



GOVT. OF NCT OF DELHI
Delhi Subordinate Services Selection Board
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Participant ID	
Participant Name	
Test Center Name	iON Digital Zone iDZ 2 Sector 62
Test Date	28/06/2022
Test Time	8:30 AM - 10:30 AM
Subject	Junior Engineer (Civil) or Section Officer (Civil)

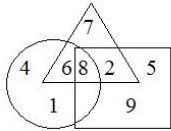
Section : Mental Ability

Q.1 खेलते समय छः मित्र A, B, C, D और E घटते कद के क्रम में खड़े हैं। D के पहले केवल दो मित्र खड़े हैं। E के बाद केवल चार मित्र खड़े हैं। C, A और F के बीच खड़ा है। सबसे ऊँचा मित्र कौन है?

- Ans
- A. F
 - B. E
 - C. B
 - D. A

Question ID : 1841222891

Q.2 In the given venn diagram, triangle shows class 5 students, rectangle shows the students who can dance, circle shows girl students.



How many class 5 girl students are there who can't dance?

- Ans
- A. 14
 - B. 8
 - C. 10
 - D. 6

Question ID : 1841222890

Q.3 नीचे एक कथन दिया गया है जिसके बाद दो धारणाएँ दी गई हैं। तय करें कि दिए गए कथन में कौन-सी धारणा/धारणाएँ अंतर्निहित है/हैं।

कथन:

इंदौर से दिल्ली तक ट्रेन से यात्रा करना सुविधाजनक है।

धारणाएँ:

I. इंदौर से दिल्ली तक हवाई यात्रा करना सुविधाजनक नहीं है।

II. इंदौर और दिल्ली ट्रेन से जुड़े हुए हैं।

- Ans
- A. दोनों ही धारणाएँ अंतर्निहित हैं।
 - B. केवल धारणा II अंतर्निहित है।
 - C. केवल धारणा I अंतर्निहित है।
 - D. कोई भी धारणा अंतर्निहित नहीं है।

Question ID : 1841222901

Q.4 Select the option which is related to the third term in the same way as second term is related to the first term.
RXF : SEO :: GPS : ?

- Ans
- A. HTY
 - B. HSX
 - C. HWB
 - D. HUZ

Question ID : 1841222898

Q.5 Three out of four given options are alike in some manner and one is different.
Choose the odd one out.

- Ans
- A. (12, 91)
 - B. (17, 126)
 - C. (6, 51)
 - D. (9, 70)

Question ID : 1841222906

Q.6 If A * B means A is the father of B, A # B means A is the mother of B, A @ B means A is the husband of B, A \$ B means A is the son of B; then for the given expression T # P * U \$ S # C @ D, how is D related to P?

- Ans
- A. Daughter-in-law
 - B. Uncle
 - C. Cousin
 - D. Son-in-law

Question ID : 1841222896

Q.7 Which number will be there in place of ? in the given number matrix?

11	18	15
?	9	24
29	77	10

- Ans
- A. 17
 - B. 21
 - C. 9
 - D. 11

Question ID : 1841222905

Q.8 अमीषा बुखार के कारण सात दिनों की छुट्टी के बाद स्कूल आ रही थी। वह दो दिनों तक कक्षाओं में उपस्थित रही और फिर शुक्रवार से वार्षिक परीक्षा की तैयारी की छुट्टियाँ शुरू हो गईं। बुखार से पहले वह आखिरी बार किस दिन कक्षा में उपस्थित हुई थी?

- Ans
- A. बुधवार
 - B. मंगलवार
 - C. गुरुवार
 - D. सोमवार

Question ID : 1841222889

Q.9 Which is the wrong term in the given letter series.

X, U, Q, I, Z

- Ans
- A. Z
 - B. U
 - C. I
 - D. Q

Question ID : 1841222892

Q.10 कुछ मित्र एक खेल खेलते समय समान दूरी पर खड़े होते हैं। राम रहीम के पश्चिम में खड़ा है, जो मरियम के उत्तर में खड़ा है, जो जोसेफ़ के पूर्व में खड़ी है; राम, जोसेफ़ की किस दिशा में खड़ा है?

- Ans
- A. दक्षिण
 - B. उत्तर
 - C. पूर्व
 - D. पश्चिम

Question ID : 1841222895

Q.11 Three out of four letter clusters are similar in some manner and one is different.
Select the odd one out.

Ans A. XAD

B. QUY

C. FIL

D. LOR

Question ID : 1841222899

Q.12 Which two numbers should be interchanged to make the given equation correct?

$$196 \div 7 + 8 - 36 \times 25 = -235$$

Ans A. 7 and 36

B. 7 and 8

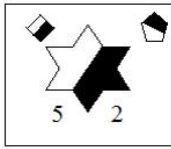
C. 36 and 196

D. 25 and 8

Question ID : 1841222908

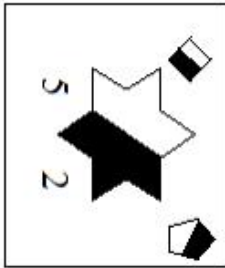


Q.13 Select the correct mirror image of the given figure if the mirror is [placed at the right side of the figure.

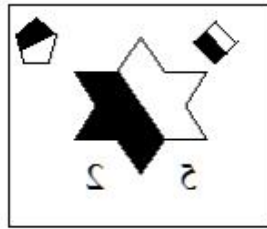


Ans

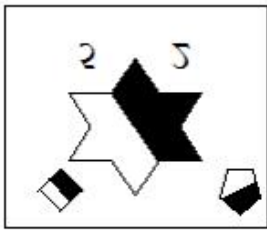
✗ A.



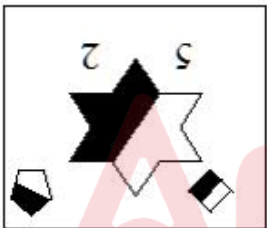
✓ B.



✗ C.



✗ D.



Question ID : 1841222903

Q.14 If $A \% B$ means A is multiplied to B , $A \# B$ means A is added to B , $A @ B$ means A is divided by B , $A \$ B$ means B is subtracted from A ; then what is the value of the given expression?

$$105 \# 87 \% @ 3 \$ 19 \% 4$$

Ans ✓ A. 58

✗ B. 104

✗ C. -17

✗ D. 97

Question ID : 1841222907

Q.15 Three out of four letter cluster-pairs are similar in some manner and one is different. Select the odd one out.

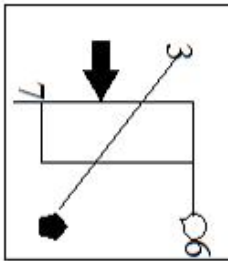
- Ans A. RCM : AIP
 B. JTU : SNX
 C. GPV : PJY
 D. VFI : EZL

Question ID : 1841222900

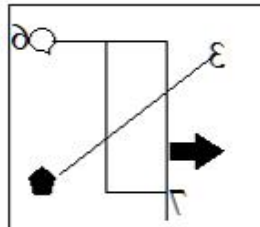
Q.16 Three out of four figures are similar in some manner and one is different. Select the odd one out.

Ans

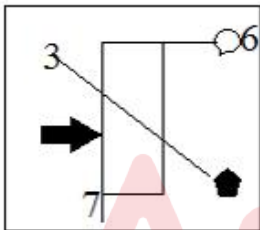
A.



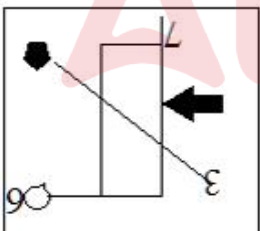
B.



C.

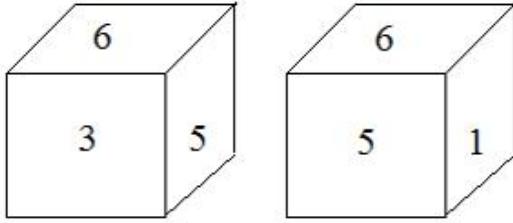


D.



Question ID : 1841222902

Q.17 Two positions of the same dice are given.



Which face is opposite the face marked 3?

- Ans
- A. 5
 - B. 1
 - C. 4
 - D. 2

Question ID : 1841222904

Q.18 If in a code language 'GRAPES' is written as 'NKLEOI', then how will 'APPLES' be written in the same code language?

- Ans
- A. LETHIO
 - B. EOLHTI
 - C. EHLTOI
 - D. LEHTOI

Question ID : 1841222894

Q.19 If all the letters of word 'ASTONISHMENT' are rearranged in alphabetical order, which letter has vowels at both sides?

- Ans
- A. H
 - B. O
 - C. M
 - D. N

Question ID : 1841222893

Q.20 एक परिवार में सात सदस्य हैं, जिनमें दो युगल और तीन बच्चे हैं। P, N का इकलौता बेटा है, जो (N) Q की बेटी S की दादी हैं। U और V, M के भाई-बहन और पोते हैं। V का संबंध N के साथ किस रूप में है?

- Ans
- A. चचेरा भाई/चचेरी बहन
 - B. पोता
 - C. बेटी
 - D. बहू

Question ID : 1841222897

Q.1 सेंट्रल कोलकाता के विक्टोरिया मेमोरियल की परिकल्पना _____ द्वारा की गई थी।

- Ans A. लॉर्ड हार्डिंग (Lord Hardinge)
 B. लॉर्ड एल्गिन (Lord Elgin)
 C. लॉर्ड कर्ज़न (Lord Curzon)
 D. लॉर्ड मायो (Lord Mayo)

Question ID : 1841222916

Q.2 निम्नलिखित में से कौन सा दक्षिणी भारत में विजयनगर के हिंदू साम्राज्य का अंतिम राजवंश था?

- Ans A. चालुक्य राजवंश
 B. होयसल राजवंश
 C. अराविदु राजवंश
 D. सातवाहन राजवंश

Question ID : 1841222914

Q.3 वेदांतम सत्यनारायण शर्मा एक प्रसिद्ध _____ नर्तक थे।

- Ans A. कथक
 B. मणिपुरी
 C. कुचिपुड़ी
 D. ओडिसी

Question ID : 1841222918

Q.4 निम्नलिखित में से किस योजना का उद्देश्य सभी स्तरों पर सरकारी प्रणालियों, बैंकों और अन्य संस्थानों के साथ परस्पर बातचीत करने के लिए ज्ञान, उपकरण और तकनीक प्रदान करके अल्पसंख्यक महिलाओं, उनके पड़ोसियों सहित, उसी गाँव / क्षेत्र में रहने वाले अन्य समुदायों के लोगों के सशक्तिकरण के साथ साथ उनके बीच विश्वास पैदा करना है?

- Ans A. नया उजाला
 B. नई रोशनी
 C. नई शक्ति
 D. नई सुबह

Question ID : 1841222911

Q.5 2011 की जनगणना के अनुसार, जनसंख्या की औसत वार्षिक चरघातांकी वृद्धि दर का प्रतिशत कितना था?

- Ans A. 1.03
 B. 1.64
 C. 3.45
 D. 2.25

Question ID : 1841222923

Q.6 1949 में पीपुल्स रिपब्लिक ऑफ़ चाइना की स्थापना के बाद से चीन के निम्नलिखित में से किस राजनीतिक दल ने शासन किया था?

- Ans A. चाइना ज़ी गॉन्ग पार्टी (China Zhi Gong Party)
 B. ज्यूसन सोसायटी (Jiusan Society)
 C. चाइनीज़ कम्युनिस्ट पार्टी (Chinese Communist Party)
 D. चाइना डेमोक्रेटिक लीग (China Democratic League)

Question ID : 1841222915

Q.7 पंच राष्ट्रीय उद्यान _____ में स्थित है।

- Ans A. महाराष्ट्र
 B. हिमाचल प्रदेश
 C. मध्य प्रदेश
 D. राजस्थान

Question ID : 1841222922

Q.8 चेनानी से नाशरी सुरंग _____ में है।

- Ans A. जम्मू और कश्मीर
 B. नागालैंड
 C. असम
 D. लद्दाख

Question ID : 1841222924

Q.9 जनवरी 2022 के महीने में, निम्नलिखित में से किस स्वतंत्रता सेनानी के नाम पर प्रधान मंत्री मोदी द्वारा आपदा प्रबंधन पुरस्कार की शुरुआत की गई?

- Ans A. वल्लभभाई पटेल
 B. सुभाष चंद्र बोस
 C. भगत सिंह
 D. महात्मा गांधी

Question ID : 1841222909

Q.10 भारत के नेशनल स्टॉक एक्सचेंज (NSE) की स्थापना कब हुई थी?

- Ans A. 1988
 B. 1990
 C. 1992
 D. 1996

Question ID : 1841222920

Q.11 सरकार ने नेताजी सुभाष चंद्र बोस की 125वीं जयंती के उपलक्ष्य में _____ को पराक्रम दिवस के रूप में घोषित किया है।

- Ans A. 24 जनवरी
 B. 23 जनवरी
 C. 25 जनवरी
 D. 22 जनवरी

Question ID : 1841222919

Q.12 मानव विकास सूचकांक 2020 _____ द्वारा तैयार किया गया था।

- Ans A. अंतर्राष्ट्रीय बचाव समिति
 B. अंतर्राष्ट्रीय मुद्रा कोष
 C. संयुक्त राष्ट्र विकास कार्यक्रम
 D. विश्व बैंक

Question ID : 1841222921

Q.13 पराशर झील निम्नलिखित में से किस राज्य में है?

- Ans A. हिमाचल प्रदेश
 B. उत्तराखंड
 C. राजस्थान
 D. उत्तर प्रदेश

Question ID : 1841222925

Q.14 जनवरी 2022 तक प्राप्त जानकारी के अनुसार, निम्नलिखित में से किस खिलाड़ी ने टेस्ट क्रिकेट में सर्वाधिक विकेट लिए हैं?

- Ans A. ए. कुंबले
 B. एम.मुरलीधरन
 C. जे.एम.एंडरसन
 D. एस.के.वार्न

Question ID : 1841222913

Q.15 निम्नलिखित में से कौन सी प्रजाति प्रोबायोटिक्स ("लाभकारी" बैक्टीरिया) हैं, जो सामान्यतः मानव पाचन और मूत्र पथ में पाई जाती है?

- Ans A. लैक्टोबैसिलस (Lactobacillus)
 B. लिस्टीरिया (Listeria)
 C. साल्मोनेला (Salmonella)
 D. कैम्पिलोबैक्टर (Campylobacter)

Question ID : 1841222926

Q.16 पूर्व केंद्रीय संचार और सूचना प्रौद्योगिकी मंत्री रविशंकर प्रसाद द्वारा 2020 में की गई घोषणा के अनुसार, ऑप्टिकल फ़ाइबर केबल इंटरनेट द्वारा सभी गांवों को जोड़ने वाला निम्नलिखित में से भारत का पहला राज्य कौन सा होगा?

- Ans A. छत्तीसगढ़
 B. गोआ
 C. कर्नाटक
 D. बिहार

Question ID : 1841222910

Q.17 As of January 2022, who is the Governor-cum- Administrator of Chandigarh?

- Ans A. Sri Debendra Dalai
 B. Shri Dharam Pal
 C. Sri Nitin Kumar Yadav
 D. Shri Banwarilal Purohit

Question ID : 1841222928

Q.18 निम्नलिखित में से कौन भारत का पहला ओलंपिक तीरंदाज़ था?

- Ans A. रिमिल बुरियुली
 B. अभिषेक वर्मा
 C. लिंबा राम
 D. मुस्कान किरार

Question ID : 1841222912

Q.19 भारतीय संविधान का निम्नलिखित में से कौन सा अनुच्छेद सांस्कृतिक और शैक्षणिक अधिकारों से संबंधित है?

- Ans A. अनुच्छेद 25-28
 B. अनुच्छेद 19-22
 C. अनुच्छेद 29-30
 D. अनुच्छेद 12-35

Question ID : 1841222927

Q.20 तलंगलम आदिवासी नृत्य निम्नलिखित में से किस राज्य का है?

- Ans A. केरल
 B. कर्नाटक
 C. असम
 D. मिज़ोरम

Question ID : 1841222917

Q.1 A एक कार्य को 12 दिनों में और B 18 दिनों में कर सकता है। यदि वे उस पर 6 दिनों तक एक साथ काम करते हैं, तो कार्य का कितना अंश शेष बचेगा?

Ans

A. $\frac{1}{6}$

B. $\frac{2}{3}$

C. $\frac{1}{4}$

D. $\frac{3}{7}$

Question ID : 1841222940

Q.2 यदि एक त्रिभुज की अंतःत्रिज्या 2.5 cm है और इसका परिमाप 32 cm है, तो त्रिभुज का क्षेत्रफल क्या होगा?

Ans

A. 35 cm^2

B. 44 cm^2

C. 40 cm^2

D. 30 cm^2

Question ID : 1841222946

Q.3 A sum of money at simple interest amounts to Rs. 1615 in 3 years and to Rs. 1654 in 4 years. The sum is:

Ans

A. Rs. 1489

B. Rs. 1498

C. Rs. 1948

D. Rs. 1648

Question ID : 1841222938

Q.4 Which of the following numbers is divisible by 2, 3, 5 and 10?

Ans

A. 32150

B. 23235

C. 24130

D. 23250

Question ID : 1841222932

Q.5 हर महीने पौधा एक स्थिर दर से बढ़ता है, और महीने के अंत में, माली कुल पौधे का 30% काट देता है और फिर भी पौधे को पिछले महीने की तुलना में 10% बढ़ा पाता है। पौधे में हर महीने कितने प्रतिशत की वृद्धि होती है?

- Ans A. 50.90%
 B. 61.62%
 C. 0.6362
 D. 65.32%

Question ID : 1841222934

Q.6 An electronics repairman purchased a defective mixer grinder for Rs. 700. He spends some amount to repair the mixer grinder and then sold it for Rs. 1400. If the percentage of profit made by the repairman is 50%, what is the amount he spends on repairing the mixer grinder (round off to the nearest integer)?

- Ans A. Rs. 333
 B. Rs. 430
 C. Rs. 303
 D. Rs. 233

Question ID : 1841222936

Q.7 The mean weight of a group of seven boys is 62 kg. The individual weights (in kg) of six of them are 54, 57, 57, 60, 59 and 55. Find the weight of the seventh boy.

- Ans A. 78 kg
 B. 82 kg
 C. 80 kg
 D. 92 kg

Question ID : 1841222943

Q.8 Simplify : $[72 - 12 \div 3 - 2] + (18 - 6) \div 4 - (6 \div 2 + 7 \times 4)$

- Ans A. 30
 B. 28
 C. 38
 D. 42

Question ID : 1841222933

Q.9 The ratio of the length and the breadth of a rectangle is 4 : 3 and the area of the rectangle is 7500 sq cm. Find the ratio of the breadth and the area of the rectangle?

- Ans A. 2 : 200
 B. 2 : 100
 C. 1 : 50
 D. 2 : 50

Question ID : 1841222945

Q.10 Rashish invests ₹ 5000 for 3 years at 5% p.a. compounded interest reckoned yearly. Income tax at the rate of 20% on the interest earned is deducted at the end of each year. Find the total interest at the end of third year.

- Ans A. ₹ 624.32
 B. ₹ 642.31
 C. ₹ 724.90
 D. ₹ 824.32

Question ID : 1841222939

Q.11 वह भागफल ज्ञात करें, जब सबसे बड़ी संख्या को 5 से विभाजित किया जाता है, जिसे 77, 48 और 34 से विभाजित करने पर शेष क्रमशः 2, 3 और 4 बचते हैं।

- Ans A. 1
 B. 3
 C. 5
 D. 15

Question ID : 1841222931

Q.12 यदि सरिता 10 km/h के बजाय 15 km/h की गति से चलती , तो वह इतने ही समय में 40 km अधिक चल पाती। उसके द्वारा तय की गई दूरी कितनी है?

- Ans A. 70 km
 B. 80 km
 C. 50 km
 D. 60 km

Question ID : 1841222942

Q.13 The fractions 0.3, 3.68, 2 in the form of like decimal fractions are _____.

- Ans A. 0.03, 36.8, 2.00
 B. 0.30, 3.68, 2.00
 C. 0.03, 3.68, 2.00
 D. 0.03, 3.68, 0.02

Question ID : 1841222929

Q.14

$$0.1 \times 0.1 \times 0.1 + 0.02 \times 0.02 \times 0.02$$

_____ का मान ज्ञात करें।

$$0.4 \times 0.4 \times 0.4 + 0.08 \times 0.08 \times 0.08$$

- Ans A. 1/12
 B. 1/64
 C. 1/24
 D. 1/48

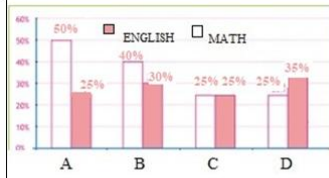
Question ID : 1841222930

Q.15 एक थैले में पाँच रुपये, दो रुपये और एक रुपये के सिक्के 2 : 3 : 5 के अनुपात में हैं। यदि उनका कुल मूल्य ₹ 273 है, तो दो रुपये के सिक्कों का मूल्य कितना होगा?

- Ans A. ₹ 82
 B. ₹ 78
 C. ₹ 39
 D. ₹ 66

Question ID : 1841222935

Q.16



The above graph shows the percentage of students who have scored a first class in Maths and English in Div A, Div B, Div C and Div D of a school. Based on the graph answer the question:

If a total of 160 students are equally distributed in all the four divisions, what is the difference between the number of students who have scored first class marks in English and Maths over all divisions?

- Ans A. 10
 B. 30
 C. 16
 D. 20

Question ID : 1841222948

Q.17 पाँच संख्याओं का माध्य 45 है। यदि किसी एक संख्या को हटा दिया जाए, तो माध्य 5 कम हो जाता है। हटाई गई संख्या ज्ञात कीजिए।

- Ans A. 50
 B. 55
 C. 45
 D. 65

Question ID : 1841222944

Q.18 अमित, बिपिन और कैथी एक कार्य को क्रमशः 20, 30 और 60 दिनों में पूरा कर सकते हैं। यदि हर तीसरे दिन बिपिन और कैथी अमित की सहायता करते हैं, तो अमित उस कार्य को कितने दिनों में पूरा कर सकता है?

- Ans A. 10 दिन
 B. 15 दिन
 C. 5 दिन
 D. 20 दिन

Question ID : 1841222941

Q.19 Find the ratio of the total surface area to the curved surface area of a cylinder with a diameter of 12 cm and height of 10 cm.

Ans

- A. $\frac{8}{5}$
- B. $\frac{7}{9}$
- C. $\frac{5}{8}$
- D. $\frac{7}{5}$

Question ID : 1841222947

Q.20 Mukul sold a fan to Sachin at 40% gain, Sachin sold it to Nitin at a loss of 24.3%. (round off to the nearest integer). If Nitin bought it for Rs. 1060 then at what price Mukul purchased it?

Ans

- A. Rs. 1250
- B. Rs. 1200
- C. Rs. 1000
- D. Rs. 980

Question ID : 1841222937

Section : General English

Q.1 Fill in the blank with the correctly spelled word choosing from the options given below.

There is a frequent _____ of hail storms and snow in this area.

- Ans A. occurence
- B. occurrence
- C. occurance
- D. ocurence

Question ID : 1841222960

Q.2 Identify the Adverb/Adverbs in the following sentence choosing one among the options given.

He quietly replied that he was entirely satisfied and quite content.

- Ans A. quietly, entirely
- B. replied, satisfied
- C. replied, content
- D. quietly, quite

Question ID : 1841222952

Q.3 Select the most appropriate Antonym of the given word.

CONSENT

- Ans A. intervene
 B. initiate
 C. hallucinate
 D. interdict

Question ID : 1841222955

Q.4 Fill in the blank using verb form (present perfect tense) choosing from the options given below.

Ouch! You _____ on my foot.

- Ans A. Tread
 B. Has treaded
 C. Have treaded
 D. Have been treading

Question ID : 1841222953

Q.5 Put the verbs in brackets into correct or more suitable verb form (past tense) choosing from the options given below.

We (come) home from school when it (start) to rain.

- Ans A. came, were starting
 B. were coming, started
 C. came, started
 D. came, was starting

Question ID : 1841222954

Q.6 Select the most appropriate meaning which best expresses the meaning of the given Idiom in the bold.

During her long illness she often **LONGED FOR** death.

- Ans A. Desired
 B. Cheered
 C. Craved
 D. Demanded

Question ID : 1841222958

Q.7 Complete the sentence using an appropriate adverb choosing from the following options given.

Nina seemed a bit annoyed about Rehana's comment, but I don't think she was _____ offended.

- Ans A. lightly
 B. softly
 C. deeply
 D. likely

Question ID : 1841222950

Q.8 Complete the sentence using an appropriate preposition choosing from the following options given.

His house is _____ the temple.

- Ans A. near
 B. to
 C. by
 D. on

Question ID : 1841222951

Q.9 Select the most appropriate option to fill in the blank.

Many are called, but _____ are chosen.

- Ans A. unique
 B. all
 C. entirety
 D. few

Question ID : 1841222962

Q.10 Complete the sentence using an appropriate preposition choosing from the following options given.

How many people can you fit _____ your car?

- Ans A. on
 B. in
 C. at
 D. of

Question ID : 1841222949

Q.11 Select the most appropriate meaning which best expresses the meaning of the given Idiom in the bold.

About an hour ago I saw a fellow **HANGING ABOUT** our bungalow.

- Ans
- A. Eyeing on
 - B. Loitering about
 - C. Expecting about
 - D. Staying in

Question ID : 1841222959

Q.12 Select the most appropriate meaning which best expresses the meaning of the given Idiom in the bold.

How did these things **COME OUT**?

- Ans
- A. Stray
 - B. Leave
 - C. Happen
 - D. Expediate

Question ID : 1841222957

Q.13 Given below are four jumbled sentences select the option that gives their correct logical sequence.

- A. Some moulds produce toxins.
- B. Some are harmful and cause infections or produce toxins, e.g., clostridium botulism and salmonella.
- C. Micro-organisms are present everywhere and some are useful in making curd, cheese and bread.
- D. Aspergillus flavus produces aflatoxin in groundnuts, cereals and spices.

- Ans
- A. CABD
 - B. BDAC
 - C. ABDC
 - D. CBAD

Question ID : 1841222961

Q.14 Select the most appropriate option to fill in the blank.

_____ strengthens our will to survive calamities.

- Ans
- A. hope
 - B. treasure
 - C. honour
 - D. value

Question ID : 1841222963

Q.15 Read the sentence and select the homophone which will correctly complete the sentence.

Wild beasts in small cages are a sorry _____.

- Ans A. Sight
 B. Site
 C. Sides
 D. Sighed

Question ID : 1841222956

Comprehension:

Read the following passage and answer the questions given below.

Foods that are high in salt, sugar, fat or calories and low in nutrient content are called Junk foods. Children, especially adolescents influenced by advertisements consume foods which are high in fat, sugar and salt. These foods are high in calories but not nutrient dense. Junk foods give generally 'empty calories'.

One of the important reasons for the rise in obesity among children is consuming junk food.

Salted snack foods like chips, candies, French fries and sweetened carbonated beverages are considered as junk foods. Bakery products like cakes with icing and biscuits are mostly made with Maida, saturated fat and sugar also come under the category of junk foods.

Puffs and karo biscuits, get the characteristic layers due to addition of trans and saturated fat. Increase in serving size of foods like popcorn in theatres is not desirable.

Idli, vadas and dosa contribute protein and vitamin requirements in addition to calories.

These foods are not junk foods.

Junk food should be restricted in diets and occasionally consuming them may not harm the body. Pizzas nowadays made with whole wheat flour. Addition of more vegetables make it more nutritious. Cheese present in pizzas contribute to protein requirement.

Indian sweets like jalebi made with maida and sugar can also be considered as junk food.

All sweets should be consumed in limited quantities due to high content of sugar and trans fats and occasional consumption may not imbalance nutrient intake.

Foods like vadas and bhajjis can be consumed occasionally though they are rich in protein they are also rich in calories.

Milk based beverages like milk shakes and lassi either sweet or salt contain lot of sugar and salt. One need to appreciate those foods with no or limited sugar and salt.

Most of the junk foods are processed. Limiting processed foods and outside foods, is desirable. Appreciating natural foods like fruits and nuts as snacks would pave the way to good health.

In 2016 the Central Board of Secondary Education had sent out a circular to its affiliated schools stating that junk food should not be sold in campuses. Many organizations over the last few years have been calling for a blanket ban for the sale of junk food across schools and colleges.

SubQuestion No : 16

Q.16 Select the most appropriate synonym of the word APPRECIATE?

- Ans A. fragrance
 B. criticize
 C. admire
 D. luxuriate

Question ID : 1841222969

Comprehension:

Read the following passage and answer the questions given below.

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SubQuestion No : 17

Q.17 What does Idli, vada and dosa contribute in addition to calories?

- Ans
- A. Sugar and salt intake
 - B. Vitamins and fats
 - C. Protein and vitamin requirement
 - D. Maida and sugar

Question ID : 1841222968

Comprehension:

Read the following passage and answer the questions given below.

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SubQuestion No : 18

Q.18 How are children and adolescents influenced towards junk food?

- Ans
- A. Due to their big serving sizes
 - B. Love towards them
 - C. Advertisements
 - D. Rich in nutrients

Question ID : 1841222966

Comprehension:

Read the following passage and answer the questions given below.

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In 2016 the Central Board of Secondary Education had sent out a circular to its affiliated schools stating that junk food should not be sold in campuses. Many organizations over the last few years have been calling for a blanket ban for the sale of junk food across schools and colleges.

SubQuestion No : 19

Q.19 What was the message sent across through the circular by the CBSE board?

- Ans
- A. Junk food to be restricted in diet
 - B. Blanket ban for sale of junk in campuses
 - C. Advertisements to be banned
 - D. Bakery items to be not sold

Question ID : 1841222967

Comprehension:

Read the following passage and answer the questions given below.

Foods that are high in salt, sugar, fat or calories and low in nutrient content are called Junk foods. Children, especially adolescents influenced by advertisements consume foods which are high in fat, sugar and salt. These foods are high in calories but not nutrient dense. Junk foods give generally 'empty calories'.

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SubQuestion No : 20

Q.20 Which of the following factors are not included under the category of junk food?

- Ans
- A. High in salt and sugar
 - B. High in fats
 - C. High in trans and saturated fats
 - D. High nutrient content foods

Question ID : 1841222965

Section : General Hindi

Q.1 'प्राणों की बाजी लगा देने' के अर्थ में किस मुहावरे का प्रयोग होता है?

- Ans
- A. जान के लाले पड़ना
 - B. जान में जान आना
 - C. जान पर खेलना
 - D. जामे से बाहर होना

Question ID : 1841222977

Q.2 'अपनी पराजय देख शत्रु ने हथियार रख दिये।' वाक्य के रेखांकित अंश को किस शब्द से प्रतिस्थापित किया जा सकता है?

- Ans A. जमा
 B. डाल
 C. छोड़
 D. भगा

Question ID : 1841222984

Q.3 'उपकार' का विलोम क्या होगा?

- Ans A. आकार
 B. निराकार
 C. सत्कार
 D. अपकार

Question ID : 1841222976

Q.4 'अपने कर्म का फल भोगना ही पड़ता है।' अर्थ को व्यंजित करने वाली उपयुक्त लोकोक्ति कौन सी है?

- Ans A. अपने मुँह मिया मिट्टू
 B. अपनी नींद सोना, अपनी नींद जागना
 C. अपने किये का क्या इलाज
 D. अपनी पगड़ी अपने हाथ

Question ID : 1841222979

Q.5 हमें प्रतिदिन व्यायाम _____ चाहिए। वाक्य के रिक्त स्थान के लिए उपयुक्त शब्द होगा-

- Ans A. करना
 B. होना
 C. लेना
 D. सोचना

Question ID : 1841222983

Q.6 'सरोवर' का सही संधि विच्छेद कौन सा है?

- Ans A. सर + ओवर
 B. सर: + अवर
 C. सर: + वर
 D. स: + रवर

Question ID : 1841222973

Q.7 'निशा फुटबाल खेलती है।' वाक्य का काल है-

- Ans A. संभाव्य वर्तमान
 B. पूर्ण वर्तमान
 C. संदिग्ध वर्तमान
 D. सामान्य वर्तमान

Question ID : 1841222980

Q.8 'शशांक' का सही संधि विच्छेद है-

- Ans A. श + शांक
 B. शशि + अंक
 C. शश + अंक
 D. शशन + अंक

Question ID : 1841222974

Q.9 'मुँह की खाना' मुहावरे का सही अर्थ है-

- Ans A. खीझ प्रकट करना
 B. उदास होना
 C. बुरी तरह हारना
 D. विश्वासघात करना

Question ID : 1841222978

Q.10 'आँधी न आती तो फसल नष्ट न होती।' यह किस प्रकार का वाक्य है?

- Ans A. संकेतवाचक
 B. संदेहवाचक
 C. इच्छावाचक
 D. विस्मयवाचक

Question ID : 1841222982

Q.11 'तुम अपनी रोजी की चिंता करो।' वाक्य के रेखांकित पद में किस कारक का प्रत्यय है?

- Ans A. संबंधकारक
 B. कारणकारक
 C. कर्ताकारक
 D. अधिकरणकारक

Question ID : 1841222970

Q.12 निम्नलिखित में से कौन सा विकल्प 'यौगिक क्रियाविशेषण' है?

- Ans A. फिर
 B. अभी
 C. दूर
 D. ठीक

Question ID : 1841222971

Q.13 'सलिल' का पर्यायवाची है-

- Ans A. समीर
 B. उदक
 C. नलिन
 D. कनक

Question ID : 1841222975

Q.14 'नीला' किस प्रकार का विशेषण है?

- Ans A. सार्वनामिक
 B. परिमाणबोधक
 C. गुणवाचक
 D. संख्यावाचक

Question ID : 1841222972

Q.15 'बच्चे विद्यालय गये होंगे।' वाक्य का काल है-

- Ans A. सामान्य भविष्य
 B. सामान्य भूत
 C. संदिग्ध भूत
 D. पूर्ण भूत

Question ID : 1841222981

Comprehension:

दिए गए गद्यांश को ध्यानपूर्वक पढ़ें और दिए गए प्रश्नों के उत्तर दें।

धर्म और विज्ञान सामाजिक जीवन के दो पक्ष हैं जिनमें से पहले का महत्त्व उस समय से रहा है जब से हम मनुष्य के मानसिक इतिहास के विषय में कुछ भी जानते हैं, जबकि दूसरे ने ग्रीक और अरबों के बीच अनियमित रूप से टिमटिमाते अस्तित्व के बाद सोलहवीं शताब्दी में अचानक महत्त्व प्राप्त किया और तबसे हमारे विचारों और संस्थाओं, जिनके बीच हम रहते हैं, दोनों को, निरंतर उत्कर्ष प्राप्त करते हुए विज्ञान परिवर्तित करता रहा है। धर्म और विज्ञान के बीच एक लम्बा द्वंद्व चलता रहा है जिसमें विज्ञान निरपवाद रूप से निरंतर विजयी साबित हुआ।

SubQuestion No : 16

Q.16 धर्म और विज्ञान का संबंध कैसा रहा है?

- Ans A. स्वार्थपूर्ण
 B. सहयोगपूर्ण
 C. परस्पर आश्रित
 D. संघर्षपूर्ण

Question ID : 1841222990

Comprehension:

दिए गए गद्यांश को ध्यानपूर्वक पढ़ें और दिए गए प्रश्नों के उत्तर दें।

धर्म और विज्ञान सामाजिक जीवन के दो पक्ष हैं जिनमें से पहले का महत्त्व उस समय से रहा है जब से हम मनुष्य के मानसिक इतिहास के विषय में कुछ भी जानते हैं, जबकि दूसरे ने ग्रीक और अरबों के बीच अनियमित रूप से टिमटिमाते अस्तित्व के बाद सोलहवीं शताब्दी में अचानक महत्त्व प्राप्त किया और तबसे हमारे विचारों और संस्थाओं, जिनके बीच हम रहते हैं, दोनों को, निरंतर उत्कर्ष प्राप्त करते हुए विज्ञान परिवर्तित करता रहा है। धर्म और विज्ञान के बीच एक लम्बा द्वंद्व चलता रहा है जिसमें विज्ञान निरपवाद रूप से निरंतर विजयी साबित हुआ।

SubQuestion No : 17

Q.17 'उत्कर्ष' का अर्थ होता है-

- Ans A. समृद्धि
 B. हास
 C. पतन
 D. विनाश

Question ID : 1841222989

Comprehension:

दिए गए गद्यांश को ध्यानपूर्वक पढ़ें और दिए गए प्रश्नों के उत्तर दें।

धर्म और विज्ञान सामाजिक जीवन के दो पक्ष हैं जिनमें से पहले का महत्त्व उस समय से रहा है जब से हम मनुष्य के मानसिक इतिहास के विषय में कुछ भी जानते हैं, जबकि दूसरे ने ग्रीक और अरबों के बीच अनियमित रूप से टिमटिमाते अस्तित्व के बाद सोलहवीं शताब्दी में अचानक महत्त्व प्राप्त किया और तबसे हमारे विचारों और संस्थाओं, जिनके बीच हम रहते हैं, दोनों को, निरंतर उत्कर्ष प्राप्त करते हुए विज्ञान परिवर्तित करता रहा है। धर्म और विज्ञान के बीच एक लम्बा द्वंद्व चलता रहा है जिसमें विज्ञान निरपवाद रूप से निरंतर विजयी साबित हुआ।

SubQuestion No : 18

Q.18 सोलहवीं शताब्दी में किसको यकायक महत्व मिला?

- Ans A. अस्तित्व
 B. विज्ञान
 C. धर्म
 D. इतिहास

Question ID : 1841222987

Comprehension:

दिए गए गद्यांश को ध्यानपूर्वक पढ़ें और दिए गए प्रश्नों के उत्तर दें।

धर्म और विज्ञान सामाजिक जीवन के दो पक्ष हैं जिनमें से पहले का महत्त्व उस समय से रहा है जब से हम मनुष्य के मानसिक इतिहास के विषय में कुछ भी जानते हैं, जबकि दूसरे ने ग्रीक और अरबों के बीच अनियमित रूप से टिमटिमाते अस्तित्व के बाद सोलहवीं शताब्दी में अचानक महत्त्व प्राप्त किया और तबसे हमारे विचारों और संस्थाओं, जिनके बीच हम रहते हैं, दोनों को, निरंतर उत्कर्ष प्राप्त करते हुए विज्ञान परिवर्तित करता रहा है। धर्म और विज्ञान के बीच एक लम्बा द्वंद्व चलता रहा है जिसमें विज्ञान निरपवाद रूप से निरंतर विजयी साबित हुआ।

SubQuestion No : 19

Q.19 सामाजिक जीवन के दो पहलू कौन से हैं?

- Ans A. धर्म और विज्ञान
 B. विचार और संस्थाएँ
 C. दर्शन और विज्ञान
 D. धर्म और दर्शन

Question ID : 1841222986

Comprehension:

दिए गए गद्यांश को ध्यानपूर्वक पढ़ें और दिए गए प्रश्नों का उत्तर दें।

धर्म और विज्ञान सामाजिक जीवन के दो पक्ष हैं जिनमें से पहले का महत्त्व उस समय से रहा है जब से हम मनुष्य के मानसिक इतिहास के विषय में कुछ भी जानते हैं, जबकि दूसरे ने ग्रीक और अरबों के बीच अनियमित रूप से टिमटिमाते अस्तित्व के बाद सोलहवीं शताब्दी में अचानक महत्त्व प्राप्त किया और तबसे हमारे विचारों और संस्थाओं, जिनके बीच हम रहते हैं, दोनों को, निरंतर उत्कर्ष प्राप्त करते हुए विज्ञान परिवर्तित करता रहा है। धर्म और विज्ञान के बीच एक लम्बा द्वंद्व चलता रहा है जिसमें विज्ञान निरपवाद रूप से निरंतर विजयी साबित हुआ।

SubQuestion No : 20

Q.20 विज्ञान किसे परिवर्तित करता रहा है?

- Ans
- A. केवल विचारों को
 - B. विचारों और संस्थाओं दोनों को
 - C. केवल संस्थाओं को
 - D. धर्म को

Question ID : 1841222988

Section : Discipline 1

Q.1 For Typical domestic earth wires smaller than _____ must not be used (where SWG = Standard wire gauge).

- Ans
- A. 3 SWG
 - B. 2 SWG
 - C. 14 SWG
 - D. 15 SWG

Question ID : 1841223002

Q.2 Choose the correct statement about Chain drive.

- A. Chain drive require moderate space and belt drive required larger space.
- B. In chain drive slip may occur.

- Ans
- A. Both A and B are correct
 - B. Only A is correct
 - C. Both A and B are incorrect
 - D. Only B is correct

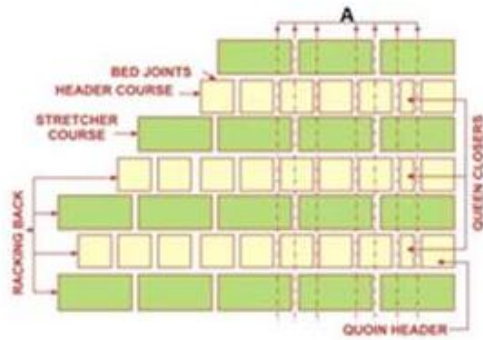
Question ID : 1841223003

Q.3 In the Coulomb's law equation constant 'k' depends upon which of the following?

- Ans
- A. Medium that the Charged objects are immersed in
 - B. Material of that the Charged objects
 - C. Magnetic field of objects
 - D. Weight of the objects

Question ID : 1841222991

Q.4 Imaginary lines represent by 'A' are known as:



- Ans
- A. Cornice
 - B. String
 - C. Spalls
 - D. Prepends

Question ID : 1841223008

Q.5 An I.C engine works with a compression ratio of 20. If cut-off happens at 10% of the stroke, then the cut-off ratio of this engine is:

- Ans
- A. 2.9
 - B. 2.2
 - C. 2.7
 - D. 2.5

Question ID : 1841223005

Q.6 The third term of a G.P. is 16. The product of its first five terms is:

- Ans
- A. 4^{25}
 - B. 2^{10}
 - C. 8^{15}
 - D. 2^{20}

Question ID : 1841222995

Q.7 Choose the correct statement about Norton's Theorem.

- A. Norton's Theorem is a way to reduce a network to an equivalent circuit composed of a single current source, parallel resistance, and parallel load.
- B. Thevenin's Theorem and Norton's Theorem are same.

- Ans
- A. Both A and B are correct
 - B. Only A is correct
 - C. Both A and B are incorrect
 - D. Only B is correct

Question ID : 1841223001

Q.8 Choose the correct statement about strip footing.

- Ans A. Strip foundations are designed for structures where the load is relatively low.
 B. It is unevenly transfer structure's loading at foundation level.
 C. They are generally used for ground where the subsoil is of a good bearing capacity.
 D. They are generally used for ground where the subsoil is of a low bearing capacity.

Question ID : 1841223007

Q.9 What is the purpose of adding ammonia buffer in sample solution?

- Ans A. adjustment of pH in sodium analyser
 B. adjustment of concentration in sodium analyser
 C. to prevent form catalyst reaction
 D. adjustment of volume of sodium analyser

Question ID : 1841222993

Q.10 Three resistance $10\ \Omega$, $15\ \Omega$ and $25\ \Omega$ are connected in series across 100 V. What will be the voltage drop across $10\ \Omega$?

- Ans A. 29 V
 B. 14 V
 C. 20 V
 D. 13.5 V

Question ID : 1841223000

Q.11 In Which Group B building are classified as per National Building Code part 4?

- Ans A. Storage Building
 B. Business Building
 C. Assembly Building
 D. Educational Building

Question ID : 1841223006

Q.12 Which of the following is not a participating compound for conducting Winkler test?

- Ans A. Starch solution
 B. Sodium thiosulphate
 C. Silver azide
 D. Azide Iodide

Question ID : 1841222994

Q.13 What will be the suitable type of shoring which is having a maximum distance of about 9 m between the end-to-end parallel walls?

- Ans A. Flying shore
 B. Vertical shore
 C. Dead shore
 D. Raking shore

Question ID : 1841223009

Q.14 An object is having skidding stop in 8 m. During skidding process, the on the object directly opposed force of 50 N to the motion is applied by surface. Calculate the amount of work done by surface.

- Ans A. Zero
 B. 2000 J
 C. 1 J
 D. -2000 J

Question ID : 1841222998

Q.15 Find the value of $(1-i/1+i)$, where 'i' is an imaginary number:

- Ans A. 1
 B. i
 C. -1
 D. 1/i

Question ID : 1841222996

Q.16 Two like parallel forces are acting at a distance of 30 mm apart and their resultant is 90 N, if the line of action of the resultant is 20 mm from one of the forces, the two forces are:

- Ans A. 120 N, -30 N
 B. 45 N, 45 N
 C. 30 N, 60 N
 D. 20 N, 70 N

Question ID : 1841222997

Q.17 Choose the correct statement.

- Ans A. Prandtl number is the ratio of momentum diffusivity by thermal conductivity
 B. Prandtl number is the ratio of thermal diffusivity by momentum diffusivity
 C. Prandtl number is the ratio of thermal conductivity by momentum diffusivity
 D. Prandtl number is the ratio of momentum diffusivity by thermal diffusivity

Question ID : 1841222992

Q.18 Relieving Arch required a lintel made of which material?

- Ans A. Steel
 B. Stone
 C. Concrete
 D. Wood

Question ID : 1841223010

Q.19 Choose the correct statement about Locomotive boiler.

- A. This boiler is capable of meeting sudden and fluctuating demands of steam.
B. Low steam generation rate

- Ans A. Both A and B are incorrect
 B. Only A is correct
 C. Only B is correct
 D. Both A and B are correct

Question ID : 1841223004

Q.20 When motion is just commencing, maximum friction is encountered. The friction acting at this stage is termed as:

- Ans A. Viscous Friction
 B. Limiting Friction
 C. Rolling Friction
 D. Sliding Friction

Question ID : 1841222999

Section : Discipline 2

Q.1 Unit speed (N_u) of the turbine runner is obtained by the following.

- Ans A. \sqrt{N}/H
 B. $N^{2/3}/H$
 C. N/H^2
 D. N/\sqrt{H}

Question ID : 1841223025

Q.2 Which of the following apparatus is used to test Soundness of cement?

- Ans A. Impact Test apparatus
 B. Los Angeles apparatus
 C. Le Chatelier apparatus
 D. Permeability apparatus

Question ID : 1841223029

Q.3 Flow of water in open channel is supposed to be laminar flow if Reynold number is equal to:

- Ans
- A. Greater than 2000
 - B. Less than 500
 - C. 500 to 2000
 - D. Doesn't depend on Reynold number

Question ID : 1841223023

Q.4 Specific yield value for well irrigation is always _____ porosity.

- Ans
- A. Less than
 - B. Inverse of
 - C. Greater than
 - D. Equal to

Question ID : 1841223015

Q.5 Which of the following is related to hydrostatic pressure on dam?

- Ans
- A. Material of dam
 - B. Length of water in dam
 - C. Shape of dam
 - D. Type of foundation of dam

Question ID : 1841223022

Q.6 Which of following is not a computer operating system?

- Ans
- A. Red Hat
 - B. Windows 7
 - C. MatLab
 - D. Vista

Question ID : 1841223026

Q.7 When a body is totally or partially submerged immersed in the fluid, it is _____ up.

- Ans
- A. Pushed
 - B. Displaced
 - C. Clamped
 - D. Buoyed

Question ID : 1841223021

Q.8 The kinematic viscosity is defined as:

- Ans
- A. Absolute viscosity of a liquid divided by its density at the same temperature.
 - B. Absolute viscosity of a liquid divided by its density at the variable temperature.
 - C. Density divided by absolute viscosity of a liquid at the same temperature.
 - D. Density divided by absolute viscosity of a liquid at the variable temperature.

Question ID : 1841223020

Q.9 Aggregate which are passing through _____ mm IS sieve is termed as fine aggregate.

- Ans A. 10 mm
 B. 4.00 mm
 C. 6.75 mm
 D. 4.75 mm

Question ID : 1841223030

Q.10 When water table is near to ground level or at ground level, the area is known as:

- Ans A. Water Logged
 B. Hells water
 C. Water Tabled
 D. Saturated

Question ID : 1841223019

Q.11 In rectangular channel of 4 m wide and 2 m deep, water is running full and Bed slope 1 in 3600. Find the velocity of flow of water, if Chezy's constant C = 60.

- Ans A. 2 m/sec
 B. 3 m/sec
 C. 1 m/sec
 D. 4 m/sec

Question ID : 1841223024

Q.12 Which of the following not correct according to input to output, the compiler phase that is processes by it?

	Phases of Compiler	Input	Output
A	Lexical Analyzer	Character stream	Token stream
B	Syntax Analyzer	Token stream	Syntax tree
C	Semantic Analyzer	Syntax tree	Syntax tree
D	Intermediate Code Generator	Syntax tree	Target-machine code

- Ans A. B
 B. A
 C. C
 D. D

Question ID : 1841223027

Q.13 Under which of the following type of irrigation, Irrigation water carried to the land by medium of gravity flow indicates?

- Ans A. Flow irrigation
 B. Lift irrigation
 C. Drip irrigation
 D. Sprinkler irrigation

Question ID : 1841223016

Q.14 Which of the following statement is correct for Hydrograph?

- A) It is the graphical representation of measured discharge of stream.
- B) Discharge is plotted in abscissa.

- Ans
- A. Only A is correct
 - B. Both A and B are correct
 - C. Both A and B are incorrect
 - D. Only B is correct

Question ID : 1841223014

Q.15 Which of the following is a data storage device for future use?

- Ans
- A. RAM
 - B. CPU
 - C. SSD
 - D. GPU

Question ID : 1841223028

Q.16 Which of the following is the composition of Terrazo flooring?

- Ans
- A. Chips, cement
 - B. Chips, powder, cement
 - C. Chips, powder, concrete
 - D. Chips, concrete

Question ID : 1841223012

Q.17 In case of diversion headwork, at trough stage the bed slope and velocity are _____.

- Ans
- A. Large
 - B. Medium
 - C. Zero
 - D. Small

Question ID : 1841223017

Q.18 A vertical member of the frame, which is provided to sub-divide a door vertically is known as _____.

- Ans
- A. Mullion
 - B. Verticals
 - C. Reveals
 - D. Rebate

Question ID : 1841223011

Q.19 National Building Code of India, Part 5 is about:

- Ans A. Landscaping
 B. Fire and Life Safety
 C. Building Materials
 D. Administration

Question ID : 1841223013

Q.20 Which of the following comment is correct for Canal Outlets?

- A) Canal outlet is small structure built at the head of water course.
B) Canal outlet are used to connect with minor or a distributary channel.

- Ans A. Only A is correct
 B. Both A and B are correct
 C. Both A and B are incorrect
 D. Only B is correct

Question ID : 1841223018

Section : Discipline3

Q.1 What is maximum permissible limit of organic matter in construction water as per IS 456:2000?

- Ans A. 2000 mg/l
 B. 20 mg/l
 C. 1000 mg/l
 D. 200 mg/l

Question ID : 1841223033

Q.2 Which of the following is not secondary air pollutants?

- Ans A. Sulphuric acid
 B. Ozone
 C. Formaldehyde
 D. Nitrogen oxides

Question ID : 1841223050

Q.3 Aerated concrete is produced by the adding the following in the concrete.

- Ans A. Magnesium sulphate
 B. Sodium nitrate
 C. Powdered Aluminum
 D. Zinc sulphate

Question ID : 1841223032

Q.4 Which of the following is Accelerating Admixtures?

- Ans A. Teepol
 B. vinsol resin
 C. triethanolamine
 D. darex

Question ID : 1841223035

Q.5 To avoid segregation the concrete had better not be thrown from height more than:

- Ans A. 2 m
 B. 1.5 m
 C. 1 m
 D. 0.5 m

Question ID : 1841223036

Q.6 Which of the following is reason for temporary hardness in water?

- Ans A. Nitrates of Ca⁺⁺ and Mg⁺⁺
 B. Sulphate of Ca⁺⁺ and Mg⁺⁺
 C. Carbonates of Ca⁺⁺ and Mg⁺⁺
 D. Bi nitrates of Ca⁺⁺ and Mg⁺⁺

Question ID : 1841223048

Q.7 The unit failure stress is taken as _____ stress.

- Ans A. Ultimate
 B. Failure
 C. Rapture
 D. Fracture

Question ID : 1841223039

Q.8 A concrete at a given age and under normal temperature its compressive strength primarily depends on:

- Ans A. curing period
 B. water cement ratio
 C. temperature at the time of mixing
 D. type of vibrator

Question ID : 1841223037

Q.9 The percentage of the aggregate of F.M. Z to be combined with coarse aggregate of F.M. X for obtaining the aggregates of F.M. Y, will be obtained by:

- Ans
- A. $P = (X + Y) / (Y + Z) * 100$
 - B. $P = (X + Y) / (Y - Z) * 100$
 - C. $P = (X - Y) / (Y + Z) * 100$
 - D. $P = (X - Y) / (Y - Z) * 100$

Question ID : 1841223034

Q.10 Which of the following method is suitable for an average size town under the normal condition where the growth rate is found to be in increasing order?

- Ans
- A. Geometric progression method
 - B. Logistic curve method
 - C. Arithmetical increase method
 - D. Incremental increase method

Question ID : 1841223045

Q.11 Effective span is normally taken as distance between center of _____.

- Ans
- A. End plates
 - B. Bed Plate
 - C. Bearing
 - D. Supports

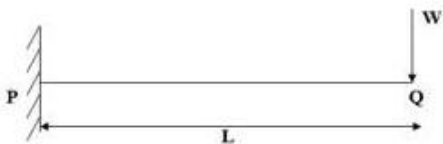
Question ID : 1841223040

Q.12 Average Daily Per Capita Demand is calculated by the following formula.

- Ans
- A. $(365 \times \text{Population}) / \text{Quantity Required in 12 Months}$
 - B. $\text{Quantity Required in 12 Months} / (365 \times \text{Population})$
 - C. $(30 \times \text{Population}) / \text{Quantity Required in 12 Months}$
 - D. $\text{Quantity Required in 12 Months} / (30 \times \text{Population})$

Question ID : 1841223046

Q.13 Find the deflection at free end.



- Ans
- A. $2WL^3/6EI$
 - B. $WL^3/3EI$
 - C. $WL^3/2EI$
 - D. $WL^3/4EI$

Question ID : 1841223038

Q.14 Find the value of strain energy of metallic bar with cross sectional area of 2 cm^2 and gauge length of 10 cm if it stretches 0.002 cm under the load of 10 kN?

- Ans
- A. 14 N-cm
 - B. 12 N-cm
 - C. 16 N-cm
 - D. 10 N-cm

Question ID : 1841223043

Q.15 Which of the following equation matched with following condition of truss?

'Internally stable and statically determinate space truss'

- Ans
- A. $j < 2m - 3$
 - B. $m = 2j - 1$
 - C. $m > 2j - 3$
 - D. $m = 3j - 6$

Question ID : 1841223044

Q.16 'When the pump is operated, the valve is opened, but when the pump is suddenly stopped the valve is automatically closed.' These are the properties of the following type of valve.

- Ans
- A. Scour valve
 - B. Butterfly valve
 - C. Check valve
 - D. Sluice valve

Question ID : 1841223047

Q.17 Which of the following is not a type of water Distribution Network?

- Ans
- A. Free End System
 - B. Radial System
 - C. Grid Iron System
 - D. Dead End System

Question ID : 1841223049

Q.18 Fill the right combination for the given statement 'Mass moment of inertia of a body about an axis is the sum total of product of its _____ and square of _____.'

- Ans
- A. distance from the axis; elemental masses
 - B. elemental masses; distance from the axis
 - C. Volume; distance from the axis
 - D. Distance from the axis; volume

Question ID : 1841223042

Q.19 Which of the following test is performed to find the workability of concrete?

- Ans A. Consistency test
 B. Water absorption test
 C. compression test
 D. Slump test

Question ID : 1841223031

Q.20 A graph showing the variation of the longitudinal stress, shear, bending moment, or other effect upon a structural member due to a moving load is known as _____.

- Ans A. Shear force diagram
 B. Bending moment diagram
 C. Force diagram
 D. Influence line diagram

Question ID : 1841223041

Section : Discipline 4

Q.1 Which of the following statement is correct for 3 hinged arches?

- A. Horizontal thrust may be found by the first theorem of Castigliano.
B. It may have circular or parabolic shape.

- Ans A. Both A and B are incorrect
 B. Both A and B are correct
 C. Only B is correct
 D. Only A is correct

Question ID : 1841223068

Q.2 The base of all paint used in building work _____.

- Ans A. Zinc oxide
 B. White lead
 C. Lead oxide
 D. Iron oxide

Question ID : 1841223058

Q.3 In soil sample if void ratio is 'e' and specific gravity 'g' then which of the following is correct for hydraulic gradient (i)?

- Ans A. $(i + e) = g - 1$
 B. $(g - 1)/(1 + e) = i$
 C. $(i + e) = g + 1$
 D. $(1 + e) = g - 1$

Question ID : 1841223064

Q.4 Which of the following assumption is correct for general flow equation for soil?

- A. Flow is laminar and follows Darcy's law.
- B. Soil medium is unsaturated, compressible and homogeneous.

- Ans
- A. Only B is correct
 - B. Both A and B are correct
 - C. Both A and B are incorrect
 - D. Only A is correct

Question ID : 1841223063

Q.5 Shale is compressed and _____ Clay.

- Ans
- A. Laminated
 - B. Coarse grained
 - C. Stratified
 - D. Metaporphic

Question ID : 1841223055

Q.6 'Talus' is a type of the transported by the following way?

- Ans
- A. By Wind
 - B. By Glacier
 - C. By Gravitational force
 - D. By Water

Question ID : 1841223060

Q.7 Which of the statement is correct about influence line diagram?

- A. An influence line a graph that shows the variation any given point on a structure due to the application of a unit load at any point on the structure.
- B. An influence line shows the deformation at any given point on a structure

- Ans
- A. Only B is correct
 - B. Both A and B are incorrect
 - C. Only A is correct
 - D. Both A and B are correct

Question ID : 1841223070

Q.8 A water treatment plant of capacity, $100000 \text{ m}^3/\text{day}$ has filter boxes of dimensions $10 \text{ m} \times 10 \text{ m}$. The loading rate to the filters is $100 \text{ m}^3/\text{day}/\text{m}^2$. When five of the filters are out of service for back washing, the loading rate (in $\text{m}^3/\text{day}/\text{m}^2$) is:

- Ans
- A. 200
 - B. 150
 - C. 300
 - D. 100

Question ID : 1841223053

Q.9 For the variation in rate of sewage, Babbitt's formula for maximum (Q_{\max}) and average rate (Q_{av}) of flow is given by the following expression.

Ans

A. $Q_{\max} = 5Q_{\text{av}}/P^{0.2}$

B. $Q_{\max} = [2 + 12/(6 + P^{0.5})]Q_{\text{av}}$

C. $Q_{\max} = 6Q_{\text{av}}/P^{0.3}$

D. $Q_{\max} = [1 + 14/(4 + P^{0.5})]Q_{\text{av}}$

Question ID : 1841223054

Q.10 White lime is also known as _____.

Ans A. Fat lime

B. Kankar lime

C. Hydraulic lime

D. Slaked lime

Question ID : 1841223057

Q.11 Find the wrong statement about Conjugate beam theorem.

Ans A. It is useful in finding the deflection.

B. It is derived from unit load method.

C. It is derived from moment area theorem.

D. It is applicable even if beam is not having point of zero slope.

Question ID : 1841223066

Q.12 The bricks up to class 12.5, when water absorption tested for 24 hours, shall not be more than _____ Percent.

Ans A. 25

B. 15

C. 30

D. 20

Question ID : 1841223059

Q.13 To find the final setting time of cement, needle does not pierce through the paste more than _____.

Ans A. 1.0 mm

B. 0.5 mm

C. 0.25 mm

D. 1.5 mm

Question ID : 1841223056

Q.14 The numerical difference between liquid and plastic limit of a soil indicates _____ index.

- Ans A. Plasticity
 B. LL
 C. Elastic
 D. Plastic

Question ID : 1841223062

Q.15 Dosage of coagulants do not depend on the which of the following factor?

- Ans A. Turbidity of water
 B. Temperature of water
 C. Time of settlement
 D. Viscosity of water

Question ID : 1841223051

Q.16 Which of the following is true for the three hinged arch?

- Ans A. Determinate if the springs are at the same level
 B. Statically determinate
 C. indeterminate depending upon loading
 D. Statically indeterminate because of central hinge

Question ID : 1841223067

Q.17 Which of the following is not a method of estimation of bearing capacity from field test?

- Ans A. Terzaghi's load test
 B. Plate load test
 C. Cone penetration test
 D. Standard penetration test

Question ID : 1841223065

Q.18 Maximum water content below which there is no volume change is also the _____.

- Ans A. Plastic limit (PL)
 B. Liquid limit (LL)
 C. Shrinkage limit (SL)
 D. Plasticity Index (PI)

Question ID : 1841223061

Q.19 Grit chamber is having which of the following primary function during Domestic Wastewater Treatment?

- Ans
- A. Conversion of organic matter into relatively stable organic residue
 - B. Removal of organic/inorganic settleable solids
 - C. Removal of large floating, suspended and settleable solids
 - D. Removal of inorganic suspended solids

Question ID : 1841223052

Q.20 Which of the following statement is not true about moment distribution method?

- Ans
- A. The degree of accuracy of the results depends on the number of successive approximations.
 - B. It is an approximate method.
 - C. Moment distribution method of analysis is applicable on beams and frames.
 - D. The moment at the end of a member is considered Negative if it tends to turn the end of the member clockwise and positive if it tends to turn it counterclockwise..

Question ID : 1841223069

Section : Discipline 5

Q.1 In Group Index system which of the following is not a soil characteristic group?

- Ans
- A. Group A-1-c
 - B. Group A-2
 - C. Group A-1-a
 - D. Group A-1-b

Question ID : 1841223081

Q.2 Which of the following command can be used to make the selection from your drawing with filters?

- Ans
- A. MSELECT
 - B. DSELECT
 - C. FSELECT
 - D. QSELECT

Question ID : 1841223079

Q.3 Propped cantilever beam is:

- Ans
- A. Over-hanged beam
 - B. Statistically determinate beam
 - C. Externally Indeterminate Structures
 - D. Internally Indeterminate Structures

Question ID : 1841223071

Q.4 The expression for design strength of members under axial tension, T_{dg} is given by yielding of gross section (A_g) yield stress of the material (f_y) and partial safety factor (γ_{mo}) for failure in tension by yielding, will be:

- Ans
- A. $T_{dg} = A_g f_y / \gamma_{mo}$
 - B. $T_{dg} = A_g / f_y \gamma_{mo}$
 - C. $T_{dg} = \gamma_{mo} / A_g f_y$
 - D. $T_{dg} = f_y / \gamma_{mo} A_g$

Question ID : 1841223086

Q.5 In Indian Railways platform surface a slope of 1 in _____ has been prescribed.

- Ans
- A. 40
 - B. 15
 - C. 25
 - D. 60

Question ID : 1841223084

Q.6 Which of the following is not consider during the rate analysis?

- Ans
- A. Establishment charge
 - B. Material cost
 - C. Labor cost
 - D. Water charges

Question ID : 1841223088

Q.7 It consists of course aggregate of 12.5 mm and 10 mm size with ready-mix bitumen compacted to a thickness of 20 mm to serve as a surface coat of the pavement. It is known as:

- Ans
- A. Renewal Coat
 - B. Wearing coat
 - C. Sheet asphalt
 - D. Bituminous premix Carpet

Question ID : 1841223082

Q.8 Which of the following command, you can change the base point of a drawing without changing its origin?

- Ans
- A. CBSE
 - B. BASE
 - C. BSEC
 - D. BSAE

Question ID : 1841223078

Q.9 A room with dimension of 4.8 m × 4.8 m with 20 cm walls all around. Its central line length will be:

- Ans A. 12.64 m
 B. 14 m
 C. 20 m
 D. 15.6 m

Question ID : 1841223087

Q.10 In first five-year plan (1951-56) main attention is given for development of _____.

- Ans A. Airport terminal
 B. Railway network
 C. Road and road transport
 D. Dock and harbor

Question ID : 1841223080

Q.11 In a network Critical activity having the _____ float.

- Ans A. Actual
 B. Zero
 C. True
 D. Standard

Question ID : 1841223072

Q.12 Critical path method is based on the which of the following orientation?

- Ans A. Resource Oriented
 B. Time Oriented
 C. Event Oriented
 D. Activity oriented

Question ID : 1841223073

Q.13 Which of the following statement is correct about the financial management?

- A. Objective of the financial management is to profit maximization.
B. Objective of the financial management is to wealth maximization.

- Ans A. Only A is correct
 B. Only B is correct
 C. Both A and B are incorrect
 D. Both A and B are correct

Question ID : 1841223074

Q.14 An asset draws Rs. 10000/- after all deduction. What will be its capitalized value with 10% per annum of rate of interest?

- Ans A. Rs. 1,00,500
 B. Rs. 1,10,000
 C. Rs. 1,00,000
 D. Rs. 1,00,100

Question ID : 1841223090

Q.15 Find the dry volume of the concrete required for 100 m² of 10 cm thick concrete work with proportion of 1 : 2 : 4.

- Ans A. 15.4 m³
 B. 10 m³
 C. 30.5 m³
 D. 25.4 m³

Question ID : 1841223089

Q.16 औद्योगिक विवाद अधिनियम, '1947' के अनुसार, सुलह अधिकारियों के संबंध में निम्नलिखित में से कौन सा कथन सही है?

- A. एक विनिर्दिष्ट क्षेत्र के लिए एक सुलह अधिकारी नियुक्त किया जा सकता है।
B. सुलह अधिकारी एक सरकारी कर्मचारी होना चाहिए।

- Ans A. A और B दोनों गलत हैं
 B. केवल A सही है
 C. केवल B सही है
 D. A और B दोनों सही हैं

Question ID : 1841223076

Q.17 Which of the following command, you can make a multiline geometry which contains multiple parallel lines?

- Ans A. MINSERT
 B. MLG
 C. ML
 D. MIL

Question ID : 1841223077

Q.18 The sleeper density of a BG track is (n + 6) in metric units. The number of sleepers per 1.280 km of track is:

- Ans A. 1800
 B. 1720
 C. 1504
 D. 1870

Question ID : 1841223085

Q.19 निम्नलिखित में से कौन परियोजना गुणवत्ता आश्वासन फ़ाइल का भाग नहीं है?

- Ans A. कंपनी बीमाकर्ता
 B. आपातकालीन प्रक्रियाओं का विवरण
 C. कंपनी स्वास्थ्य एवं सुरक्षा(H&S)नीति
 D. सामग्री विवरण

Question ID : 1841223075

Q.20 Which of the following test is performed on Bitumen for detecting overheating or cracked bitumen?

- Ans A. Float test
 B. Softening point test
 C. Flash and fire test
 D. Spot test

Question ID : 1841223083

