. 0.5

✓ B. 0.3

✗ C. 0.4

✗ D. 0.2

Question ID : **1841223887**