DSSSB
AE

Previous Year Paper
(Civil)
23 Jun, 2024 Shift 3

GOVT. OF NCT OF DELHI
Delhi Subordinate Services Selection Board
FC-18, Institutional Area, Karkardooma, Delhi – 110092.
www.dsssb.delhigovt.nic.in

Participant ID	
Participant Name	
Test Center Name	
Test Date	23/06/2024
Test Time	4:30 PM - 6:30 PM
Subject	Assistant Engineer (Civil)

Section : **General intelligence and Reasoning Ability**

Q.1 **What should come in place of '?' in the given series?**

64 85 106 127 148 ?

Ans ✗ 1. 177

✗ 2. 167

✔ 3. 169

✗ 4. 179

Question ID : **630680560866**
Option 1 ID : **6306802192522**
Option 2 ID : **6306802192520**
Option 3 ID : **6306802192521**
Option 4 ID : **6306802192523**

Q.2 **AH11 is related to EL13 in a certain way. In the same way, IZ15 is related to MD17. Which of the following is QX17 related to, following the same logic?**

Ans ✔ 1. UB19

✗ 2. SZ19

✗ 3. TB15

✗ 4. KR19

Question ID : **63068092757**
Option 1 ID : **630680359725**
Option 2 ID : **630680359724**
Option 3 ID : **630680359723**
Option 4 ID : **630680359726**

Q.3 Observe the given set of words and answer the question that follows.
VAT HAT VAN BUN MEN
If 'W' is added before each word, which of the following will form a meaningful English word?

Ans ✔ 1. HAT

✘ 2. VAN

✘ 3. VAT

✘ 4. BUN

Question ID : **630680382153**
Option 1 ID : **6306801489528**
Option 2 ID : **6306801489530**
Option 3 ID : **6306801489527**
Option 4 ID : **6306801489529**

Q.4 If '+' means '−', '×' means '+', '÷' means '×', '−' means '÷', then what is '?' in the given equation?
6 + 1 ÷ 112 − 2 × 94 = ?

Ans ✔ 1. 44

✘ 2. 155

✘ 3. 43

✘ 4. 156

Question ID : **63068053360**
Option 1 ID : **630680205526**
Option 2 ID : **630680205529**
Option 3 ID : **630680205527**
Option 4 ID : **630680205528**

Q.5 JLHI is related to OQMN in a certain way based on the English alphabetical order. In the same way, CEAB is related to HJFG. To which of the following is RTPQ related, following the same logic?

Ans ✔ 1. WYUV

✘ 2. UVWY

✘ 3. WZUV

✘ 4. WXUV

Question ID : **63068083543**
Option 1 ID : **630680323877**
Option 2 ID : **630680323879**
Option 3 ID : **630680323876**
Option 4 ID : **630680323878**

Q.6 Select the number from among the given options that can replace the question mark (?) in the following series.
2 15 106 743 ?

Ans ✅ 1. 5202

✖ 2. 5222

✖ 3. 5200

✖ 4. 5220

Question ID : **63068075801**
Option 1 ID : **630680293319**
Option 2 ID : **630680293320**
Option 3 ID : **630680293318**
Option 4 ID : **630680293317**

Q.7 Select the set in which the numbers are related in the same way as are the numbers of the given sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)
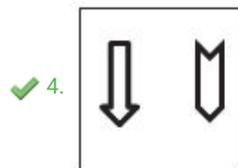(2, 15, 11)
(7, 113, 64)
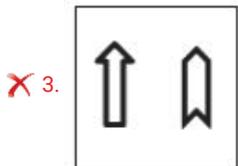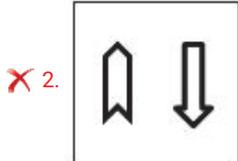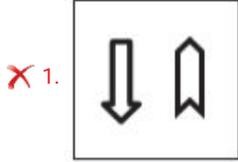
Ans ✖ 1. (13, 765, 18)

✅ 2. (9, 132, 51)

✖ 3. (11, 272, 15)

✖ 4. (2, 61, 13)

Question ID : **630680375565**
Option 1 ID : **6306801463418**
Option 2 ID : **6306801463416**
Option 3 ID : **6306801463417**
Option 4 ID : **6306801463415**

Q.8 Select the figure from the options that can replace the question mark (?) and complete the pattern.

Ans

✗ 1.

✗ 2.

✗ 3.

✔ 4.
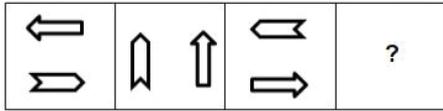
Question ID : **63068057726**
Option 1 ID : **630680222743**
Option 2 ID : **630680222744**
Option 3 ID : **630680222745**
Option 4 ID : **630680222742**

Q.9 Each of the digits in the number 454667585123 is arranged in ascending order from left to right. What will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

Ans ✗ 1. 11

✗ 2. 10

✔ 3. 9

✗ 4. 12

Question ID : **630680452002**
Option 1 ID : **6306801765084**
Option 2 ID : **6306801765083**
Option 3 ID : **6306801765082**
Option 4 ID : **6306801765085**

Q.10 A paper is folded and cut as shown below. How will it appear when unfolded?

Ans

✔ 1.

✘ 2.

✘ 3.

✘ 4.
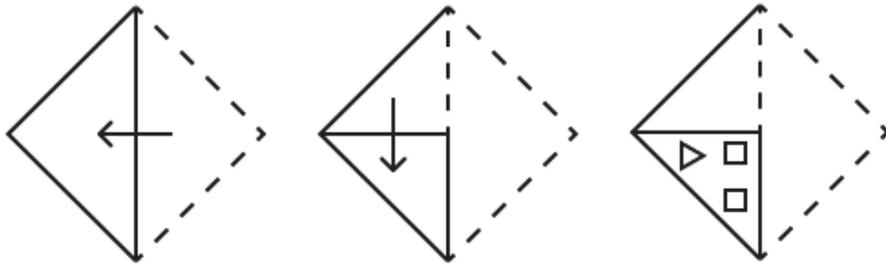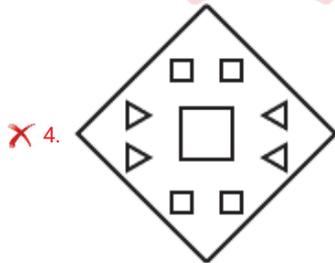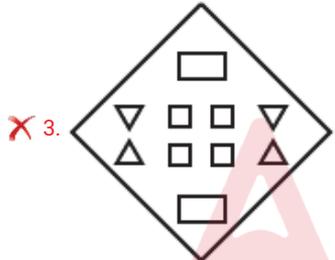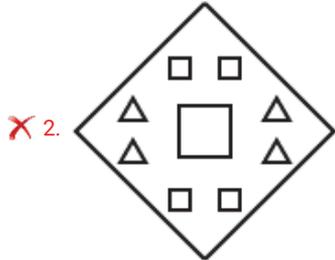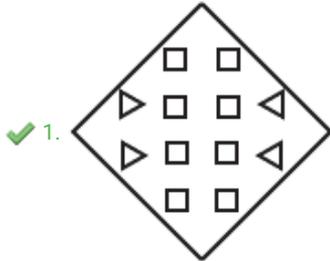
Question ID : **630680531794**
Option 1 ID : **6306802078957**
Option 2 ID : **6306802078960**
Option 3 ID : **6306802078958**
Option 4 ID : **6306802078959**

Q.11 मेहमानों से अंकित का परिचय कराते हुए मृणालिनी ने कहा, "उसकी माँ मेरी माँ की इकलौती पुत्री है"।

अंकित का मृणालिनी से क्या संबंध है?

Ans ✔ 1. पुत्र

✘ 2. भाई

✘ 3. पिता

✘ 4. भतीजा

Question ID : **63068057099**
Option 1 ID : **630680220283**
Option 2 ID : **630680220285**
Option 3 ID : **630680220282**
Option 4 ID : **630680220284**

Q.12 This question is based on the five, three-digit numbers given below.

(Left) 762 120 860 388 316 (Right)
(Example: 697 − First digit = 6, second digit = 9 and third digit = 7)
NOTE: All operations to be done from left to right.

If 5 is subtracted from every number, in how many numbers will the third digit be exactly divisible by the first digit?

Ans ✘ 1. 1

✔ 2. 3

✘ 3. 5

✘ 4. 2

Question ID : **630680756549**
Option 1 ID : **6306802965175**
Option 2 ID : **6306802965173**
Option 3 ID : **6306802965172**
Option 4 ID : **6306802965174**

Q.13 एब्बी, बाला, चान, देव, एम्मा, फैनी और गैरी एक परिवार के सात सदस्य हैं, जिनमें दो विवाहित युगल हैं। एब्बी उस बाला की बहन है, जो एम्मा का नाती है। फैनी, देव के पिता हैं और उनके दो पोते और केवल एक पुत्री है। गैरी, एब्बी के पिता हैं। चान, देव का भाई है। गैरी के साथ एम्मा का क्या संबंध है?

Ans   ✗ 1. एम्मा, गैरी की बहन है

   ✗ 2. गैरी, एम्मा की पुत्रवधू है

   ✗ 3. एम्मा, गैरी की माँ हैं

   ✓ 4. एम्मा, गैरी की सास हैं

Question ID : **630680296729**
Option 1 ID : **6306801154570**
Option 2 ID : **6306801154568**
Option 3 ID : **6306801154567**
Option 4 ID : **6306801154569**

Q.14 453 is related to 571 following a certain logic. Following the same logic, 629 is related to 747. To which ofthe following options is 506 related, following the same logic?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbersinto its constituent digits. E.g. 13 – Operations on 13, such as adding / subtracting / multiplying to 13, can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1and 3 is not allowed.)

Ans   ✓ 1. 624

   ✗ 2. 658

   ✗ 3. 646

   ✗ 4. 612

Question ID : **630680454480**
Option 1 ID : **6306801774837**
Option 2 ID : **6306801774834**
Option 3 ID : **6306801774836**
Option 4 ID : **6306801774835**

Q.15 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

X : 150 :: 12 : Y

Ans ✔ 1. X = 15, Y = 120

✘ 2. X = 15, Y = 60

✘ 3. X = 10, Y = 185

✘ 4. X = 10, Y = 144

Question ID : **630680394145**
Option 1 ID : **6306801536870**
Option 2 ID : **6306801536873**
Option 3 ID : **6306801536871**
Option 4 ID : **6306801536872**

Q.16 पांच दोस्त एक ही इमारत की पांच अलग-अलग मंजिलों पर रहते हैं। इमारत की सबसे निचली मंजिल का क्रमांक 1 है और सबसे ऊपरी मंजिल का क्रमांक 5 है। अनुसूया और सुनील के बीच केवल तीन व्यक्ति रहते हैं। चाड और कासिम के बीच केवल एक व्यक्ति रहता है। बिकास, चाड के ठीक नीचे रहता है। अनुसूया सबसे निचली मंजिल पर नहीं रहती है। मंजिल क्रमांक 1 पर कौन रहता है?

Ans ✗ 1. बिकास

✗ 2. कासिम

✗ 3. अनुसूया

✓ 4. सुनील

Question ID : 630680545353
Option 1 ID : 6306802132067
Option 2 ID : 6306802132064
Option 3 ID : 6306802132066
Option 4 ID : 6306802132065

Q.17 निम्नलिखित में से तीन शब्द-युग्म किसी निश्चित तरीके से एकसमान हैं और इसलिए कोई समूह बनाते हैं। कौन-सा शब्द-युग्म उस समूह से संबंधित नहीं है?
(युग्मों में शब्दों को सार्थक हिंदी शब्द माना जाना चाहिए और शब्दों में अक्षरों की संख्या/व्यंजनों/स्वरों की संख्या के आधार पर समूह नहीं बनाया जाना चाहिए।)

Ans ✗ 1. स्पष्ट-गुप्त

✓ 2. डरावना-भयानक

✗ 3. अद्भुत-भयानक

✗ 4. अनुपस्थिति-मौजूदगी

Question ID : 630680404867
Option 1 ID : 6306801578960
Option 2 ID : 6306801578959
Option 3 ID : 6306801578961
Option 4 ID : 6306801578962

Q.18 What will come in place of the question mark (?) in the following equation if '+' and '−' are interchanged and '×' and '÷' are interchanged?
$12 ÷ 6 × 1 − 7 + 3 = ?$

Ans ✗ 1. 67

✗ 2. 5

✗ 3. 10

✓ 4. 76

Question ID : **630680374627**
Option 1 ID : **6306801459675**
Option 2 ID : **6306801459678**
Option 3 ID : **6306801459677**
Option 4 ID : **6306801459676**

Q.19 Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the one that does NOT belong to that group?

Ans ✓ 1. BF-IM

✗ 2. HL-PT

✗ 3. EI-MQ

✗ 4. FJ-NR

Question ID : **630680352791**
Option 1 ID : **6306801373260**
Option 2 ID : **6306801373259**
Option 3 ID : **6306801373257**
Option 4 ID : **6306801373258**

Q.20 8 व्यक्ति A, B, C, D, E, F, G और H एक पंक्ति में उत्तर की ओर मुख करके बैठे हैं। H और E पंक्ति के अंतिम छोरों पर बैठे हैं। F, H के ठीक दाएँ बैठा है। B, E के बाएँ से दूसरे स्थान पर बैठा है। C, B के ठीक दाएँ बैठा है। G, F के ठीक दाएँ बैठा है। A, B के ठीक बाएँ बैठा है। D, A के ठीक बाएँ बैठा है। G और A के बीच में कौन-सा व्यक्ति बैठा है?

Ans ✗ 1. H

✔ 2. D

✗ 3. C

✗ 4. G

Question ID : **630680521184**
Option 1 ID : **6306802037161**
Option 2 ID : **6306802037162**
Option 3 ID : **6306802037164**
Option 4 ID : **6306802037163**

Section : **General Awareness**

Q.1 The NEP 2020 seeks to replace the existing 10+2 format of curricular structure with a _____.

Ans ✗ 1. 3+3+4+4 structure

✗ 2. 5+4+3+3 structure

✗ 3. 4+4+3+3 structure

✔ 4. 5+3+3+4 structure

Question ID : **630680639763**
Option 1 ID : **6306802504761**
Option 2 ID : **6306802504758**
Option 3 ID : **6306802504759**
Option 4 ID : **6306802504760**

Q.2 संविधान का निम्नलिखित में से कौन सा अनुच्छेद राष्ट्रपति या उपराष्ट्रपति के चुनाव से संबंधित संदेह और विवादों के निर्धारण से संबंधित है?

Ans   ✓ 1. अनुच्छेद 71

✗ 2. अनुच्छेद 73

✗ 3. अनुच्छेद 67

✗ 4. अनुच्छेद 69

Question ID : **63068051142**
Option 1 ID : **630680196834**
Option 2 ID : **630680196837**
Option 3 ID : **630680196836**
Option 4 ID : **630680196835**

Q.3 Which of the following is a qualitative instrument used by the Central Banks to influence the money supply?

Ans   ✓ 1. Imposing capital requirements on banks

✗ 2. Buying or selling government securities in open market operations

✗ 3. Changing the interest rate paid on excess reserves

✗ 4. Providing forward guidance on future interest rate policy

Question ID : **630680321527**
Option 1 ID : **6306801250815**
Option 2 ID : **6306801250813**
Option 3 ID : **6306801250814**
Option 4 ID : **6306801250816**

Q.4 तत्कालीन गवर्नर जनरल के साथ सहायक गठबंधन की संधि पर हस्ताक्षर करने वाला पहला राज्य कौन-सा था?

Ans   ✗ 1. त्रावणकोर

✗ 2. अवध

✗ 3. मैसूर

✓ 4. हैदराबाद

Question ID : **630680309325**
Option 1 ID : **6306801203459**
Option 2 ID : **6306801203457**
Option 3 ID : **6306801203458**
Option 4 ID : **6306801203460**

Q.5 नागरिकता अधिनियम, 1955 में भारतीय नागरिकता प्राप्त करने के कितने चिन्हित किए गए?

Ans ✗ 1. छह

✗ 2. चार

✓ 3. पाँच

✗ 4. तीन

Question ID : **630680384023**
Option 1 ID : **6306801496990**
Option 2 ID : **6306801496988**
Option 3 ID : **6306801496989**
Option 4 ID : **6306801496987**

Q.6 'द सब्स्टेंस एंड द शैडो: : एन ऑटोबायोग्राफी' (The Substance and the Shadow: : An Autobiography) निम्नलिखित में से किसकी आत्मकथा है?

Ans ✗ 1. किशोर कुमार

✗ 2. मनोज कुमार

✓ 3. दिलीप कुमार

✗ 4. राज कुमार

Question ID : **630680512300**
Option 1 ID : **6306802002171**
Option 2 ID : **6306802002173**
Option 3 ID : **6306802002170**
Option 4 ID : **6306802002172**

Q.7 वर्ष 2023 में, अल्पसंख्यक कार्य मंत्रालय द्वारा दी गई जानकारी के अनुसार ₹16.05 करोड़ की लागत से यूनानी चिकित्सा में मौलिक अनुसंधान केंद्र कहाँ स्थापित किया गया?

Ans ✗ 1. कोलकाता

✗ 2. नई दिल्ली

✗ 3. जबलपुर

✓ 4. हैदराबाद

Question ID : **630680766918**
Option 1 ID : **6306803005958**
Option 2 ID : **6306803005959**
Option 3 ID : **6306803005960**
Option 4 ID : **6306803005957**

Q.8 भारतीय संघ की कार्यपालिका शक्तियां औपचारिक रूप से _____ के पास होती हैं

Ans ✗ 1. भारत के प्रधान मंत्री

✗ 2. भारत के राज्य के राज्यपाल

✗ 3. भारत के मुख्य न्यायमूर्ति

✓ 4. भारत के राष्ट्रपति

Question ID : **630680218579**
Option 1 ID : **630680848223**
Option 2 ID : **630680848225**
Option 3 ID : **630680848226**
Option 4 ID : **630680848224**

Q.9 What is used by organisms to break complex substances into simple substances?

Ans ✗ 1. Glycogen

✓ 2. Biocatalysts

✗ 3. Fats

✗ 4. Energy

Question ID : **63068099096**
Option 1 ID : **630680385091**
Option 2 ID : **630680385089**
Option 3 ID : **630680385090**
Option 4 ID : **630680385088**

Q.10 The Komagata Maru incident of 1914 was when a ship laden with Indian immigrants was refused entry in:

Ans ✗ 1. England

✗ 2. Germany

✓ 3. Canada

✗ 4. USA

Question ID : **630680118814**
Option 1 ID : **630680460358**
Option 2 ID : **630680460361**
Option 3 ID : **630680460360**
Option 4 ID : **630680460359**

Q.11 निम्नलिखित में से कौन सी नदी धुआंधार जलप्रपात बनाती है?

Ans ✗ 1. तापी

✓ 2. नर्मदा

✗ 3. माही

✗ 4. कावेरी

Question ID : **630680511147**
Option 1 ID : **6306801997718**
Option 2 ID : **6306801997720**
Option 3 ID : **6306801997719**
Option 4 ID : **6306801997721**

Q.12 साहित्यिक आधुनिक हिंदी किस लिपि में लिखी गई है?

Ans ✓ 1. देवनागरी

✗ 2. गौड़ी

✗ 3. खरोस्ठी

✗ 4. ग्रंथ

Question ID : **63068091347**
Option 1 ID : **630680354122**
Option 2 ID : **630680354123**
Option 3 ID : **630680354125**
Option 4 ID : **630680354124**

Q.13 निम्नलिखित में से किसने पहली बार 1893 में भारत का दौरा किया, बाद में यहीं बस गए और 1916 में इंडियन होम रूल लीग की स्थापना की?

Ans ✓ 1. एनी बेसेंट

✗ 2. जॉन एल्टन

✗ 3. मैरी कारपेंटर

✗ 4. कैथरीन मेयो

Question ID : **630680769758**
Option 1 ID : **6306803016969**
Option 2 ID : **6306803016968**
Option 3 ID : **6306803016971**
Option 4 ID : **6306803016970**

Q.14 गुजरात के तरनेतर मेले का संबंध निम्नलिखित में से किससे है?

Ans ✗ 1. रामायण

✗ 2. कथासरितसागर

✗ 3. पंचतंत्र

✓ 4. महाभारत

Question ID : **63068087476**
Option 1 ID : **630680339291**
Option 2 ID : **630680339290**
Option 3 ID : **630680339289**
Option 4 ID : **630680339292**

Q.15 भारतीय राष्ट्रीय विज्ञान फिल्म महोत्सव निम्नलिखित में से किस विभाग का प्रमुख कार्यक्रम है?

Ans ✗ 1. जैव प्रौद्योगिकी विभाग

✓ 2. विज्ञान और प्रौद्योगिकी विभाग

✗ 3. वैज्ञानिक और औद्योगिक अनुसंधान विभाग

✗ 4. वैज्ञानिक संचार विभाग

Question ID : **630680115167**
Option 1 ID : **630680446034**
Option 2 ID : **630680446035**
Option 3 ID : **630680446036**
Option 4 ID : **630680446037**

Q.16 If MPS=0.4, what is the value of MPC?

Ans ✗ 1. −0.4

✗ 2. 0.4

✓ 3. 0.6

✗ 4. 0.16

Question ID : **630680103678**
Option 1 ID : **630680402944**
Option 2 ID : **630680402943**
Option 3 ID : **630680402945**
Option 4 ID : **630680402946**

Q.17 भारत की जनगणना 2011 के अनुसार, भारत की कुल जनसंख्या में सिख समुदाय का प्रतिशत कितना था?

Ans ✗ 1. 2.3%

✗ 2. 0.4%

✗ 3. 0.7%

✓ 4. 1.7%

Question ID : **630680209240**
Option 1 ID : **630680811175**
Option 2 ID : **630680811177**
Option 3 ID : **630680811176**
Option 4 ID : **630680811178**

Q.18 What is the primary function of the Golgi apparatus in a cell?

Ans ✗ 1. DNA replication

✗ 2. Waste elimination

✗ 3. Energy production

✓ 4. Protein modification and packaging

Question ID : **630680609399**
Option 1 ID : **6306802384671**
Option 2 ID : **6306802384672**
Option 3 ID : **6306802384669**
Option 4 ID : **6306802384670**

Q.19 Select the option that correctly completes the following statement.

The northern plains of India are formed by the alluvial deposits brought by the rivers:
1.Indus
2.Ganga
3.Brahmaputra

Ans ✗ 1. Only 2 and 3 are correct.

✗ 2. Only 1 and 2 are correct.

✓ 3. 1, 2 and 3 are correct.

✗ 4. Only 1 and 3 are correct.

Question ID : **630680119362**
Option 1 ID : **630680462539**
Option 2 ID : **630680462538**
Option 3 ID : **630680462541**
Option 4 ID : **630680462540**

Q.20 In April 2024, who became the first wicketkeeper to execute 300 dismissals in the T20 cricket internationals?

Ans ✅ 1. MS Dhoni

❌ 2. Sanju Samson

❌ 3. Dinesh Karthik

❌ 4. KL Rahul

Question ID : **630680759835**
Option 1 ID : **6306802978234**
Option 2 ID : **6306802978235**
Option 3 ID : **6306802978237**
Option 4 ID : **6306802978236**

Section : **Arithmetical and Numerical Ability**

Q.1 एक डाइनिंग टेबल के मूल्य में प्रत्येक वर्ष 20% की दर से ह्रास होता है। यदि दो वर्ष बाद मेज का मूल्य Rs.4,800 हो जाएगा, तो मेज का वर्तमान मूल्य ज्ञात कीजिए।

Ans ❌ 1. Rs.2,400

✅ 2. Rs.7,500

❌ 3. Rs.8,400

❌ 4. Rs.6,000

Question ID : **630680524138**
Option 1 ID : **6306802048705**
Option 2 ID : **6306802048703**
Option 3 ID : **6306802048706**
Option 4 ID : **6306802048704**

Q.2 The area of the base of a right circular cone is $576\ \pi cm^2$ and its slant height is $25\ cm$. The volume of the cone $(in\ cm^3)$ is: $\left(use\ \pi = \frac{22}{7}\right)$

Ans ❌ 1. 2424

✅ 2. 4224

❌ 3. 4422

❌ 4. 2244

Question ID : **630680570500**
Option 1 ID : **6306802230910**
Option 2 ID : **6306802230912**
Option 3 ID : **6306802230911**
Option 4 ID : **6306802230909**

Q.3 A shopkeeper marks the selling price of sarees at 10% above the cost price and allows a certain percentage of discount at the time of selling. If he made a loss of 1% in this transaction, what was the discount allowed?

Ans ✔ 1. 0.1

✗ 2. 0.01

✗ 3. 0.11

✗ 4. 0.09

Question ID : **630680816426**
Option 1 ID : **6306803197978**
Option 2 ID : **6306803197980**
Option 3 ID : **6306803197979**
Option 4 ID : **6306803197977**

Q.4 A एक गोलाकार मैदान के परितः एक चक्कर प्रति घंटे की दर से चलता है, जबकि B इसके परितः सात चक्कर प्रति घंटे की दर से दौड़ता है। वे 8:30 a.m. बजे समान बिंदु से समान दिशा में चलना शुरू करते हैं। वे पहली बार एक-दूसरे को _____ बजे पार करेंगे।

Ans ✗ 1. 8:30 a.m.

✗ 2. 8:25 a.m.

✗ 3. 8:35 a.m.

✔ 4. 8:40 a.m.

Question ID : **630680546513**
Option 1 ID : **6306802136625**
Option 2 ID : **6306802136624**
Option 3 ID : **6306802136626**
Option 4 ID : **6306802136627**

Q.5 The production of a company has ups and downs every year. The production increases by 15% and 20%, respectively, for two consecutive years. In the third year, it decreases by 10%. Again in the next two years it increases by 15% and 20%, respectively, and decreases by 10% in the next year. If the counting is started from the year 2010, what will be the effect on the production of the company in 2014?

Ans ✔ 1. Increase 42.83%

✘ 2. Decrease 36.62%

✘ 3. Decrease 40.83%

✘ 4. Increase 46.62%

Question ID : **630680600032**
Option 1 ID : **6306802347873**
Option 2 ID : **6306802347872**
Option 3 ID : **6306802347870**
Option 4 ID : **6306802347871**

Q.6 A storage tank consists of circular cylinder with a hemisphere adjoining at either end. If the diameter of the cylinder is 8.4 m and its length is 15 m, the cost (in ₹) of painting it on the outside at the rate of ₹75 per m^2 will be:
$(\pi = \frac{22}{7})$

Ans ✘ 1. 42,633

✔ 2. 46,332

✘ 3. 46,323

✘ 4. 38,016

Question ID : **630680395483**
Option 1 ID : **6306801542100**
Option 2 ID : **6306801542102**
Option 3 ID : **6306801542101**
Option 4 ID : **6306801542103**

Q.7 Find the largest number of 5 digits which when divided by 3,5,8,16, leaves the same remainder 3 in each case.

Ans   ✗ 1. 99846

   ✗ 2. 99845

   ✗ 3. 99849

   ✔ 4. 99843

Q.8 The following bar graph represents the demand and production of five firms A, B, C, D and E.
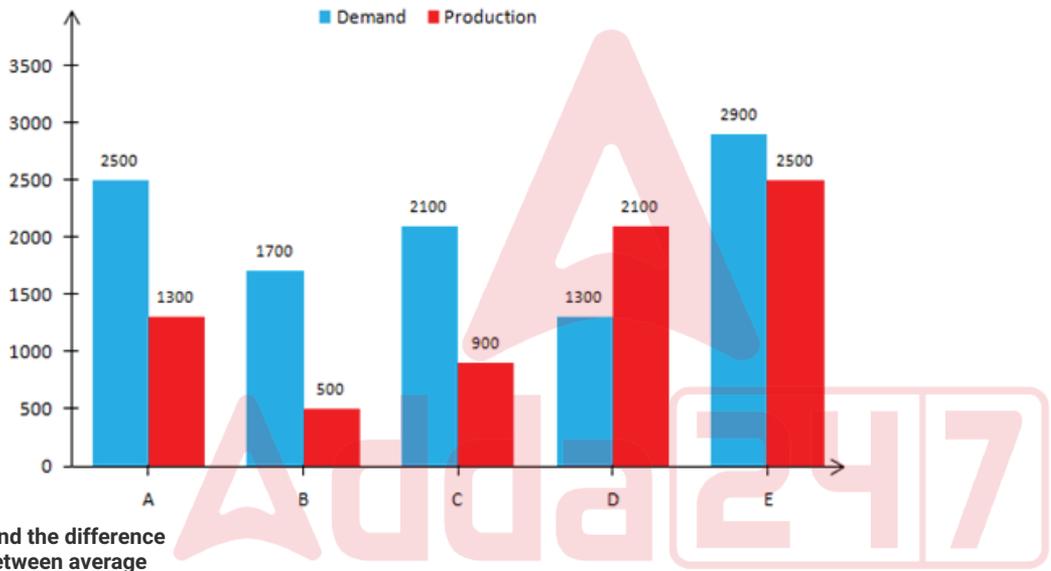
Find the difference between average demand and average production of the firms B, C, D and E.

Ans   ✗ 1. 600

   ✔ 2. 500

   ✗ 3. 300

   ✗ 4. 400

Q.9 Three persons A, B and C started a business on partnership such that the investment by A is $\dfrac{2}{3}$ times of that by B and the investment by B is $1\dfrac{3}{4}$ times of that by C. If they have earned ₹2,53,800 as profit, then find A's share in the profit.

Ans ✔ 1. ₹75,600

✗ 2. ₹70,600

✗ 3. ₹65,600

✗ 4. ₹60,600

Question ID : **630680521826**
Option 1 ID : **6306802039640**
Option 2 ID : **6306802039641**
Option 3 ID : **6306802039643**
Option 4 ID : **6306802039642**

Q.10 एक व्यक्ति को 8 km की दूरी 1 घंटे में तय करनी है। यदि वह एक-चौथाई दूरी कुल समय के एक-तिहाई समय में तय करता है, तो शेष दूरी को शेष समय में तय करने के लिए उसकी चाल (km/h में) कितनी होनी चाहिए ताकि वह व्यक्ति ठीक समय पर गंतव्य स्थल पर पहुंच जाए?

Ans ✗ 1. 7

✔ 2. 9

✗ 3. 8

✗ 4. 6

Question ID : **630680206528**
Option 1 ID : **630680800721**
Option 2 ID : **630680800719**
Option 3 ID : **630680800720**
Option 4 ID : **630680800722**

Q.11 y varies directly as (x + 4) and y = 12 when x = 2, what is the value of y when x = 5?

Ans ✘ 1. 14

✔ 2. 18

✘ 3. 16

✘ 4. 20

Question ID : **630680402911**
Option 1 ID : **6306801571233**
Option 2 ID : **6306801571235**
Option 3 ID : **6306801571234**
Option 4 ID : **6306801571236**

Q.12 Study the given bar graph and answer the question that follows. The bar graph below shows information on employment rates across 6 countries, A, B, C, D, E and F, in 1995 and 2005 where employment rates are calculated as people holding jobs as percentage of employable people.
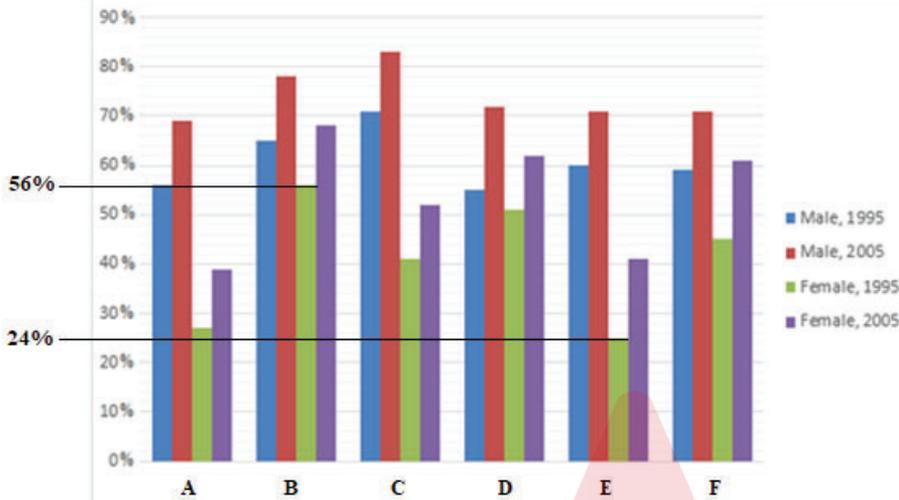
The percentages of employable females in countries B and E who actually had a job in 1995 can be read from the bar graph given above. Suppose the number of employed Swiss females in that year was equal to the number of employed Kiwi males in the same year. Also, let the ratio of employed Kiwi males to employed Kiwi females be 5 : 4. What will be the ratio of the number of employable Swiss females without a job to the number of employable Kiwi females without a job in that year?

Ans ✘ 1. 9 : 29

　　 ✘ 2. 4 : 13

　　 ✘ 3. 3 : 10

　　 ✔ 4. 165 : 532

Question ID : **630680406571**
Option 1 ID : **6306801585508**
Option 2 ID : **6306801585506**
Option 3 ID : **6306801585509**
Option 4 ID : **6306801585507**

Q.13 ₹2,400 की राशि का भुगतान छ: मासिक किस्तों में किया जाना है। यदि प्रत्येक किश्त ₹300 की है, तो साधारण ब्याज की दर (निकटतम पूर्णांक तक) ज्ञात करें।

Ans ✗ 1. 15%

✗ 2. 25%

✗ 3. 20%

✓ 4. 18%

Question ID : **630680131589**
Option 1 ID : **630680509594**
Option 2 ID : **630680509596**
Option 3 ID : **630680509595**
Option 4 ID : **630680509597**

Q.14 The HCF of two numbers, which are in the ratio 23 : 14, is 13. The smaller of the two numbers is:

Ans ✗ 1. 212

✗ 2. 322

✗ 3. 152

✓ 4. 182

Question ID : **630680524052**
Option 1 ID : **6306802048359**
Option 2 ID : **6306802048361**
Option 3 ID : **6306802048360**
Option 4 ID : **6306802048362**

Q.15 The average of three even natural numbers is 24, that of three other even natural numbers is 28 and that of three other even natural numbers is 20. Find the average of all nine even natural numbers.

Ans ✗ 1. 26

✔ 2. 24

✗ 3. 27

✗ 4. 25

Question ID : **630680628732**
Option 1 ID : **6306802460988**
Option 2 ID : **6306802460986**
Option 3 ID : **6306802460989**
Option 4 ID : **6306802460987**

Q.16 The ratio of the lateral surface area of a cone and the total surface area is 4 : 5. Find the ratio between the radius and the slant height.

Ans ✗ 1. 2 : 1

✔ 2. 4 : 1

✗ 3. 1 : 4

✗ 4. 1 : 2

Question ID : **630680816408**
Option 1 ID : **6306803197913**
Option 2 ID : **6306803197910**
Option 3 ID : **6306803197911**
Option 4 ID : **6306803197912**

Q.17 Ram and Mohan can finish a piece of work in 15 days and 9 days, respectively. Ram worked for 6 days and then, Mohan joined him. Find the total time taken to finish the work.

Ans

✗ 1. $8\frac{3}{8}$ days

✔ 2. $9\frac{3}{8}$ days

✗ 3. $7\frac{3}{8}$ days

✗ 4. $6\frac{3}{8}$ days

Question ID : **630680131146**
Option 1 ID : **630680507856**
Option 2 ID : **630680507854**
Option 3 ID : **630680507855**
Option 4 ID : **630680507857**

Q.18 The marked price of a shirt is ₹1,240. Ms Kanti Singh buys the shirt at ₹948.60 after getting two successive discounts. If the first discount is 15%, then the second percentage discount is:

Ans

✗ 1. 12%

✔ 2. 10%

✗ 3. 16%

✗ 4. 8%

Question ID : **630680227087**
Option 1 ID : **630680881040**
Option 2 ID : **630680881041**
Option 3 ID : **630680881039**
Option 4 ID : **630680881042**

Q.19 In an experiment, bacterial growth increases by 27% in the first year of observation and by 20% in the subsequent year. What is the ratio of the number of bacteria at the end of the first year to the end of the second year?

Ans ✗ 1. 4 : 5

✗ 2. 6 : 7

✔ 3. 5 : 6

✗ 4. 7 : 8

Question ID : **630680632018**
Option 1 ID : **6306802473974**
Option 2 ID : **6306802473976**
Option 3 ID : **6306802473975**
Option 4 ID : **6306802473977**

Q.20 If P is a digit such that 45P82 is divisible by 11, then P is _____.

Ans ✗ 1. 5

✗ 2. 8

✔ 3. 7

✗ 4. 6

Question ID : **63068094328**
Option 1 ID : **630680366008**
Option 2 ID : **630680366010**
Option 3 ID : **630680366009**
Option 4 ID : **630680366007**

Section : **English Language and Comprehension**

Q.1 Select the most appropriate meaning of the given proverb. Birds of a feather flock together.

Ans ✘ 1. Similar birds come together.

✘ 2. Feathers of all birds are similar.

✘ 3. People of bad character stay apart.

✔ 4. People of similar traits associate with one another.

Question ID : **630680186673**
Option 1 ID : **630680723641**
Option 2 ID : **630680723642**
Option 3 ID : **630680723644**
Option 4 ID : **630680723643**

Q.2 Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.
A. Generation gaps are generally seen in the family between parents and their children.
B. Children being very young and immature do not understand the way of thinking of their parents.
C. It is not only because of the gap in age, but also because of the way parents react to a particular situation.
D. In many cases, the parents, even if they are mature, do not empathise with the changing values and thinking patterns of the modern world.

Ans ✘ 1. CBAD

✘ 2. BCAD

✘ 3. DBAC

✔ 4. ACBD

Question ID : **630680204353**
Option 1 ID : **630680792495**
Option 2 ID : **630680792498**
Option 3 ID : **630680792496**
Option 4 ID : **630680792497**

Q.3 **Select the most appropriate meaning of the given proverb.**
A drowning man will clutch at a straw.

Ans ✗ 1. This is said about someone who is manipulative and who will take any available opportunities for benefits.

✓ 2. This is said about someone who is in a very difficult situation and who will take any available opportunity to improve it.

✗ 3. This is said about someone who is in a very difficult situation and who will take selective opportunities to improve it.

✗ 4. This is said about someone who is in a very profitable situation and who will take added opportunity to improve it.

Question ID : **630680156403**
Option 1 ID : **630680605279**
Option 2 ID : **630680605277**
Option 3 ID : **630680605276**
Option 4 ID : **630680605278**

Q.4 **Select the most appropriate ANTONYM of the underlined word in the given sentence.**

Marine ecosystems provide essential services, including oxygen production, climate regulation and <u>nutrient</u> cycling.

Ans ✓ 1. Insalubrious

✗ 2. Implacable

✗ 3. Sumptuous

✗ 4. Opulent

Question ID : **630680549989**
Option 1 ID : **6306802150216**
Option 2 ID : **6306802150219**
Option 3 ID : **6306802150217**
Option 4 ID : **6306802150218**

Q.5 **Select the most appropriate degree of comparison to fill in the blank.**
Prarthana is a _____ name.

Ans ✗ 1. more nice

✗ 2. nicest

✓ 3. nice

✗ 4. nicer

Question ID : **630680146571**
Option 1 ID : **630680567169**
Option 2 ID : **630680567166**
Option 3 ID : **630680567168**
Option 4 ID : **630680567167**

Q.6 **Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**
A. In the past, any strategy on Flood Disaster Management largely focused on riverine floods affecting large tracts of rural areas.
B. Interestingly, it has to be treated as a separate disaster as the strategies to deal with it are different from the causes of the same.
C. Improper disposal of solid waste, including domestic, commercial and industrial waste, and dumping of construction debris lead to blockage of the drains.
D. The National Disaster Management Authority has recently released guidelines on the management of urban flooding.

Ans ✗ 1. BDCA

✗ 2. ABCD

✗ 3. ACBD

✓ 4. DBCA

Question ID : **630680156790**
Option 1 ID : **630680606802**
Option 2 ID : **630680606800**
Option 3 ID : **630680606801**
Option 4 ID : **630680606803**

Q.7 **Select the most appropriate option to fill in the blank.**
No boy other _____ Shyam has done it.

Ans ✓ 1. than

✗ 2. else

✗ 3. or

✗ 4. but

Question ID : **630680196047**
Option 1 ID : **630680760576**
Option 2 ID : **630680760577**
Option 3 ID : **630680760578**
Option 4 ID : **630680760575**

Q.8 **Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.**
A) Scarcity springs from the fact that the material resources of the world are limited and that our ability to make use of those resources is even more limited by our ignorance.
B) As our knowledge grows and we increase our skill, we can exploit more and more of the opportunities that nature offers to us.
C) The increase in communication, for example, has brought within our reach the resources of vast areas that were closed to us before: the development in scientific knowledge has made accessible many valuable minerals.
D) Scarcity is not created by war; it is a permanent characteristic of all human society and is the basis of the problem that Man faces and always has faced.

Ans ✗ 1. ABCD

✗ 2. DCAB

✗ 3. ADCB

✓ 4. DABC

Question ID : **630680156290**
Option 1 ID : **630680604859**
Option 2 ID : **630680604856**
Option 3 ID : **630680604857**
Option 4 ID : **630680604858**

Q.9 **Select the most appropriate option to fill in the blank.**
_____ **earth is very hot inside.**

Ans ✗ 1. A

✔ 2. The

✗ 3. This

✗ 4. An

Question ID : **630680328391**
Option 1 ID : **6306801277533**
Option 2 ID : **6306801277536**
Option 3 ID : **6306801277534**
Option 4 ID : **6306801277535**

Q.10 **Select the most appropriate spelling of the underlined word in the given sentence.**
A genetic <u>pridesposition</u> **is not the only factor that accounts for some disorders.**

Ans ✔ 1. predisposition

✗ 2. predisposotion

✗ 3. predysposition

✗ 4. pradisposition

Question ID : **630680424250**
Option 1 ID : **6306801655340**
Option 2 ID : **6306801655339**
Option 3 ID : **6306801655342**
Option 4 ID : **6306801655341**

Q.11 Sentences of a paragraph are given below in jumbled order. Select the most logical order of sentences from the given options to construct a meaningful and coherent paragraph.
1. Some beaches are protected, as is the case with portions of California's more vulnerable coastlines, where the California Coastal Act of 1976 places restrictions on building and development.
2. The Great Barrier Reef alone is home to 4,000 distinct molluscs, 1,500 different fish species, and 400 different types of coral.
3. However, others are not, and as a result, are contaminated.
4. It is situated around 1,240 miles off the coast of Queensland, Australia, and is actually a chain of nearly 3,000 reefs rather than a single reef.

Ans ✗ 1. 2, 3, 1, 4

✗ 2. 2, 3, 4, 1

✓ 3. 2, 4, 1, 3

✗ 4. 2, 4, 3, 1

Question ID : **630680196399**
Option 1 ID : **630680761964**
Option 2 ID : **630680761963**
Option 3 ID : **630680761965**
Option 4 ID : **630680761966**

Q.12 Select the most appropriate option to fill in the blank.

This is the only shop in this city which has _____ good reputation.

Ans ✗ 1. an

✗ 2. more

✗ 3. them

✓ 4. a

Question ID : **63068054650**
Option 1 ID : **630680210636**
Option 2 ID : **630680210635**
Option 3 ID : **630680210634**
Option 4 ID : **630680210637**

Q.13 **Select the most appropriate ANTONYM of the word 'customary' in the given sentence.**
The famous scientist's innovative and pioneering research brought about a significant change in the field of astrophysics.

Ans ✔ 1. Innovative

✘ 2. Pioneering

✘ 3. Significant

✘ 4. Famous

Question ID : **630680324658**
Option 1 ID : **6306801263074**
Option 2 ID : **6306801263075**
Option 3 ID : **6306801263076**
Option 4 ID : **6306801263073**

Q.14 **Select the most appropriate adverb to fill in the blank.**
"All of us are equals in the world," said the sage _____.

Ans ✘ 1. angrily

✔ 2. wisely

✘ 3. clearly

✘ 4. frightfully

Question ID : **630680183576**
Option 1 ID : **630680711314**
Option 2 ID : **630680711316**
Option 3 ID : **630680711315**
Option 4 ID : **630680711313**

Q.15 In the following sentence, four words have been underlined, out of which one word is MISSPELT. Select the option with the MISSPELT word. <u>Enterpreneurship</u> development is a <u>pivotal</u> chapter in the study of business studies and we are fortunate enough to have this <u>opportunity</u> to gain in-depth knowledge of its education which initiates the development of <u>infrastructure</u> of public and private policies.

Ans ✗ 1. opportunity

✗ 2. pivotal

✗ 3. infrastructure

✔ 4. Enterpreneurship

Question ID : **630680517308**
Option 1 ID : **6306802021630**
Option 2 ID : **6306802021629**
Option 3 ID : **6306802021631**
Option 4 ID : **6306802021628**

Comprehension:

Read the given passage and answer the questions that follow. After breakfast, Jack walked to the post office. I took the one-eyed collie to chase rabbits in the upper fields, but it barked at ducks and brought me a tramp's shoe from a hedge, and lay down with its tail wagging in a rabbit hole. I threw stones at the deserted duck pond, and the collie ambled back with sticks. Jack went skulking into the damp dingle, his hands in his pockets, his cap over one eye. I left the collie sniffing at a molehill, and climbed to the tree-top in the corner of the field. Below me, Jack was playing Indians all alone, scalping through the bushes, surprising himself round a tree, hiding from himself in the grass. I called to him once, but he pretended not to hear. He played alone, silently and savagely. I saw him standing with his hands in his pockets, on the mudbank by the stream at the foot of the dingle. My bough lurched, the heads of the dingle bushes spun up towards me like green tops. 'I'm falling!' I cried, my trousers saved me, I swung and grasped, this was one minute of wild adventure, but Jack did not look up and the minute was lost. I climbed, without dignity, to the ground.

SubQuestion No : 16

Q.16 Two words describe how Jack played alone. What are they?

Ans   ✗ 1. Quickly and harshly

    ✗ 2. Slowly and tamely

    ✓ 3. Silently and savagely

    ✗ 4. Quickly and savagely

Question ID : **630680135458**
Option 1 ID : **630680524584**
Option 2 ID : **630680524582**
Option 3 ID : **630680524583**
Option 4 ID : **630680524585**

Comprehension:

Read the given passage and answer the questions that follow. After breakfast, Jack walked to the post office. I took the one-eyed collie to chase rabbits in the upper fields, but it barked at ducks and brought me a tramp's shoe from a hedge, and lay down with its tail wagging in a rabbit hole. I threw stones at the deserted duck pond, and the collie ambled back with sticks. Jack went skulking into the damp dingle, his hands in his pockets, his cap over one eye. I left the collie sniffing at a molehill, and climbed to the tree-top in the corner of the field. Below me, Jack was playing Indians all alone, scalping through the bushes, surprising himself round a tree, hiding from himself in the grass. I called to him once, but he pretended not to hear. He played alone, silently and savagely. I saw him standing with his hands in his pockets, on the mudbank by the stream at the foot of the dingle. My bough lurched, the heads of the dingle bushes spun up towards me like green tops. 'I'm falling!' I cried, my trousers saved me, I swung and grasped, this was one minute of wild adventure, but Jack did not look up and the minute was lost. I climbed, without dignity, to the ground.

SubQuestion No : 17

Q.17 Why was the duck pond deserted?

Ans   ✗ 1. Ducks went for a feed.

✗ 2. Ducks went a nesting.

✔ 3. The collie had barked them off.

✗ 4. The collie called them outside.

Question ID : **630680135456**
Option 1 ID : **630680524574**
Option 2 ID : **630680524575**
Option 3 ID : **630680524577**
Option 4 ID : **630680524576**

Comprehension:

Read the given passage and answer the questions that follow. After breakfast, Jack walked to the post office. I took the one-eyed collie to chase rabbits in the upper fields, but it barked at ducks and brought me a tramp's shoe from a hedge, and lay down with its tail wagging in a rabbit hole. I threw stones at the deserted duck pond, and the collie ambled back with sticks. Jack went skulking into the damp dingle, his hands in his pockets, his cap over one eye. I left the collie sniffing at a molehill, and climbed to the tree-top in the corner of the field. Below me, Jack was playing Indians all alone, scalping through the bushes, surprising himself round a tree, hiding from himself in the grass. I called to him once, but he pretended not to hear. He played alone, silently and savagely. I saw him standing with his hands in his pockets, on the mudbank by the stream at the foot of the dingle. My bough lurched, the heads of the dingle bushes spun up towards me like green tops. 'I'm falling!' I cried, my trousers saved me, I swung and grasped, this was one minute of wild adventure, but Jack did not look up and the minute was lost. I climbed, without dignity, to the ground.

SubQuestion No : 18

Q.18 Why does author say the minute was lost?

Ans   ✗ 1. That minute would turn into an hour.

   ✗ 2. That minute would not move fast forward.

   ✗ 3. That minute would not move forward.

   ✔ 4. That minute would not come back again.

Question ID : **630680135460**
Option 1 ID : **630680524590**
Option 2 ID : **630680524592**
Option 3 ID : **630680524591**

Comprehension:

Read the given passage and answer the questions that follow. After breakfast, Jack walked to the post office. I took the one-eyed collie to chase rabbits in the upper fields, but it barked at ducks and brought me a tramp's shoe from a hedge, and lay down with its tail wagging in a rabbit hole. I threw stones at the deserted duck pond, and the collie ambled back with sticks. Jack went skulking into the damp dingle, his hands in his pockets, his cap over one eye. I left the collie sniffing at a molehill, and climbed to the tree-top in the corner of the field. Below me, Jack was playing Indians all alone, scalping through the bushes, surprising himself round a tree, hiding from himself in the grass. I called to him once, but he pretended not to hear. He played alone, silently and savagely. I saw him standing with his hands in his pockets, on the mudbank by the stream at the foot of the dingle. My bough lurched, the heads of the dingle bushes spun up towards me like green tops. 'I'm falling!' I cried, my trousers saved me, I swung and grasped, this was one minute of wild adventure, but Jack did not look up and the minute was lost. I climbed, without dignity, to the ground.

SubQuestion No : 19

Q.19 What saved Dylan from falling out of the tree?

Ans ✔ 1. His trousers

✘ 2. His shirt

✘ 3. His coat

✘ 4. His sweater

Question ID : **630680135459**
Option 1 ID : **630680524588**
Option 2 ID : **630680524589**
Option 3 ID : **630680524586**
Option 4 ID : **630680524587**

Comprehension:

Read the given passage and answer the questions that follow. After breakfast, Jack walked to the post office. I took the one-eyed collie to chase rabbits in the upper fields, but it barked at ducks and brought me a tramp's shoe from a hedge, and lay down with its tail wagging in a rabbit hole. I threw stones at the deserted duck pond, and the collie ambled back with sticks. Jack went skulking into the damp dingle, his hands in his pockets, his cap over one eye. I left the collie sniffing at a molehill, and climbed to the tree-top in the corner of the field. Below me, Jack was playing Indians all alone, scalping through the bushes, surprising himself round a tree, hiding from himself in the grass. I called to him once, but he pretended not to hear. He played alone, silently and savagely. I saw him standing with his hands in his pockets, on the mudbank by the stream at the foot of the dingle. My bough lurched, the heads of the dingle bushes spun up towards me like green tops. 'I'm falling!' I cried, my trousers saved me, I swung and grasped, this was one minute of wild adventure, but Jack did not look up and the minute was lost. I climbed, without dignity, to the ground.

SubQuestion No : 20

Q.20 What kind of game did Jack play?

Ans ✗ 1. Westerns

✗ 2. Ludo

✔ 3. Indians

✗ 4. Jungle

Question ID : **630680135457**
Option 1 ID : **630680524579**
Option 2 ID : **630680524580**
Option 3 ID : **630680524578**
Option 4 ID : **630680524581**

Section : Hindi Language and Comprehension

Q.1 'उमेश हमेशा सच बोलता है।' वाक्य में किस क्रिया विशेषण का प्रयोग हुआ है -

Ans ✗ 1. परिमाणवाचक क्रियाविशेषण

✗ 2. स्थानवाचक क्रियाविशेषण

✓ 3. रीतिवाचक क्रियाविशेषण

✗ 4. कालवाचक क्रियाविशेषण

Question ID : 630680126542
Option 1 ID : 630680490733
Option 2 ID : 630680490732
Option 3 ID : 630680490730
Option 4 ID : 630680490731

Q.2 इस नई उल्लेखनीय विश्व-व्यवस्था के विकास में बेहद दो चीजें हैं' वाक्य का सर्वाधिक उपयुक्त क्रम है-

Ans ✓ 1. इस नयी विश्व-व्यवस्था के विकास में दो चीजें बेहद उल्लेखनीय हैं'

✗ 2. दो चीजें बेहद उल्लेखनीय हैं विश्व-व्यवस्था के इस नयी विकास में

✗ 3. इस विश्व-व्यवस्था के विकास में उल्लेखनीय नयी बेहद दो चीजें हैं

✗ 4. इस नयी विकास में बेहद उल्लेखनीय हैं विश्व-व्यवस्था के दो चीजें

Question ID : 630680378555
Option 1 ID : 6306801475278
Option 2 ID : 6306801475276
Option 3 ID : 6306801475275
Option 4 ID : 6306801475277

Q.3 'खेत रहना' मुहावरे का अर्थ है -

Ans ✓ 1. युद्ध में मरना

✗ 2. भूस्वामी होना

✗ 3. जंगल में रहना

✗ 4. गिरवी रखना

Question ID : 630680125675
Option 1 ID : 630680487358
Option 2 ID : 630680487361
Option 3 ID : 630680487359
Option 4 ID : 630680487360

Q.4 दिए गए विकल्पों में से क्रिया-विशेषण वाक्यांश चुनकर वाक्य पूरा कीजिए-
'पौधे खाद-पानी और सिचाई के बाद _____।'

Ans ✗ 1. मुरझा गए

✗ 2. फैल गए

✓ 3. तेजी से बढ़े

✗ 4. खिल गए

Question ID : **63068085029**
Option 1 ID : **630680329620**
Option 2 ID : **630680329622**
Option 3 ID : **630680329621**
Option 4 ID : **630680329623**

Q.5 'राहुल _____ खेल रहा है।'

वाक्य में रिक्त स्थान की पूर्ति ऐसे शब्द द्वारा कीजिए की वाक्य सकर्मक क्रिया का बन जाए -

Ans ✓ 1. गेंद से

✗ 2. विनोद के साथ

✗ 3. मैदान में

✗ 4. फिर से

Question ID : **630680123772**
Option 1 ID : **630680479972**
Option 2 ID : **630680479971**
Option 3 ID : **630680479970**
Option 4 ID : **630680479973**

Q.6 किये गए उपकार को न मानने वाला

Ans ✗ 1. कृतकार्य

✗ 2. कृतान्त

✓ 3. कृतघ्न

✗ 4. कृतज्ञ

Question ID : **63068049260**
Option 1 ID : **630680189488**
Option 2 ID : **630680189489**
Option 3 ID : **630680189487**
Option 4 ID : **630680189486**

Q.7 लोकोक्ति का अर्थ बतावें और उत्तर के रूप में सही विकल्प चुनें।

ऊँची दुकान फीका पकवान

Ans ✖ 1. बड़ी दुकान में अच्छा सामान मिलता है

✖ 2. बड़ी दुकान में अच्छा सामान नहीं मिलता है।

✖ 3. ऊँची दुकान में नहीं जाना चाहिए

✔ 4. केवल बाह्य प्रदर्शन

Question ID : 630680135411
Option 1 ID : 630680524409
Option 2 ID : 630680524407
Option 3 ID : 630680524408
Option 4 ID : 630680524406

Q.8 शब्द युग्मों से निर्मित निम्न वाक्यों में से अर्थ के आधार पर रेखांकित अशुद्धि वाले विकल्प का चयन कीजिए-

Ans ✖ 1. उच्च न्यायालय में याचिका दायर करने की <u>अवधि</u> अब बीत चुकी है।

✖ 2. एक अच्छा नागरिक कभी भी <u>अविधि</u> कार्य नहीं करता है।

✖ 3. राकेश जो कार्य कर रहा वह <u>अविधि</u> है।

✔ 4. प्रधानमंत्री अपने पद पर पाँच साल की <u>अवधी</u> तक कार्य करेंगे।

Question ID : 630680762749
Option 1 ID : 6306802989600
Option 2 ID : 6306802989603
Option 3 ID : 6306802989601
Option 4 ID : 6306802989602

Q.9 निम्न रिक्त स्थान की पूर्ति उचित क्रिया से करें।
राजू का आगरा ___तय है।

Ans ✖ 1. के लिए

✖ 2. का

✖ 3. लाना

✔ 4. जाना

Question ID : 630680199300
Option 1 ID : 630680772845
Option 2 ID : 630680772843
Option 3 ID : 630680772846
Option 4 ID : 630680772844

Q.10 दादी जी कुर्सी पर बैठी हैं। क्रिया के किस प्रकार का उदाहरण है?

Ans ✗ 1. अकर्मक

✓ 2. सकर्मक

✗ 3. संयुक्त

✗ 4. सहायक

Question ID : **63068060560**
Option 1 ID : **630680233691**
Option 2 ID : **630680233690**
Option 3 ID : **630680233693**
Option 4 ID : **630680233692**

Q.11 'बिहारीलाल हिंदी साहित्य के महत्पूर्ण कवि है।' वाक्य में रेखांकित शब्द की सही वर्तनी है -

Ans ✗ 1. महत्तपूर्ण

✓ 2. महत्त्वपूर्ण

✗ 3. महत्तव्पूर्ण

✗ 4. महत्वपूर्ण

Question ID : **630680126559**
Option 1 ID : **630680490796**
Option 2 ID : **630680490797**
Option 3 ID : **630680490795**
Option 4 ID : **630680490794**

Q.12 'आदि से लेकर अंत तक' वाक्यांश के लिए एक शब्द होगा-

Ans ✗ 1. आदिकर्ता

✗ 2. आद्योत

✗ 3. आद्यबीज

✓ 4. आद्योपांत

Question ID : **630680204973**
Option 1 ID : **630680794755**
Option 2 ID : **630680794756**
Option 3 ID : **630680794758**
Option 4 ID : **630680794757**

Q.13 'जारज' का विलोम शब्द है।`

Ans   ✘ 1. सजल

     ✘ 2. मंथर

     ✘ 3. जड़

     ✔ 4. औरस

Question ID : **63068065712**
Option 1 ID : **630680253805**
Option 2 ID : **630680253804**
Option 3 ID : **630680253802**
Option 4 ID : **630680253803**

Q.14 निम्नलिखित वाक्य को उचित क्रम में लिखें।

सब मिलकर आज हम खाना बनाएँगे।

Ans   ✘ 1. मिलकर आज सब खाना हम बनाएँगे।

     ✔ 2. आज हम सब मिलकर खाना बनाएँगे।

     ✘ 3. खाना बनाएँगे आज सब मिलकर हम।

     ✘ 4. सब मिलकर खाना आज हम बनाएँगे।

Question ID : **630680553882**
Option 1 ID : **6306802165383**
Option 2 ID : **6306802165382**
Option 3 ID : **6306802165384**
Option 4 ID : **6306802165385**

Q.15 वर्तनीगत अशुद्धियाँ किस वाक्य में है ?

Ans   ✘ 1. सब लोग अपनी – अपनी राय दें।

     ✔ 2. कुरीतीयों का एक मात्र कारण अज्ञात है।

     ✘ 3. राम थक कर अपने कमरे में सो गया।

     ✘ 4. वे प्रातःकाल आ पहुँचे।

Question ID : **63068064765**
Option 1 ID : **630680250027**
Option 2 ID : **630680250029**
Option 3 ID : **630680250028**
Option 4 ID : **630680250026**

Comprehension:

निम्नलिखित गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न के चार विकल्पों में से सही विकल्प चुनें।

सूरज डूबने लगा और धीरे-धीरे ग्लेशियरों में पिघली केसर बहने लगी। बर्फ कमल के लाल फूलों में बदलने लगी, घाटियां गहरी पीली हो गई। अंधेरा होने लगा तो हम उठे और मुंह हाथ धोने और चाय पीने लगे। और सब चुपचाप थे, गुमसुम, जैसे सब का कुछ छिन गया हो, या शायद सबको कुछ ऐसा मिल गया हो जिसके अंदर ही अंदर सहेजने में सब आत्म लीन हों या अपने में डूब गए हों। थोड़ी देर में चांद निकला और हम फिर बाहर निकले... इस बार सब शांत था। जैसे सब सो रहा हो। मैं थोड़ा अलग आराम कुर्सी खींच कर बैठ गया। यह मेरा मन इतना कल्पना हीन क्यों हो गया है? इसी हिमालय को देखकर किसने क्या-क्या नहीं लिखा और यह मेरा मन है कि एक कविता तो दूर, एक पंक्ति, एक शब्द भी तो नहीं जानता। पर कुछ नहीं, यह सब कितना छोटा लग रहा है इस हिम सम्राट के समक्ष। पर धीरे-धीरे लगा कि मन के अंदर भी बादल थे जो छूट रहे हैं। कुछ ऐसा उभर रहा है जो इन चित्रों की प्रकृति का है जो उसी ऊंचाई पर उठने की चेष्टा कर रहा है ताकि इन से उन्हीं के स्तर पर मिल सके। लगा, यह हिमालय बड़े भाई की तरह ऊपर चढ़ गया है, और मुझे छोटे भाई को नीचे खड़ा हुआ, कुंठित और लज्जित देखकर थोड़ा उत्साहित भी कर रहा है, स्नेह भरी चुनौती भी दे रहा है 'हिम्मत है? ऊंचे उठोगे?"

SubQuestion No : 16

Q.16 शाम होने पर सब किस में आत्मलीन या डूबे हुए प्रतीत हो रहे थे ?

Ans ✅ 1. सब कुछ छिन गया हो, सब कुछ मिल गया हो

❌ 2. कल्पनाहीन

❌ 3. कुंठित और लज्जित

❌ 4. उत्साहित

Question ID : 630680140370
Option 1 ID : 630680543276
Option 2 ID : 630680543274
Option 3 ID : 630680543277
Option 4 ID : 630680543275

Comprehension:

निम्नलिखित गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न के चार विकल्पों में से सही विकल्प चुनें।

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SubQuestion No : 17

Q.17 चांद के निकलने पर सब की दशा किस प्रकार की थी?

Ans ✘ 1. मुस्कुराते हुए

✘ 2. जैसे हिम सो रहा है

✘ 3. नदी की तरह उत्साही

✔ 4. शांत

Question ID : 630680140367
Option 1 ID : 630680543262
Option 2 ID : 630680543264
Option 3 ID : 630680543265
Option 4 ID : 630680543263

Comprehension:

निम्नलिखित गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न के चार विकल्पों में से सही विकल्प चुनें।

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SubQuestion No : 18

Q.18 हिमालय को देखकर लेखक के मन में कौन से संबंधों का बोध हुआ?

Ans ✅ 1. बड़ा भाई- छोटा भाई

❌ 2. पर्वत- झरना

❌ 3. कमल- घाटी

❌ 4. सूरज- चांद

Comprehension:

निम्नलिखित गद्यांश के आधार पर पाँच प्रश्न दिए गए हैं। गद्यांश को ध्यानपूर्वक पढ़ें तथा प्रत्येक प्रश्न के चार विकल्पों में से सही विकल्प चुनें।

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SubQuestion No : 19

Q.19 सूर्यास्त के समय ग्लेशियरों को देखकर कैसा लग रहा था?

Ans ✔ 1. पिघली केसर मानो बह रही हो

✘ 2. बर्फ के लाल फूल हों

✘ 3. शांत और शीतल

✘ 4. अदना व्यक्ति की तरह

Comprehension:

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SubQuestion No : 20

Q.20 निम्नलिखित में से कौन सा शब्द सम्राट का पर्यायवाची नहीं है?

Ans ✗ 1. नृप

✓ 2. मेदिनी

✗ 3. महीप

✗ 4. धराधीश

Question ID : 630680140371
Option 1 ID : 630680543278
Option 2 ID : 630680543280
Option 3 ID : 630680543279
Option 4 ID : 630680543281

Section : **Discipline1**

Q.1 In a series magnetic circuit, if 'H' is magnetizing force and 'l' is length then, the total ampere turns of a composite magnetic path is calculated by the relation ____.

Ans ✗ 1. AT = H+l

✗ 2. AT = H/l

✓ 3. AT = H×l

✗ 4. AT = $H^2 \times l^2$

Question ID : **630680504161**
Option 1 ID : **6306801970208**
Option 2 ID : **6306801970206**
Option 3 ID : **6306801970205**
Option 4 ID : **6306801970207**

Q.2 What is the width of a strip foundation required for a compound wall with a load of 320 kN per metre length, given that the safe bearing capacity of the soil is 150 kN/m^2?

Ans ✓ 1. 2.1 m

✗ 2. 6.2 m

✗ 3. 3.8 m

✗ 4. 5.3 m

Question ID : **630680876236**
Option 1 ID : **6306803431713**
Option 2 ID : **6306803431712**
Option 3 ID : **6306803431714**
Option 4 ID : **6306803431711**

Q.3 What is the angle between the planes of projection in an orthographic projection?

Ans ✗ 1. 60 degrees

✗ 2. 45 degrees

✓ 3. 90 degrees

✗ 4. 180 degrees

Question ID : **630680876147**
Option 1 ID : **6306803431356**
Option 2 ID : **6306803431355**
Option 3 ID : **6306803431358**
Option 4 ID : **6306803431357**

Q.4 Which of the following types of cement is NOT OPC based?

Ans ✗ 1. Hydrophobic cement

✗ 2. Sulphate resisting cement

✔ 3. High alumina cement

✗ 4. Low heat cement

Question ID : **630680211447**
Option 1 ID : **630680819936**
Option 2 ID : **630680819935**
Option 3 ID : **630680819938**
Option 4 ID : **630680819937**

Q.5 A cantilever beam of length 5 m carries two point loads and a couple at the free end, as shown in the figure below. The shear force for the portion DC is _____.

Ans ✗ 1. 50 kN

✗ 2. 30 kN

✔ 3. 0 kN

✗ 4. 20 kN

Question ID : **630680177249**
Option 1 ID : **630680687173**
Option 2 ID : **630680687174**
Option 3 ID : **630680687175**
Option 4 ID : **630680687172**

Q.6 Match the following.

1. Portion of base period in which kor watering is needed	A. Paleo
2. First watering to crop	B. Root zone depth
3. First watering before sowing	C. Kor period
4. Maximum depth which the crop root spreads	D. Kor depth
	E. Kor watering

Ans ✗ 1. 1-D, 2-C, 3-A, 4-E

✓ 2. 1-C, 2-E, 3-A, 4-B

✗ 3. 1-E, 2-C, 3-A, 4-B

✗ 4. 1-C, 2-D, 3-E, 4-B

Question ID : **630680111133**
Option 1 ID : **630680430376**
Option 2 ID : **630680430377**
Option 3 ID : **630680430375**
Option 4 ID : **630680430374**

Q.7 **Which of the following statements is/are true with respect to types of curve?**
Statement A: A compound curve consists of two or more simple arcs that turn in the same direction and join at common tangent points.
Statement B: A reverse curve consists of two circular arcs of different radii, having their centres to different sides of a common tangent.

Ans ✗ 1. Both the statements are false.

✓ 2. Both the statements are true.

✗ 3. Statement A is true, but Statement B is false.

✗ 4. Statement B is true, but Statement A is false.

Question ID : **630680161603**
Option 1 ID : **630680625743**
Option 2 ID : **630680625742**
Option 3 ID : **630680625740**
Option 4 ID : **630680625741**

Q.8 The annual deposit/instalment to get money of structure at the end of its useful life is known as _____.

Ans ✘ 1. obsolescence value

✔ 2. sinking fund

✘ 3. capital cost

✘ 4. annuity

Question ID : **630680311072**
Option 1 ID : **6306801210401**
Option 2 ID : **6306801210403**
Option 3 ID : **6306801210402**
Option 4 ID : **6306801210404**

**Q.9** The stopping distance in exit taxiway design is given by the equation _____, where : d- deceleration in m/sec^2 ,f- coefficient of friction

Ans ✘ 1. $\dfrac{V^2}{25.5f}$

✔ 2. $\dfrac{V^2}{25.5d}$

✘ 3. $\dfrac{V^2}{254f}$

✘ 4. $\dfrac{V^2}{254d}$

Question ID : **630680114830**
Option 1 ID : **630680444688**
Option 2 ID : **630680444686**
Option 3 ID : **630680444687**
Option 4 ID : **630680444689**

Q.10 From the given free body diagram, find the unbalanced horizontal force.
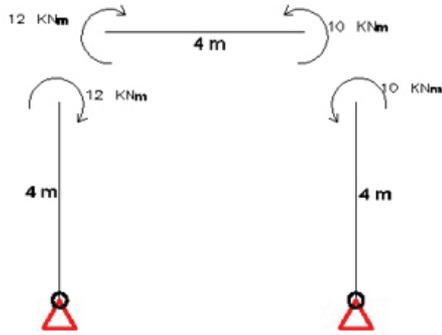
Ans
- ✗ 1. 1.5 KN
- ✗ 2. 0.75 KN
- ✔ 3. 0.5 KN
- ✗ 4. 2.5 KN

Question ID : **630680133174**
Option 1 ID : **630680515684**
Option 2 ID : **630680515683**
Option 3 ID : **630680515682**
Option 4 ID : **630680515685**

Q.11 Which of the following statements is/are correct?

1. Damped oscillation is defined as reduction in the amplitude of an oscillating system, caused by the dissipation of energy.
2. The rate at which the energy reduces is proportional to the amplitude.

Ans
- ✔ 1. Only 1
- ✗ 2. Both 1 and 2
- ✗ 3. Neither 1 nor 2
- ✗ 4. Only 2

Question ID : **630680876297**
Option 1 ID : **6306803431955**
Option 2 ID : **6306803431957**
Option 3 ID : **6306803431958**
Option 4 ID : **6306803431956**

Q.12 Calculate the specific retention of an unconfined aquifer if its porosity averages to 30%, and the specific yield is 22%.

Ans ✔ 1. 8%

✘ 2. 73.33%

✘ 3. 28%

✘ 4. 1.36%

Question ID : **63068099858**
Option 1 ID : **630680388129**
Option 2 ID : **630680388131**
Option 3 ID : **630680388130**
Option 4 ID : **630680388128**

Q.13 Which classification of computers is typically used as a central processing unit (CPU) in embedded systems, consumer electronics, and small-scale applications?

Ans ✘ 1. Personal Computers

✔ 2. Microcontrollers

✘ 3. Mini Computers

✘ 4. Quantum Computers

Question ID : **630680876166**
Option 1 ID : **6306803431433**
Option 2 ID : **6306803431432**
Option 3 ID : **6306803431431**
Option 4 ID : **6306803431434**

Q.14 The value of the integral $\int \frac{1}{\sin 2z} \, dz$ on $\{z: |z| = 2\}$ is:

Ans ✘ 1. -2πi

✔ 2. 2πi

✘ 3. -πi

✘ 4. πi

Question ID : **63068094770**
Option 1 ID : **630680367778**
Option 2 ID : **630680367777**
Option 3 ID : **630680367776**
Option 4 ID : **630680367775**

Q.15 Which of the following relations holds true upon comparing average DC currents of half-wave and full-wave rectifier circuits, assuming sinusoidal AC signal as an input?

Ans ✗ 1.

$$I_{DC} \text{ (half-wave rectifier circuit)} \geq I_{DC} \text{ (full-wave rectifier circuit)}$$

✗ 2.

$$I_{DC} \text{ (half-wave rectifier circuit)} = I_{DC} \text{ (full-wave rectifier circuit)}$$

✓ 3.

$$I_{DC} \text{ (half-wave rectifier circuit)} < I_{DC} \text{ (full-wave rectifier circuit)}$$

✗ 4.

$$I_{DC} \text{ (half-wave rectifier circuit)} > I_{DC} \text{ (full-wave rectifier circuit)}$$

Question ID : **630680361523**
Option 1 ID : **6306801407940**
Option 2 ID : **6306801407939**
Option 3 ID : **6306801407938**
Option 4 ID : **6306801407937**

Q.16 Which of the following is the purpose of plasticisers in polymer processing?

Ans ✗ 1. To decrease the melting point of the polymer

✓ 2. To improve the flexibility of the polymer

✗ 3. To increase the strength of the polymer

✗ 4. To increase the viscosity of the polymer melt

Question ID : **630680876289**
Option 1 ID : **6306803431924**
Option 2 ID : **6306803431926**
Option 3 ID : **6306803431923**
Option 4 ID : **6306803431925**

Q.17 The settling velocity of a particle follows which of the following relationships?

Ans

✗ 1. $V_s \propto dp^{1/2}$

✗ 2. $V_s \propto d_p$

✗ 3. $V_s^2 \propto d_p$

✓ 4. $V_s \propto d_p^2$

Question ID : **630680103214**
Option 1 ID : **630680401116**
Option 2 ID : **630680401115**
Option 3 ID : **630680401117**
Option 4 ID : **630680401118**

Q.18 The interface separating the crustal mass into upper and lower crust is called _____.

Ans

✗ 1. Lehmann discontinuity

✗ 2. Repetti discontinuity

✗ 3. Mohorovicic discontinuity

✓ 4. Conrad discontinuity

Question ID : **630680876187**
Option 1 ID : **6306803431517**
Option 2 ID : **6306803431518**
Option 3 ID : **6306803431515**
Option 4 ID : **6306803431516**

Q.19 The Joule-Thomson coefficient is defined as:

Ans

✗ 1. $\left(\dfrac{\partial h}{\partial T}\right)_P$

✗ 2. $\left(\dfrac{\partial h}{\partial P}\right)_T$

✓ 3. $\left(\dfrac{\partial T}{\partial P}\right)_h$

✗ 4. $\left(\dfrac{\partial P}{\partial T}\right)_h$

Question ID : **630680116729**
Option 1 ID : **630680452204**
Option 2 ID : **630680452203**
Option 3 ID : **630680452202**
Option 4 ID : **630680452205**

Q.20 In a two-dimensional flow around a cylinder, the discharge between streamlines, which are 0.2 m apart, is 0.05 m^3/s per one-metre depth of the flow. Determine the flow velocity (in m/s) between the streamlines.

Ans   ✗ 1. 1

   ✗ 2. 40

   ✗ 3. 0.001

   ✔ 4. 0.25

Question ID : **63068082861**
Option 1 ID : **630680321310**
Option 2 ID : **630680321308**
Option 3 ID : **630680321311**
Option 4 ID : **630680321309**

Section : **Discipline2**

Q.1
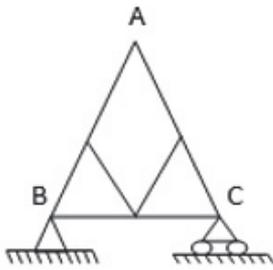
The given truss is:

Ans   ✗ 1. stable

   ✗ 2. statically determinate and stable

   ✗ 3. statically indeterminate and stable

   ✔ 4. unstable and statically determinate

Question ID : **630680103968**
Option 1 ID : **630680404087**
Option 2 ID : **630680404090**
Option 3 ID : **630680404089**
Option 4 ID : **630680404088**

Q.2 **Which of the following statements regarding protective filters used in hydraulic structures is FALSE?**

Ans ✔ 1. It inhibits the flow of water through it.

✘ 2. It reduces the uplift pressure.

✘ 3. It reduces erosion of soil.

✘ 4. It reduces piping in the soil.

Question ID : **630680114712**
Option 1 ID : **630680444217**
Option 2 ID : **630680444216**
Option 3 ID : **630680444214**
Option 4 ID : **630680444215**

Q.3 **As per IS: 800-2007, a diagonal stiffener for a plate girder should be designed to carry _____.**

Ans ✔ 1. a portion of the applied shear and bearing that exceeds the capacity of the web

✘ 2. only a portion of the applied shear that exceeds the capacity of the web

✘ 3. only the applied shear on the web

✘ 4. the applied shear and bearing on the web

Question ID : **630680219874**
Option 1 ID : **630680853377**
Option 2 ID : **630680853376**
Option 3 ID : **630680853375**
Option 4 ID : **630680853378**

Q.4 If _____,it is termed as 'Face right observation' in theodolite surveying.

Ans ✔ 1. the vertical circle is located at the right side of the observer

✖ 2. Vernier A is located at the right side of the observer

✖ 3. the upper tangent screw is located at the right side of the observer

✖ 4. the lower tangent screw is located at the right side of the observer

Question ID : **630680161586**
Option 1 ID : **630680625672**
Option 2 ID : **630680625673**
Option 3 ID : **630680625674**
Option 4 ID : **630680625675**

Q.5 If 2x + 3y + 6 = 0, then the quartile deviation of y = _____.

Ans

✖ 1. $\left|\frac{3}{2}\right| Q.D.(x)$

✖ 2. $|2| Q.D.(x)$

✖ 3. $|3| Q.D.(x)$

✔ 4. $\left|\frac{2}{3}\right| Q.D.(x)$

Question ID : **63068093954**
Option 1 ID : **630680364513**
Option 2 ID : **630680364511**
Option 3 ID : **630680364514**
Option 4 ID : **630680364512**

Q.6 A rectangular concrete beam of width 100 mm and depth 250 mm, spanning over 8 m, is pre-stressed by a straight cable carrying an effective pre-stressing force of 250 kN, located at an eccentricity of 40 mm. The beam supports a load of 1.8 kN/m, inclusive of self-weight. The nature of stresses induced at the top and bottom fibres are:

Ans ✗ 1. Both top and bottom fibres in tension

✗ 2. Bottom fibre in compression and top fibre in tension

✗ 3. Top fibre in compression and bottom fibre in tension

✔ 4. Both top and bottom fibres in compression

Question ID : **630680217755**
Option 1 ID : **630680844933**
Option 2 ID : **630680844934**
Option 3 ID : **630680844932**
Option 4 ID : **630680844931**

Q.7 In case of uncontrolled intersection, visibility at all the roads should be at least provided with:

Ans ✗ 1. sight distance

✗ 2. intermediate sight distance

✗ 3. over taking sight distance

✔ 4. stopping sight distance

Question ID : **63068083041**
Option 1 ID : **630680322027**
Option 2 ID : **630680322026**
Option 3 ID : **630680322025**
Option 4 ID : **630680322024**

Q.8 An elastic pile subjected to a horizontal shear and moment can be analysed by:

Ans ✗ 1. Terzaghi's analysis

✔ 2. Reese and Matlock analysis

✗ 3. Meyerhof's analysis

✗ 4. Vesic's analysis

Question ID : **630680159125**
Option 1 ID : **630680615969**
Option 2 ID : **630680615968**
Option 3 ID : **630680615970**
Option 4 ID : **630680615971**

Q.9 A column with both the ends hinged can carry a load of 20 kN. If the same is clamped at both the ends, the load carrying capacity will be increased by _____ times.

Ans ✗ 1. 2

✗ 2. $2\sqrt{2}$

✔ 3. 4

✗ 4. $\sqrt{2}$

Question ID : **630680101169**
Option 1 ID : **630680393196**
Option 2 ID : **630680393199**
Option 3 ID : **630680393198**
Option 4 ID : **630680393197**

Q.10 **The peak of the outflow hydrograph will occur at the point of intersection of the inflow and outflow curves in case of _____.**

Ans ✗ 1. outflow from the storage reservoir is controlled

✗ 2. inflow to the storage reservoir is controlled

✓ 3. outflow from the storage reservoir is uncontrolled

✗ 4. inflow to the storage reservoir is uncontrolled

Question ID : **630680101137**
Option 1 ID : **630680393074**
Option 2 ID : **630680393075**
Option 3 ID : **630680393073**
Option 4 ID : **630680393072**

Q.11 **In the Molecular Orbital Theory, which of the following types of orbitals interact to form bonding molecular orbitals?**

Ans ✗ 1. Orbitals with different energies

✗ 2. Orbitals with opposite spin

✓ 3. Orbitals with similar energy

✗ 4. Orbitals with the same spin

Question ID : **630680876283**
Option 1 ID : **6306803431902**
Option 2 ID : **6306803431900**
Option 3 ID : **6306803431899**
Option 4 ID : **6306803431901**

Q.12 **Which of the following viruses causes water-borne diseases?**

Ans ✗ 1. Nipah virus

✓ 2. Hepatitis A

✗ 3. Hantavirus

✗ 4. Entamoeba histolytica

Question ID : **630680103218**
Option 1 ID : **630680401132**
Option 2 ID : **630680401133**
Option 3 ID : **630680401131**
Option 4 ID : **630680401134**

Q.13 Which unit of measurement in the MKS system is commonly used for quantifying rock excavation in earthworks?

Ans ✗ 1. Square meter (m^2)

✓ 2. Cubic meter (m^3)

✗ 3. Meter (m)

✗ 4. Square feet (ft^2)

Question ID : **630680876223**
Option 1 ID : **6306803431660**
Option 2 ID : **6306803431659**
Option 3 ID : **6306803431661**
Option 4 ID : **6306803431662**

Q.14 Which of the following attributes is/are true for an English bond in comparison with a Flemish bond?
A. Higher strength of bonding.
B. Requires more brick bats.
C. Requires more facing bricks.
D. More economic.

Ans ✗ 1. Only A

✗ 2. A, C and D

✓ 3. Only A and C

✗ 4. Only B and D

Question ID : **630680876247**
Option 1 ID : **6306803431755**
Option 2 ID : **6306803431758**
Option 3 ID : **6306803431756**
Option 4 ID : **6306803431757**

Q.15 In the temperature range between 0°C and 100°C, a particular system maintained at constant volume has a heat capacity $C = A + 2BT$ with $A = 0.014$ J/K and $B = 4.2 \times 10^{-4}$ J/K2. A heat reservoir at 0°C and a reversible work source are available. If the system is cooled from 100°C to the temperature of the reservoir, then the maximum amount of work that can be transferred to a reversible work source will be:

Ans ✗ 1. 5.67 J

✗ 2. 8.45 J

✗ 3. 3.89 J

✔ 4. 4.41 J

Question ID : **630680211725**
Option 1 ID : **630680821048**
Option 2 ID : **630680821050**
Option 3 ID : **630680821047**
Option 4 ID : **630680821049**

Q.16 What is the correct arrangement in the increasing order of pore/void size in a hydrated cement paste?
A – Capillary pores
B – Entrapped air
C – Entrained air
D – Interlayer space in C-S-H

Ans ✔ 1. D < A < C < B

✗ 2. D < C < A < B

✗ 3. D < A < B < C

✗ 4. D < C < B < A

Question ID : **630680121396**
Option 1 ID : **630680470542**
Option 2 ID : **630680470544**
Option 3 ID : **630680470543**
Option 4 ID : **630680470545**

Q.17 Which of the following is a high-level programming language?

Ans ✗ 1. Machine Language

✓ 2. C++

✗ 3. Assembly Language

✗ 4. Binary

Question ID : **630680876157**
Option 1 ID : **6306803431395**
Option 2 ID : **6306803431397**
Option 3 ID : **6306803431396**
Option 4 ID : **6306803431398**

Q.18 Which of the following dimensionless number controls the significance of the surface tension force?

Ans ✗ 1. Mach number

✗ 2. Euler's number

✗ 3. Froude number

✓ 4. Weber number

Question ID : **630680108830**
Option 1 ID : **630680422213**
Option 2 ID : **630680422212**
Option 3 ID : **630680422214**
Option 4 ID : **630680422215**

Q.19 Which of the following is a characteristic of a wave function?

Ans ✗ 1. Non-continuous

✓ 2. Finite

✗ 3. Physically significant

✗ 4. Multi-valued

Question ID : **630680876324**
Option 1 ID : **6306803432064**
Option 2 ID : **6306803432066**
Option 3 ID : **6306803432063**
Option 4 ID : **6306803432065**

Q.20 The capacity of building materials, systems or structures to absorb energy by undergoing deforming in the inelastic range is called _____, which is one of the characteristics of a building affecting its earthquake performance.

Ans ✗ 1. mode shape

✓ 2. ductility

✗ 3. damping

✗ 4. redundancy

Question ID : **630680876121**
Option 1 ID : **6306803431252**
Option 2 ID : **6306803431254**
Option 3 ID : **6306803431251**
Option 4 ID : **6306803431253**

Section : **Discipline3**

Q.1 Match the following columns according to USBR classification.

Types of hydraulic jump	Froude number
1. Undular jump	a. $1.7 - 2.5$
2. Weak jump	b. $1.0 - 1.7$
3. Oscillating jump	c. $4.5 - 9.0$
4. Steady jump	d. $2.5 - 4.5$

Ans ✓ 1. 1-b, 2-a, 3-d, 4-c

✗ 2. 1-d, 2-c, 3-a, 4-b

✗ 3. 1-a, 2-b, 3-c, 4-d

✗ 4. 1-c, 2-b, 3-a, 4-d

Question ID : **630680103449**
Option 1 ID : **630680402041**
Option 2 ID : **630680402042**
Option 3 ID : **630680402039**
Option 4 ID : **630680402040**

Q.2 The rise in elevation over a length of 2 km in mountainous terrain shall NOT exceed:

Ans ✗ 1. 80 m

✗ 2. 120 m

✗ 3. 90 m

✓ 4. 100 m

Question ID : **630680157911**
Option 1 ID : **630680611172**
Option 2 ID : **630680611175**
Option 3 ID : **630680611173**
Option 4 ID : **630680611174**

Q.3 What is the maximum permissible velocity of water in canals with boulder lining, as per Indian standards?

Ans ✓ 1. 1.5 m/sec

✗ 2. 4.5 m/sec

✗ 3. 3 m/sec

✗ 4. 0.5 m/sec

Question ID : **630680144458**
Option 1 ID : **630680558900**
Option 2 ID : **630680558898**
Option 3 ID : **630680558899**
Option 4 ID : **630680558901**

Q.4 Which of the following is an example of secondary storage?

Ans ✗ 1. CPU

✓ 2. Hard Drive

✗ 3. Cache Memory

✗ 4. RAM

Question ID : **630680876156**
Option 1 ID : **6306803431392**
Option 2 ID : **6306803431393**
Option 3 ID : **6306803431394**
Option 4 ID : **6306803431391**

Q.5 **The built-in barrier potential due to formation of the p-n junction diode is a function of _____.**

Ans ✗ 1. the net acceptor concentration of the p-region only

✗ 2. the minority charge carrier concentration

✗ 3. the net donor concentration of the n-region only

✔ 4. net acceptor and donor concentrations in p-region and n-region, respectively

Question ID : **630680361508**
Option 1 ID : **6306801407878**
Option 2 ID : **6306801407880**
Option 3 ID : **6306801407879**
Option 4 ID : **6306801407877**

Q.6 The depth of the flow at a vertical in a stream is 3.5 m. The velocity of the flow at various points on this vertical as measured by a current meter are given below.

Position of the current meter above the stream bed in m	Velocity in m/s
0.7	2
1.4	3
2.8	3.5

Determine the mean velocity using the three point method.

Ans ✗ 1. 2.833 m/s

✔ 2. 2.875 m/s

✗ 3. 2.75 m/s

✗ 4. 3 m/s

Question ID : **630680133661**
Option 1 ID : **630680517583**
Option 2 ID : **630680517582**
Option 3 ID : **630680517584**
Option 4 ID : **630680517585**

Q.7 Which of the following pitched roofs is formed by four sloping surfaces in four directions forming four sloped triangles?

Ans ✗ 1. Mansard roof

✗ 2. Gable roof

✔ 3. Hip roof

✗ 4. Gambrel roof

Question ID : **630680876259**
Option 1 ID : **6306803431805**
Option 2 ID : **6306803431803**
Option 3 ID : **6306803431804**
Option 4 ID : **6306803431806**

Q.8 Mollier diagram is a plot of:

Ans ✗ 1. pressure vs. enthalpy

✔ 2. entropy vs. enthalpy

✗ 3. temperature vs. entropy

✗ 4. temperature vs. enthalpy

Question ID : **630680147662**
Option 1 ID : **630680571389**
Option 2 ID : **630680571386**
Option 3 ID : **630680571387**
Option 4 ID : **630680571388**

Q.9 A _____ is a regular polyhedron.

Ans ✗ 1. square prism

✗ 2. cylinder

✗ 3. sphere

✔ 4. tetrahedron

Question ID : **630680876151**
Option 1 ID : **6306803431373**
Option 2 ID : **6306803431371**
Option 3 ID : **6306803431372**
Option 4 ID : **6306803431374**

Q.10 **Fishes will disappear in the _____.**

Ans ✔ 1. zone of active decomposition

✘ 2. clear water zone

✘ 3. zone of recovery

✘ 4. zone of acration

Question ID : **630680103220**
Option 1 ID : **630680401141**
Option 2 ID : **630680401142**
Option 3 ID : **630680401140**
Option 4 ID : **630680401139**

Q.11 **Select the correct option about the following types of repair.**

Repair Type A: Architectural repairs do not restore the original structural strength of structural components in a building.
Repair Type B: Structural repairs restore a structure to its prior strength and facilitate any further strengthening measures.

Ans ✘ 1. Repair Type A is correct, but Repair Type B is incorrect.

✘ 2. Repair Type A is incorrect, but Repair Type B is correct.

✘ 3. Both the types of repairs are incorrect.

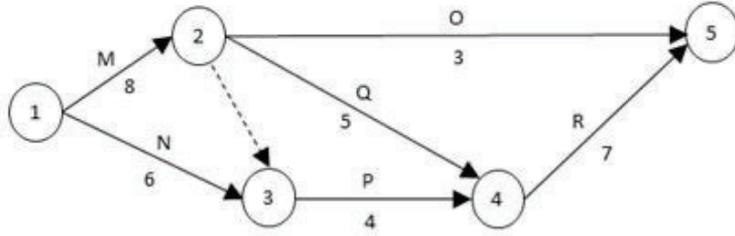✔ 4. Both the types of repairs are correct.

Question ID : **630680876130**
Option 1 ID : **6306803431288**
Option 2 ID : **6306803431287**
Option 3 ID : **6306803431290**
Option 4 ID : **6306803431289**

Q.12

The early start time of activities P and R is _____ .

Ans

✗ 1. 8 and 12, respectively

✗ 2. 6 and 10, respectively

✓ 3. 8 and 13, respectively

✗ 4. 6 and 13, respectively

Question ID : **63068099206**
Option 1 ID : **630680385531**
Option 2 ID : **630680385528**
Option 3 ID : **630680385530**
Option 4 ID : **630680385529**

Q.13 Consider the following statements with respect to the temperature effect on a load-carrying, three-hinged arch.
a) There is a decrease in horizontal thrust due to rise in temperature.
b) There is an increase in horizontal thrust due to rise in temperature.
c) No stresses are produced in the arch due to change in temperature.
Which of the above statement(s) is/are correct?

Ans

✗ 1. Only b

✗ 2. Only a

✗ 3. Only a and b

✓ 4. Only a and c

Question ID : **630680103963**
Option 1 ID : **630680404070**
Option 2 ID : **630680404069**
Option 3 ID : **630680404067**
Option 4 ID : **630680404068**

Q.14 **What does the Valence Bond Theory describe regarding chemical bonding?**

Ans ✔ 1. It defines the interaction between filled and unfilled atomic orbital's to form bonds.

✘ 2. It discusses the electrostatic attraction between positive and negative ions to form bonds

✘ 3. It explains the transfer of electrons from one atom to another to form ionic bonds.

✘ 4. It describes the sharing of electrons between atoms to form covalent bonds.

Question ID : **630680876282**
Option 1 ID : **6306803431897**
Option 2 ID : **6306803431898**
Option 3 ID : **6306803431896**
Option 4 ID : **6306803431895**

Q.15 **What is the solution for the differential equation (x+y+1)dx-(x+y+3)dy=0 ?**

Ans ✘ 1. $x + y - \ln(x + y + 2) = c$

✘ 2. $x - y + \ln(x + y + 2) = c$

✔ 3. $x - y - \ln(x + y + 2) = c$

✘ 4. $x + y + \ln(x + y + 2) = c$

Question ID : **63068094786**
Option 1 ID : **630680367840**
Option 2 ID : **630680367841**
Option 3 ID : **630680367842**
Option 4 ID : **630680367839**

Q.16 Partial safety factor of steel for its design strength in limit state method is:

Ans ✗ 1. 1.65

✗ 2. 1.5

✗ 3. 2

✔ 4. 1.15

Question ID : **630680138739**
Option 1 ID : **630680537136**
Option 2 ID : **630680537134**
Option 3 ID : **630680537137**
Option 4 ID : **630680537135**

Q.17 Which type of standard format of estimation is shown in the given table?

S. No.	Particulars	Amount (in Rs.)
1	Estimated cost	
2	Water supply and sanitary charges @... %	
3	Electrification charges@...%	
4	Contingencies@... (3 to 5 %)	
5	Work charge establishment @ (1 to 2 %)	
	Total amount	
	In words	

Ans ✔ 1. Face sheet

✗ 2. Contingencies sheet

✗ 3. Abstract sheet

✗ 4. Measurement sheet

Question ID : **630680211772**
Option 1 ID : **630680821235**
Option 2 ID : **630680821238**
Option 3 ID : **630680821236**
Option 4 ID : **630680821237**

Q.18 The rate of secondary consolidation in comparison to primary consolidation is:

Ans ✗ 1. may be higher or lower

✗ 2. voids same

✗ 3. higher

✓ 4. lower

Question ID : **630680134223**
Option 1 ID : **630680519765**
Option 2 ID : **630680519764**
Option 3 ID : **630680519762**
Option 4 ID : **630680519763**

Q.19 Surveying includes the art of establishing points on, above or beneath the surface of the earth by using predetermined _____.

Ans ✗ 1. elevations only

✗ 2. angular measurements only

✓ 3. angular and linear measurements

✗ 4. linear measurements only

Question ID : **630680121629**
Option 1 ID : **630680471469**
Option 2 ID : **630680471467**
Option 3 ID : **630680471466**
Option 4 ID : **630680471468**

Q.20 A column is subjected to the Euler's crippling load P_h of flexural rigidity EI having both ends of column hinged. If the same length of column is fixed at its one end and the other end that is free is subjected to the Euler's crippling load P_f having flexural rigidity 4EI, what is the relation between the two critical loads P_h and P_f ?

Ans ✗ 1. $P_h = 8P_f$

✗ 2. $P_h = 16P_f$

✗ 3. $P_h = 4P_f$

✓ 4. $P_h = P_f$

Question ID : **630680110582**
Option 1 ID : **630680428476**
Option 2 ID : **630680428477**
Option 3 ID : **630680428474**
Option 4 ID : **630680428475**

Section : **Discipline4**

Q.1 Which of the following is NOT a criterion to work out the rate analysis?

Ans ✓ 1. Individual rate of labour which is different from market rate

✗ 2. Hire charges of tools and plants and their outturn

✗ 3. Details of all the operations involved in carrying out the work

✗ 4. Task work or the output of the labour

Question ID : **630680339594**
Option 1 ID : **6306801320897**
Option 2 ID : **6306801320900**
Option 3 ID : **6306801320899**
Option 4 ID : **6306801320898**

Q.2 Systematic errors are _____ in nature and they are ____.

Ans   ✔ 1. cumulative; positive or negative

   ✘ 2. cumulative; always positive

   ✘ 3. compensating; positive or negative

   ✘ 4. compensating; always positive

Question ID : **630680121634**
Option 1 ID : **630680471487**
Option 2 ID : **630680471489**
Option 3 ID : **630680471486**
Option 4 ID : **630680471488**

Q.3 The equations developed by St Venant for unsteady open channel flow are:

Ans   ✘ 1. momentum and energy equation

   ✘ 2. momentum and impulse equation

   ✔ 3. continuity and momentum equation

   ✘ 4. continuity and energy equation

Question ID : **630680101133**
Option 1 ID : **630680393059**
Option 2 ID : **630680393057**
Option 3 ID : **630680393058**
Option 4 ID : **630680393056**

Q.4 **What should be the size of the edge strip in case of a two-way slab if corners of the slab are prevented from lifting?**

Ans ✗ 1. Ly/8 and Lx/8, where Ly and Lx are the long span and the short span, respectively

✗ 2. Ly/6 and Lx/6, where Ly and Lx are the long span and the short span, respectively

✓ 3. Ly/5 and Lx/5, where Ly and Lx are the long span and the short span, respectively

✗ 4. Ly/7 and Lx/7, where Ly and Lx are the long span and the short span, respectively

Question ID : **630680206787**
Option 1 ID : **630680801750**
Option 2 ID : **630680801748**
Option 3 ID : **630680801747**
Option 4 ID : **630680801749**

Q.5 In stress path system, $\Delta\sigma_3 =$ change in confining pressure and $\Delta\sigma_1 =$ change in vertical pressure, and if $\Delta\sigma_3 = \Delta\sigma_1$, the stress path will be:

Ans ✗ 1. at less than 45° from horizontal axis

✗ 2. at greater than 90° from horizontal axis

✗ 3. at 45° from horizontal axis

✓ 4. at 90° from horizontal axis

Question ID : **630680134193**
Option 1 ID : **630680519651**
Option 2 ID : **630680519653**
Option 3 ID : **630680519650**
Option 4 ID : **630680519652**

Q.6 **A transistor acts as an amplifier in which of the following region?**

Ans ✗ 1. Both active and cut off region

✗ 2. Cut off region

✗ 3. Saturation region

✓ 4. Active region

Question ID : **630680340654**
Option 1 ID : **6306801325060**
Option 2 ID : **6306801325059**
Option 3 ID : **6306801325058**
Option 4 ID : **6306801325057**

Q.7 Match the following alloying elements with their effects on properties of steel.

A	Copper	(i)	Improves impact toughness and cold brittle tendency
B	Nickel	(ii)	Increases strength
C	Manganese	(iii)	Improves corrosion resistance but reduces ductility
D	Aluminium	(iv)	Increases strength but reduces weld-ability

Ans ✗ 1. A – (iii), B – (i), C – (iv), D – (ii)

✗ 2. A – (i), B – (iii), C – (iv), D – (ii)

✓ 3. A – (iii), B – (ii), C – (iv), D – (i)

✗ 4. A – (i), B – (ii), C – (iv), D – (iii)

Question ID : **630680211446**
Option 1 ID : **630680819933**
Option 2 ID : **630680819934**
Option 3 ID : **630680819932**
Option 4 ID : **630680819931**

Q.8 Which of the following is the correct expression for the weight 'W' for Culmann's graphical method? Symbols have their usual meanings.

W = Weight of the slope mass above the failure plane
β = Slope angle with the horizontal
H = Height of the slope
θ = Angle of the failure plane with the horizontal
γ = Unit weight of soil
L = Inclined length of the failure plane

Ans ✗ 1. $W = \dfrac{1}{4}\gamma LH \cos\beta \sin(\beta - \theta)$

✗ 2. $W = \dfrac{1}{4}\gamma LH \cos ec\beta \sin(\beta - \theta)$

✗ 3. $W = \dfrac{1}{2}\gamma LH \cos\beta \sin(\beta - \theta)$

✓ 4. $W = \dfrac{1}{2}\gamma LH \cos ec\beta \sin(\beta - \theta)$

Question ID : **630680201878**
Option 1 ID : **630680782860**
Option 2 ID : **630680782861**
Option 3 ID : **630680782859**
Option 4 ID : **630680782862**

Q.9 When an object contains multiple inclined surfaces, what approach can be taken regarding auxiliary views?

Ans ✗ 1. Create an auxiliary view parallel to the main view.

✗ 2. Draw a single auxiliary view for all inclined surfaces.

✗ 3. Use isometric projection to represent inclined surfaces.

✓ 4. Draw separate auxiliary views for each inclined surface.

Question ID : **630680876145**
Option 1 ID : **6306803431348**
Option 2 ID : **6306803431347**
Option 3 ID : **6306803431350**
Option 4 ID : **6306803431349**

Q.10 Consider the given statements and select the correct answer from the following options. Statement 1: When the surface drainage is not adequate, the heavy precipitation in the area is not drained off quickly and the rainwater remains stagnant over the area for a considerable time. Statement 2: Sometimes the cultivators plough up and obliterate existing natural drainage. This results in a stoppage of stormwater flow, consequent flooding and waterlogging.

Ans ✗ 1. Statement 1 is false but statement 2 is true

✗ 2. Both statements are false

✗ 3. Statement 1 is true but statement 2 is false

✓ 4. Both statements are true

Question ID : **630680111656**
Option 1 ID : **630680432361**
Option 2 ID : **630680432358**
Option 3 ID : **630680432360**
Option 4 ID : **630680432359**

Q.11 A glass manometer filled with water is connected to vessels A and B at pressures 100 kPa and 10.0 kPa, respectively, shown in the following figure. Calculate the water column height(in m). Specific weight of water is given as 9810 N/m³
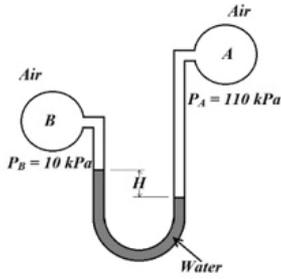
Ans ✗ 1. 14.27

✗ 2. 12.23

✔ 3. 10.19

✗ 4. 7.64

Question ID : **63068082843**
Option 1 ID : **630680321236**
Option 2 ID : **630680321237**
Option 3 ID : **630680321238**
Option 4 ID : **630680321239**

Q.12 Which of the following is NOT a type of fault?

Ans ✔ 1. Isoclinal

✗ 2. Reverse

✗ 3. Normal

✗ 4. Strike-slip

Question ID : **630680876196**
Option 1 ID : **6306803431554**
Option 2 ID : **6306803431552**
Option 3 ID : **6306803431551**
Option 4 ID : **6306803431553**

Q.13 A steel structure is subjected to a dead load of 40 KN (inclusive of self-weight), live load of 20 KN, wind load of 60 KN and earthquake load of 100 KN. As per the provisions of IS: 800-2007, for limit state of strength, the maximum design load for the structure will be equal to _____.

Ans ✗ 1. 90 KN

✗ 2. 192 KN

✓ 3. 210 KN

✗ 4. 220 KN

Question ID : **630680335165**
Option 1 ID : **6306801303877**
Option 2 ID : **6306801303878**
Option 3 ID : **6306801303879**
Option 4 ID : **6306801303880**

Q.14 Which transmission medium is immune to electromagnetic interference and eavesdropping?

Ans ✓ 1. Fiber optic cable

✗ 2. Twisted pair cable

✗ 3. Wireless transmission using encryption

✗ 4. Coaxial cable

Question ID : **630680876185**
Option 1 ID : **6306803431509**
Option 2 ID : **6306803431507**
Option 3 ID : **6306803431510**
Option 4 ID : **6306803431508**

Q.15 In a water sample, if 2 mg of platinum cobalt salt is mixed in 1 l of distilled water, then the colour produced is:

Ans ✗ 1. 2 NTU

✓ 2. 2 true colour unit

✗ 3. 1 true colour unit

✗ 4. 1 NTU

Question ID : **630680103203**
Option 1 ID : **630680401074**
Option 2 ID : **630680401072**
Option 3 ID : **630680401071**
Option 4 ID : **630680401073**

Q.16 Mudball from action is the result of:

Ans ✗ 1. negative air pressure

✗ 2. high inflow rate

✓ 3. high conc. of suspended particle in inlet

✗ 4. lesser air flow rate during cleaning

Question ID : **630680103210**
Option 1 ID : **630680401099**
Option 2 ID : **630680401100**
Option 3 ID : **630680401101**
Option 4 ID : **630680401102**

Q.17 Which of the following statements conform(s) to panel walls in building construction?
1. Panel walls are external load bearing walls.
2. They are self supporting walls subjected to lateral loads.
3. They are primarily used in framed structures.

Ans ✗ 1. 2 and 3

✓ 2. 1 and 3

✗ 3. 1 and 2

✗ 4. Only 1

Question ID : **630680876250**
Option 1 ID : **6306803431768**
Option 2 ID : **6306803431769**
Option 3 ID : **6306803431767**
Option 4 ID : **6306803431770**

Q.18 The thickness of the sub-base should NOT be less than _____ for design traffic of less than 10 MSA.

Ans ✗ 1. 250 mm

✓ 2. 150 mm

✗ 3. 200 mm

✗ 4. 100 mm

Question ID : **630680157947**
Option 1 ID : **630680611319**
Option 2 ID : **630680611318**
Option 3 ID : **630680611317**
Option 4 ID : **630680611316**

Q.19 Water is made to flow in a channel. The flow will undergo a hydraulic jump. If the value of 'q' = 9 m^3/s and 'y$_1$' = 1.36 m, then the values of y$_2$ and V$_2$ are _____ and _____, respectively.

Ans ✗ 1. y2 = 4.5076 m; V$_2$ = 1.9966 m/s

✗ 2. y2 = 3.1356; V$_2$ = 2.8702 m/s

✗ 3. y2 = 1.9966 m; V$_2$ = 4.5076 m/s

✓ 4. y2 = 2.8702 m; V$_2$ = 3.1356 m/s

Question ID : **630680103450**
Option 1 ID : **630680402043**
Option 2 ID : **630680402045**
Option 3 ID : **630680402044**
Option 4 ID : **630680402046**

Q.20 The principal strains recorded for a rectangular panel subject to biaxial loading are $\varepsilon_{11} = 100 \times 10^{-6}, \varepsilon_{22} = -50 \times 10^{-6}$. The magnitude of maximum shear strain is _____ $\times 10^{-6}$.

Ans ✓ 1. 150

✗ 2. 75

✗ 3. 200

✗ 4. 250

Question ID : **630680102012**
Option 1 ID : **630680396405**
Option 2 ID : **630680396404**
Option 3 ID : **630680396406**
Option 4 ID : **630680396407**

Section : **Discipline5**

Q.1 Select the correct option about the following graphs used to measure earthquakes.

Graph I: Accelerographs are used to measure relatively weak ground motions.
Graph II: Strong ground motions are measured by seismographs.

Ans ✔ 1. Both the graphs are incorrect.

✘ 2. Graph I is correct, but Graph II is incorrect.

✘ 3. Graph I is incorrect, but Graph II is correct.

✘ 4. Both the graphs are correct.

Question ID : **630680876116**
Option 1 ID : **6306803431234**
Option 2 ID : **6306803431231**
Option 3 ID : **6306803431232**
Option 4 ID : **6306803431233**

Q.2 The minimum slenderness ratio of a short column is _____.

Ans ✘ 1. 9

✘ 2. 12

✔ 3. 3

✘ 4. 6

Question ID : **630680206797**
Option 1 ID : **630680801789**
Option 2 ID : **630680801790**
Option 3 ID : **630680801787**
Option 4 ID : **630680801788**

Q.3 **The paved area adjacent and in front of terminal building is known as the apron and it is used for loading and unloading of the aircrafts.**
The dimensions of loading apron depends upon:
Statement 1: Number of loading positions required
Statement 2: Size of the airport and service station for aircrafts

Ans ✗ 1. Statement 1 is false and statement 2 is true.

✗ 2. Both statements are false.

✗ 3. Statement 1 is true and statement 2 is true.

✔ 4. Statement 1 is true and statement 2 is false.

Question ID : **630680114833**
Option 1 ID : **630680444700**
Option 2 ID : **630680444701**
Option 3 ID : **630680444699**
Option 4 ID : **630680444698**

Q.4 **The variance of a uniformly distributed random variable of length 2 is:**

Ans ✗ 1. $\dfrac{1}{72}$

✗ 2. $\dfrac{1}{6}$

✔ 3. $\dfrac{1}{3}$

✗ 4. $\dfrac{1}{9}$

Question ID : **63068093942**
Option 1 ID : **630680364466**
Option 2 ID : **630680364465**
Option 3 ID : **630680364463**
Option 4 ID : **630680364464**

Q.5 **Among the following properties of a plaster Board, the INCORRECT property is:-**
_____

Ans ✖ 1. They are highly fire resistant.

✔ 2. They are generally strengthened by incorporating polypropylene fibres.

✖ 3. They are very light weight.

✖ 4. They can be sawn to desired shapes and sizes.

Question ID : **63068099194**
Option 1 ID : **630680385481**
Option 2 ID : **630680385483**
Option 3 ID : **630680385480**
Option 4 ID : **630680385482**

Q.6 **The terrain with a cross slope of 15% is considered as:**

Ans ✔ 1. rolling terrain

✖ 2. steep terrain

✖ 3. plain terrain

✖ 4. mountainous terrain

Question ID : **63068083039**
Option 1 ID : **630680322017**
Option 2 ID : **630680322019**
Option 3 ID : **630680322016**
Option 4 ID : **630680322018**

Q.7 A refrigerator having a COP of 5 is used for heating purposes in winter so that atmosphere becomes the cold body and the room to be heated becomes the hot body. How much heat would be available for heating for each kW input to the driving motor if the motor efficiency is 90%?

Ans ✗ 1. 2.8 kW

✗ 2. 6.3 kW

✗ 3. 4.2 kW

✔ 4. 5.4 kW

Question ID : **630680211721**
Option 1 ID : **630680821031**
Option 2 ID : **630680821034**
Option 3 ID : **630680821032**
Option 4 ID : **630680821033**

Q.8 As per IS: 800-2007, the design compressive strength of a built-up battened column composed of two channel sections placed back to back is determined by classifying the section into buckling class:

Ans ✔ 1. 'c'

✗ 2. 'b'

✗ 3. 'a'

✗ 4. 'd'

Question ID : **630680219839**
Option 1 ID : **630680853237**
Option 2 ID : **630680853236**
Option 3 ID : **630680853235**
Option 4 ID : **630680853238**

Q.9 A soil yields a maximum dry density of 1.6 g/cc at an OMC of 18% during a standard proctor test. The value of specific gravity G = 2.62. Find out the value of void ratio and degree of saturation.

Ans ✗ 1. 0.6375 and 87.5%

✗ 2. 0.2375 and 87.5%

✗ 3. 0.2375 and 73.97%

✓ 4. 0.6375 and 73.97%

Question ID : **630680133883**
Option 1 ID : **630680518468**
Option 2 ID : **630680518469**
Option 3 ID : **630680518467**
Option 4 ID : **630680518466**

Q.10 Froude number (Fr) can be expressed as:

Ans ✗ 1.

$Fr = \sqrt{(Fi/Fp)}$, where Fi is inertia force and Fp is intensity of pressure

✓ 2.

$Fr = \sqrt{(Fi/Fg)}$, where Fi is inertia force and Fg is force due to gravity

✗ 3. $Fr = \sqrt{(Fi/Fs)}$, where Fi is inertia force and Fs is surface tension

✗ 4. $Fr = \sqrt{(Fi/Fe)}$, where Fi is inertia force and Fe is elastic force

Question ID : **630680108829**
Option 1 ID : **630680422208**
Option 2 ID : **630680422210**
Option 3 ID : **630680422209**
Option 4 ID : **630680422211**

Q.11 The ratio of area estimated to be irrigated during the base period to the design of full supply discharge at the head of the canal is?

Ans ✗ 1. Time factor

✗ 2. Capacity factor

✓ 3. Full supply coefficient

✗ 4. Nominal duty

Question ID : **63068079244**
Option 1 ID : **630680307013**
Option 2 ID : **630680307014**
Option 3 ID : **630680307016**
Option 4 ID : **630680307015**

Q.12 Which type of levelling is best suitable when we have to determine the difference in elevation between two points that are far apart and no obstacles for chaining between them?

Ans ✗ 1. Profile levelling

✗ 2. Reciprocal levelling

✗ 3. Check levelling

✔ 4. Differential levelling

Question ID : **630680121675**
Option 1 ID : **630680471652**
Option 2 ID : **630680471653**
Option 3 ID : **630680471650**
Option 4 ID : **630680471651**

Q.13 What is the radius of a metal atom if it crystallises with body-centred lattice with a unit cell edge of 456 pm?

Ans ✗ 1. 188.38 pm

✗ 2. 122.34 pm

✔ 3. 197.45 pm

✗ 4. 144.19 pm

Question ID : **630680876317**
Option 1 ID : **6306803432037**
Option 2 ID : **6306803432035**
Option 3 ID : **6306803432036**
Option 4 ID : **6306803432038**

Q.14 A cantilever beam is 60 mm wide and 120 mm deep of 2.4 m span. It carries an 8 kN/m intensity on a 1.6 m from the fixed end. What is the maximum deflection at free end if E = 205 GPa?

Ans ✗ 1. 205.64 mm

✗ 2. 102.82 mm

✔ 3. 6.16 mm

✗ 4. 411.28 mm

Question ID : **630680137590**
Option 1 ID : **630680532728**
Option 2 ID : **630680532727**
Option 3 ID : **630680532726**
Option 4 ID : **630680532729**

Q.15 Which of the following options does NOT represent an estimate?

Ans ✗ 1. Supplementary estimate

✗ 2. Plinth area estimate

✔ 3. Secondary estimate

✗ 4. Revised estimate

Question ID : **630680876227**
Option 1 ID : **6306803431676**
Option 2 ID : **6306803431677**
Option 3 ID : **6306803431678**
Option 4 ID : **6306803431675**

Q.16 In the following options, which rock is a type of siliciclastic sedimentary rock?

Ans ✗ 1. Dolomite

✗ 2. Oolite

✔ 3. Sandstone

✗ 4. Diatomaceous earth

Question ID : **630680876192**
Option 1 ID : **6306803431535**
Option 2 ID : **6306803431536**
Option 3 ID : **6306803431538**
Option 4 ID : **6306803431537**

Q.17 A cable of negligible weight is suspended between two points 250 m apart, with the right support being 10 m higher than the left support. Four vertical loads of magnitudes 350 kN, 150 kN, 350 kN and 1100 kN are applied at points A, B, C and D, which are 50 m, 100 m, 150 m and 200 m horizontally apart from the left support, respectively. The largest sag of the cable will be at point:

Ans ✗ 1. D

✗ 2. A

✔ 3. C

✗ 4. B

Question ID : **630680140047**
Option 1 ID : **630680542057**
Option 2 ID : **630680542054**
Option 3 ID : **630680542056**
Option 4 ID : **630680542055**

Q.18 Identify the INCORRECT requirement of a good stair from the following.

Ans ✔ 1. The going should not be less than 20 cm.

✗ 2. The width of the landing should not be less than the width of the stair.

✗ 3. Number of continuous steps in a flight should not be more than 12.

✗ 4. Rise of the stair should be 10 to 15 cm.

Question ID : **630680876261**
Option 1 ID : **6306803431812**
Option 2 ID : **6306803431813**
Option 3 ID : **6306803431814**
Option 4 ID : **6306803431811**

Q.19 Newmark's influence charts can be used for _____ .

Ans ✔ 1. finding the vertical stress at any point due to a uniformly loaded area of any shape

✘ 2. finding the shear stresses under uniformly circular loaded areas

✘ 3. finding the vertical stresses under concentrated loaded areas

✘ 4. finding the horizontal stress below the centre of a circular area

Question ID : **630680159106**
Option 1 ID : **630680615895**
Option 2 ID : **630680615894**
Option 3 ID : **630680615892**
Option 4 ID : **630680615893**

Q.20 A steel rod of length 1 m is fixed at one end and the other end is free. It is subjected to rise in temperature of about 20°C. The thermal coefficient of expansion of material is 20×10^{-6}/°C. The amount of thermal strain produced is _____ $\times 10^{-6}$.

Ans ✘ 1. 28

✘ 2. 25

✔ 3. 400

✘ 4. 20

Question ID : **630680164067**
Option 1 ID : **630680635407**
Option 2 ID : **630680635406**
Option 3 ID : **630680635405**
Option 4 ID : **630680635404**