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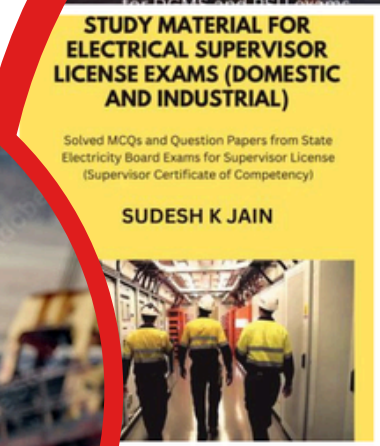
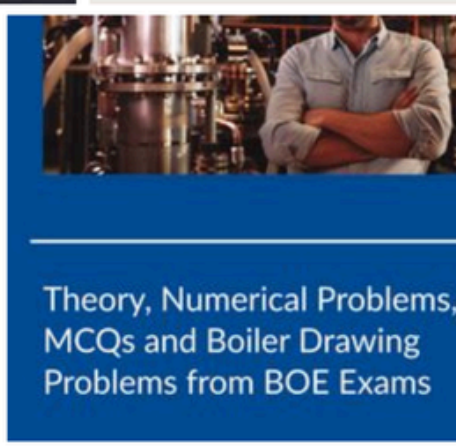
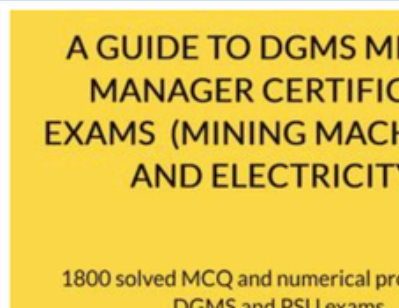








कोल इण्डिया लिमिटेड
Coal India Limited
एक महारत्न कंपनी A Maharatna Company

ONLINE APPLICATION FOR MANAGEMENT TRAINEES 2016-17

Roll No:
Participant Name:
Test Center Name:
Test Date:
Test Time:

Section : General Knowledge/Awareness

Q.1 What does RAM in a computer stands for?

Ans
✗ 1. Rapid Applied Memory
✓ 2. Random Access Memory
✗ 3. Random Application Mapping
✗ 4. Rapid Action Machine

Q.2 What does IDBI in IDBI Bank stand for?

Ans
✓ 1. Industrial Development Bank of India
✗ 2. Investment Development Board of India
✗ 3. Infrastructure and Development Board of India
✗ 4. Industrial Divestment Board of India

Q.3 What type of Energy does "a batsman hitting a ball" use?

Ans
✗ 1. Frictional Energy
✓ 2. Kinetic Energy
✗ 3 Gravitational Energy
✗ 4 Potential Energy

Q.4 Who is the Chief Justice of India as of February 2017?

Ans
✗ 1. Justice C. S. Karnan
✗ 2. Justice H. L. Dattu
✓ 3. Justice Jagdish Singh Khehar
✗ 4. Justice T. S. Thakur

Q.5 Who is the Chief Executive Officer (CEO) of the Wipro Group?

Ans
✗ 1. Rishad Premji
✗ 2 Vishal Sikka
✗ 3 Azim H. Premji
✓ 4. Abidali Z. Neemuchwala

Q.6 Whom among the following stepped down as the Chairman of International Cricket Council (ICC) on 15th March 2017?

Question ID : **2391302735**
Status : **Answered**
Chosen Option : **3**

Ans
1. Zaheer Abbas
2. N. Srinivasan
3. Shashank Manohar
4. David Richardson

Q.7 Asia's first and longest cycle highway runs between:

Question ID : **2391302734**
Status : **Answered**
Chosen Option : **1**

Ans
1. Mumbai and Pune in Maharashtra
2. Hyderabad and Secunderabad in Telangana
3. Etawah and Agra in Uttar Pradesh
4. Bengaluru and Mysuru in Karnataka

Q.8 Who has been awarded the 2016 IAAF World Athlete of the Year Award in male category for sixth time?

Question ID : **2391302730**
Status : **Answered**
Chosen Option : **1**

Ans
1. Usain Bolt
2. Andre De Grasse
3. Michael Phelps
4. Patrik Sjöberg

Q.9 Who is the current Speaker of Lok Sabha?

Question ID : **2391302738**
Status : **Answered**
Chosen Option : **4**

Ans
1. S. M. Krishna
2. Meira Kumar
3. Mohammad Hamid Ansari
4. Sumitra Mahajan

Q.10 Which of the following does the 7th Schedule of the Constitution of India comprise?
i. State List
ii. Union List
iii. Concurrent List

Question ID : **2391302714**
Status : **Answered**
Chosen Option : **3**

Ans
1. Only (i)
2. Both (ii) and (iii)
3. All (i), (ii) and (iii)
4. Both (i) and (ii)

Q.11 Which film won the 70th British Academy of Film and Television Arts (BAFTA) Award in the Best Special Visual Effects category?

Question ID : **2391302733**
Status : **Answered**
Chosen Option : **3**

Ans
1. Lion
2. Manchester by the Sea
3. The Jungle Book
4. La La Land

Q.12 Which statement about the Gobi Desert is NOT correct?

Question ID : **2391302731**
Status : **Answered**
Chosen Option : **3**

Ans
1. Gobi is a cold desert.
2. Most of Gobi's rain is blocked by the Himalayas.
3. It never rains in the Gobi desert.
4. Gobi desert is the most expansive arid region in Asia.

Q.13 Whom did Chandragupta Maurya overthrow to take over the reins of the Magadha Empire?

Question ID : **2391302717**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Mahapadma Nanda
✗ 2. Bimbisara
✓ 3. Dhana Nanda
✗ 4. Ajatshatru

Q.14 Which of the following is NOT an example of Biomass Material?

Question ID : **2391302727**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. Wood
✓ 2. Coal
✗ 3. Animal Waste
✗ 4. Garbage

Q.15 Which of the following countries first invented the idea of "Gross National Happiness" to use happiness as a measure of good governance?

Question ID : **2391302721**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Bhutan
✗ 2. Norway
✗ 3. Great Britain
✗ 4. Taiwan

Q.16 Mr. Reddy is running for the Vice-President's post. Which of the following qualities of Mr. Reddy make him an ineligible candidate to contest election for the post of Vice-President of India?

Question ID : **2391302715**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Mr. Reddy has completed the age of thirty-five years.
✗ 2. Mr. Reddy is qualified for election as a member of the Council of States.
✓ 3. Mr. Reddy is the District Commissioner of Guntur, which is an office of profit under the Government of Andhra Pradesh.
✗ 4. Mr. Reddy is a citizen of India.

Q.17 Who became the first woman to win the Jnanpith Award in 1976 for her 1965-novel Pratham Pratisruti (The First Promise)?

Question ID : **2391302732**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. Mahasweta Devi
✓ 2. Ashapoorna Devi
✗ 3. Amrita Pritam
✗ 4. Lily Ray

Q.18 Who won the Men's Final Australian OpenTennis Championship 2017?

Question ID : **2391302736**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Rafael Nadal
✓ 2. Roger Federer
✗ 3. Novak Djokovic
✗ 4. Stanislas Wawrinka

Q.19 All executive action of the Government of India is taken in the name of the _____.

Question ID : **2391302716**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Vice President of India
✓ 2. President of India
✗ 3. Prime Minister of India
✗ 4. Speaker of Lok Sabha

Q.20

A physical balance is an example of:

Question ID : **2391302726**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Lever
✘ 2. Inclined plane
✘ 3. Wedge
✘ 4. Composite machine

Q.21 Which country is the world leader in the population of bovine animals?

Question ID : **2391302722**
Status : **Answered**
Chosen Option : **1**

Ans
✘ 1. USA
✘ 2. Spain
✔ 3. India
✘ 4. Denmark

Q.22 _____ has the largest coal reserves in India.

Question ID : **2391302720**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Jharkhand
✘ 2. West Bengal
✘ 3. Chhattisgarh
✘ 4. Odisha

Q.23 Who wrote the medieval-era epic poem "Padmavat"?

Question ID : **2391302719**
Status : **Answered**
Chosen Option : **2**

Ans
✔ 1. Malik Muhammad "Jayasi"
✘ 2. Amir Khusro
✘ 3. Mulla Daud
✘ 4. Abu'l-Fazl ibn Mubarak

Q.24 Who among the following won the Dronacharya Award in Gymnastics for the year 2016?

Question ID : **2391302729**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. Deepa Karmakar
✔ 2. Bishweshwar Nandi
✘ 3. Rajendra Pralhad Shelke
✘ 4. Lalita Babar

Q.25 Which of the following Governor Generals of India earned the title, "Maker of the Modern India"?

Question ID : **2391302718**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. Lord Bentick
✘ 2. Lord Mountbatten
✔ 3. Lord Dalhousie
✘ 4. Lord Canning

Section : **Numerical Ability**

Q.1 A can finish the work in 25 days and B in 25 days. They both work together for 5 days and then B leaves. How many days will A take to complete the remaining work?

Question ID : **2391302752**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 17 days
✔ 2. 15 days
✘ 3. 20 days
✘ 4. 18 days

Q.2 The number of terms in the sequence 20, 25, 30, ……., 150 is:

Question ID : **2391302762**

Ans
1. 27 ✓
2. 23 ✗
3. 22 ✗
4. 26 ✗

Status : **Answered**
Chosen Option : **1**

Q.3 Pipe A can fill the tank 2 times faster than pipe B. If pipe A and B together fill the tank in 24 minutes, then pipe B alone can fill the tank in:

Ans
1. 70 minutes ✗
2. 72 minutes ✓
3. 75 minutes ✗
4. 71 minutes ✗

Question ID : **2391302753**
Status : **Answered**
Chosen Option : **2**

Q.4 If the sum of 2 numbers is 175, their LCM is 300 and HCF is 25. Then the difference between 2 numbers is:

Ans
1. 20 ✗
2. 10 ✗
3. 25 ✓
4. 15 ✗

Question ID : **2391302740**
Status : **Answered**
Chosen Option : **3**

Q.5 An army post with1800 men has provision of food for 50 days. After 10 days, some of the men go back to the base camp due to injuries. The remaining food is now enough for the next 50 days for the remaining men. What is the number of men who went back to the base camp?

Ans
1. 310 Men ✗
2. 360 Men ✓
3. 350 Men ✗
4. 250 Men ✗

Question ID : **2391302746**
Status : **Answered**
Chosen Option : **2**

Q.6 Mr. Vijay rows a boat with the stream in 8 km/hr and against the stream in 4 km/hr. In still water, his rate of rowing in km/hr is:

Ans
1. 2 ✓
2. 4 ✗
3. 1 ✗
4. 3 ✗

Question ID : **2391302759**
Status : **Answered**
Chosen Option : **1**

Q.7 A flight has to travel between 2 cities A and B, 3000 km apart. The flight was slowed down due to bad weather. Its average speed for the trip reduced by 200 km/hr and the time of flight increased by 30 min. The duration of the flight with original speed is:

Ans
1. 2.75 hrs ✗
2. 2.25 hrs ✗
3. 2.6 hrs ✗
4. 2.5 hrs ✓

Question ID : **2391302751**
Status : **Answered**
Chosen Option : **4**

Q.8 Due to economic surges the price of eggs suddenly reduced to 40%. This enabled a woman to buy 64 more eggs for $ 50. Then the reduced price per dozen is:

Ans
1. $ 4 ✗
2. $ 3.75 ✓
3. $ 3.5 ✗
4. $ 3.25 ✗

Question ID : **2391302750**
Status : **Answered**
Chosen Option : **2**

Q.9 The total number of odd factors of $2^5 \times 3^3 \times 5^2$ is:

Ans
1. 6 ✗
2. 10 ✗
3. 12 ✓
4. 15 ✗

Question ID : **2391302739**
Status : **Answered**
Chosen Option : **3**

Q.10 The average of 7 numbers is 29. The average of first three of them is 23 and the last three of them is 42. Then the fourth number is:

Question ID : **2391302743**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 8
✘ 2. 12
✘ 3. 9
✘ 4. 10

Q.11 The curved surface area of a hemisphere is $8\pi\,cm^2$, then its radius is:

Question ID : **2391302760**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. 2.5 cm
✘ 2. 1 cm
✘ 3. 3 cm
✔ 4. 2 cm

Q.12 In a bio gas plant the population of yeast bacteria increases at a rate of 9% per annum, but there is an additional annual increase of 1% in population due to various other inputs in the system. The percentage increase in the yeast population after 2 yrs is:

Question ID : **2391302748**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 25%
✔ 2. 21%
✘ 3. 20%
✘ 4. 22%

Q.13 The number of terms in the sequence 5, 20, 80, 320, ……., 81920 is:

Question ID : **2391302763**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 6
✘ 2. 7
✔ 3. 8
✘ 4. 9

Q.14 श्री दीप 1833 रुपए को इस प्रकार से विभाजित करते हैं कि पहले भाग का 4 गुना, दूसरे भाग का तीन गुना तथा तीसरे भाग का दोगुना बराबर है, तो दूसरे भाग का मान है:

Question ID : **2391302745**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. रु. 560
✔ 2. रु. 564
✘ 3. रु. 654
✘ 4. रु. 546

Q.15 For a positive integer n, $3^{6n} - 6^{3n}$ is divisible by:

Question ID : **2391302741**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 6
✘ 2. 513
✔ 3. 3
✘ 4. 500

Q.16 Ms. Shivangi invests Rs. 4000 for six months at 20% per annum compounded quarterly. The total amount she gets after 6 months is:

Question ID : **2391302749**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. Rs. 4411
✘ 2. Rs. 4440
✔ 3. Rs. 4410
✘ 4. Rs. 4401

Q.17 If two is added to the denominator of a rational number it becomes $\frac{1}{2}$ and if 4 is added to the numerator it becomes $\frac{1}{2}$. Then the sum of the numerator and the denominator of the rational number is:

Question ID : **2391302744**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. −18
✘ 2. −38
✔ 3. 38

✗ 4. 18

Q.18 If $-5 \leq x \leq 1$ and $-1 \leq y \leq 5$, then the minimum value of $2y - 3x$ is:

Question ID : **2391302742**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. -5
✗ 2. -10
✗ 3. -9
✗ 4. -8

Q.19 Mr. Shiva invested equal amount of money in two private firms which gives 15% simple interest per annum for 3.5 years and 5 years respectively. If the difference in their interests is Rs. 270. The amount invested by Mr. Shiva is:

Question ID : **2391302747**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Rs. 1200
✗ 2. Rs. 1500
✗ 3. Rs. 1250
✗ 4. Rs. 1205

Q.20 If three sides of the triangle are given as 32 cm, 34 cm and 34 cm,then the area of the triangle is:

Question ID : **2391302757**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $500\ cm^2$
✓ 2. $480\ cm^2$
✗ 3. $450\ cm^2$
✗ 4. $475\ cm^2$

Q.21 A train 130 meters long travelling at 36 km/hr crosses the bridge in 30 sec. Then the length of the bridge is:

Question ID : **2391302758**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 175 meters
✗ 2. 125 meters
✓ 3. 170 meters
✗ 4. 196 meters

Q.22 If y exceeds x by 10% then x is less than y by what percent?

Question ID : **2391302761**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $9\frac{1}{12}$
✓ 2. $9\frac{1}{11}$
✗ 3. $9\frac{1}{14}$
✗ 4. $9\frac{1}{13}$

Q.23 If x_1 and x_2 are the roots of the equation $x^2 + 2x - 15 = 0$ then the quadratic equation which has the roots $\frac{1}{x_1}$ and $\frac{1}{x_2}$ is:

Question ID : **2391302756**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. $15x^2 - 2x - 1 = 0$
✗ 2. $15x^2 + 2x - 1 = 0$
✗ 3. $15x^2 - 2x + 1 = 0$
✗ 4. $-15x^2 - 2x - 1 = 0$

Q.24 Find x, given $5(\sqrt{5})^{x+5} = (\sqrt{5})^{2x+7}$:

Question ID : **2391302755**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $x = -2$
✓ 2. $x = 0$
✗ 3. $x = -1$
✗ 4. $x = 1$

Q.25 In a chemistry lab two beakers A and B contain 62% and 84% of spirit respectively. If two liters from A is mixed with 4 liters of B, the ratio of sprit and water in the resulting mixture is:

Question ID : **2391302754**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 23 : 7
✘ 2. 17 : 19
✘ 3. 17 : 21
✘ 4. 58 : 19

Section : **Reasoning**

Q.1 In a certain code language CARPET is written as FDUSHW. How will MOTHER be coded in that code language?

Question ID : **2391302777**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. REHTOM
✘ 2. OPUIFS
✔ 3. PRWKHU
✘ 4. PRWHUK

Q.2 In a row of boys, Vivek stands thirteenth from the left and Ravi is thirteenth from the right. If they interchange their places, Ravi would be eighteenth from the right. How many boys are there in the row?

Question ID : **2391302782**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 32
✘ 2. 31
✔ 3. 30
✘ 4. 29

Q.3 If '+' means '×', '−' means '÷', '×' means '−' and '÷' means '+', then what will be the value of $16 \div 36 - 6 \times 2 + 3 = ?$

Question ID : **2391302778**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 14
✔ 2. 16
✘ 3. 26
✘ 4. 20

Q.4 Select the related letter from the given alternatives.

CXFU : AZBY :: GTNM : ?

Question ID : **2391302765**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. EVJQ
✘ 2. EROP
✘ 3. RIIP
✘ 4. IRRD

Q.5 Find the odd number pair from the given alternative.

Question ID : **2391302769**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 42 – 33
✘ 2. 46 – 10
✔ 3. 12 – 91
✘ 4. 25 – 43

Q.6 Seven friends – A, B, C, D, E, F and G are sitting in a circle facing at the centre. 'E' is neighbour of A and D. 'G' is not between 'F' and 'C'. 'F' is to the immediate right of 'A'. Who is sitting to the right of 'G'?

Question ID : **2391302774**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. D
✘ 2. F
✘ 3. A
✘ 4. C

Q.7 What is related to 'Courage' in the same way as 'Kindness' is related to 'Cruelty'?

Question ID : **2391302764**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Cowardice
✘ 2. Fear

✗ 3. Bravery

✗ 4. Valour

Q.8 Select the one which is different from other three.

Question ID : **2391302768**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. IRJQ
✓ 2. GHST
✗ 3. EVFU
✗ 4. KPLO

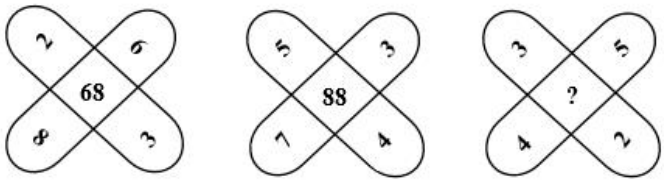
Q.9 Choose the correct alternative that will complete the given number series.

9, 17, 31, 57, ?, 205

Question ID : **2391302771**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 107
✗ 2. 102
✗ 3. 109
✗ 4. 104

Q.10 Find the missing number from the given alternatives.



Question ID : **2391302780**
Status : **Not Attempted**
Chosen Option : **--**

Ans
✓ 1. 43
✗ 2. 41
✗ 3. 45
✗ 4. 42

Q.11 Four sets of three statements each are given below. Take these statements to be true even if they look factually absurd. Select one alternative in which third statement is implied by the first two statements.

Question ID : **2391302783**
Status : **Answered**
Chosen Option : **2**

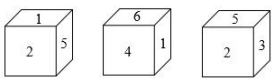
Ans
✗ 1.
All J's are K's. All K's are M's. So, all M's are J's.

✓ 2.
All apples are red. All bananas are apples. So, all bananas are red.

✗ 3.
All locks are keys. Some ball are keys. So, all locks are balls.

✗ 4.
All tables are chairs. All cupboards are tables. So, all chairs are cupboards.

Q.12 Three positions of a cube are shown below. Which number will be opposite to the face containing 3?



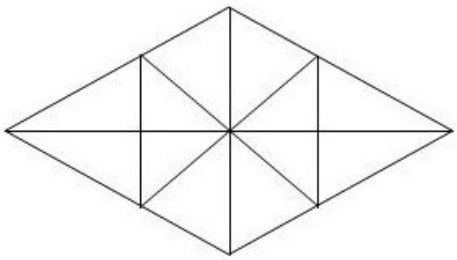
Question ID : **2391302785**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 4
✗ 2. 6
✗ 3. 5
✓ 4. 1

Q.13

Question ID : **2391302788**
Status : **Answered**
Chosen Option : **1**

How many triangles are there in the following figure?



Ans
1. 20
2. 12
3. 28
4. 24

Q.14 Mother's age is twice her daughter's age. The son is older than daughter by one year and father is five years older than mother. If son has completed 18 years, find father's age.

Question ID : **2391302775**
Status : **Answered**
Chosen Option : **4**

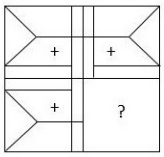
Ans
1. 40 years
2. 42 years
3. 41 years
4. 39 years

Q.15 Shyam walked 20 metres towards south. Then he turned to his left and walked 15 metres. He again turned to his left and walked 20 metres. He then turned to his right and walked 10 metres. How far and in which direction is Shyam from the starting point?

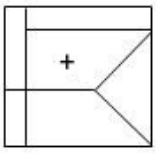
Question ID : **2391302781**
Status : **Answered**
Chosen Option : **2**

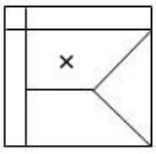
Ans
1. 25 Metres, North
2. 25 Metres, East
3. 35 Metres, East
4. 35 Metres, West

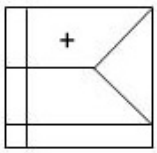
Q.16 Select the figure from the alternatives which will complete the pattern in given question figure.

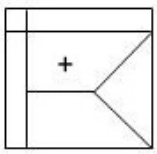


Question ID : **2391302786**
Status : **Answered**
Chosen Option : **1**

Ans
1. 

2. 

3. 

4. 

Q.17

In the given letter series, which one set of letters when sequentially placed in the gaps shall complete it?
p _ n n m _ p m n _ m p _ m n _ m p

Question ID : **2391302770**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. m p n p n
✘ 2. n p m p n
✘ 3. n m n p p
✘ 4. m n p n p

Q.18 Select the related number from the given alternatives.

23 : 34 :: 47 : ?

Question ID : **2391302766**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 65
✘ 2. 69
✔ 3. 62
✘ 4. 72

Q.19 From the given alternatives select the word which cannot be formed using the letters of the given word.

ORGANISATION

Question ID : **2391302776**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. STRONG
✘ 2. ORGAN
✘ 3. GRANT
✔ 4. REASON

Q.20 Some equations are solved on the basis of a certain system. Find the correct value for '?' on that basis.

8 * 6 = 28
11 * 5 = 96
15 * 7 = ?

Question ID : **2391302779**
Status : **Answered**
Chosen Option : **2**

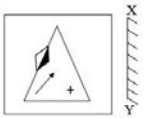
Ans
✘ 1. 105
✔ 2. 176
✘ 3. 208
✘ 4. 147

Q.21 'R' is the paternal uncle of 'P', who is the daughter of 'N' and 'N' is the daughter-in-law of 'M'. How is 'R' related to 'M'?

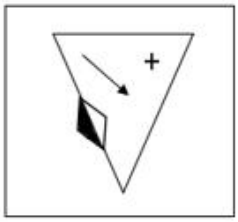
Question ID : **2391302773**
Status : **Answered**
Chosen Option : **2**

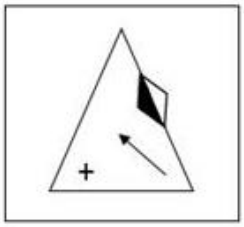
Ans
✘ 1. Brother
✔ 2. Son
✘ 3. Son-in-law
✘ 4. Cousin

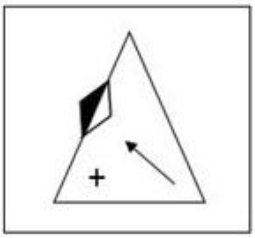
Q.22 Which of the answer figure is exactly the mirror image of the question figure, when the mirror is held on the line X Y?

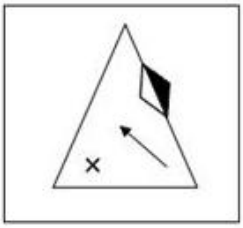


Question ID : **2391302787**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1.


2. 

3. 

4. 

Q.23 Identify the word which belongs to the class of given words.

Grams, Kilograms, Quintal

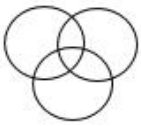
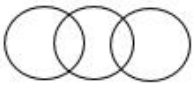
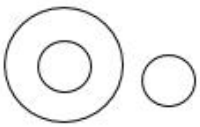
Question ID : **2391302767**
Status : **Answered**
Chosen Option : **2**

Ans
1. Litre
2. Tonnes
3. Yard
4. Kilometer

Q.24 Identify the diagram that best represents the relationship among classes given below.

Boys, Students, Athletes

Question ID : **2391302784**
Status : **Answered**
Chosen Option : **1**

Ans
1. 
2. 
3. 
4. 

Q.25 Alok is older than Malvika. Gyan is older than Malvika but younger than Alok. Kamal is younger than Rashmi and Malvika. Malvika is older than Rashmi. Whose age is exactly in the middle of the five?

Question ID : **2391302772**
Status : **Answered**
Chosen Option : **2**

Ans
1. Gyan
2. Malvika
3. Rashmi
4. Alok

Section : **General English**

Q.1 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

You can be exempted from games only while you produce a medical certificate.

Question ID : **2391302791**
Status : **Answered**
Chosen Option : **2**

Ans
✔ 1. only while
✘ 2. produce
✘ 3. from
✘ 4. can be

Q.2 Select the ANTONYM of the given word.

PRECIOUS

Question ID : **2391302800**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Worthless
✘ 2. Loved
✘ 3. Costly
✘ 4. Valued

Q.3 Select the word that is spelt INCORRECTLY.

Question ID : **2391302804**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. moist
✘ 2. molest
✔ 3. moltan
✘ 4. molecule

Q.4 Select the word that is spelt INCORRECTLY.

Question ID : **2391302803**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. Excel
✘ 2. Access
✔ 3. Expell
✘ 4. Excess

Q.5 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

This is one of the five books that was launched yesterday at the Vigyan Bhawan.

Question ID : **2391302789**
Status : **Answered**
Chosen Option : **1**

Ans
✘ 1. at
✘ 2. one of the
✘ 3. This
✔ 4. that was

Q.6 Select the ANTONYM of the given word.

DESPAIR

Question ID : **2391302802**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. Hope
✘ 2. Abandon
✘ 3. Detest
✘ 4. Reject

Q.7 Select the word that best expresses the meaning of the given word.

TRANQUIL

Question ID : **2391302798**
Status : **Answered**
Chosen Option : **4**

Ans

1. Silent
2. Tired
3. Active
4. Calm

Q.8 Select the word that is spelt INCORRECTLY.

Question ID : **2391302805**
Status : **Answered**
Chosen Option : **4**

Ans
1. faucet
2. fauna
3. fault
4. favaur

Q.9 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

A time came when Gautam Buddha began to feel weary with the luxuries surrounding him.

Question ID : **2391302790**
Status : **Answered**
Chosen Option : **3**

Ans
1. began to
2. came
3. with
4. when

Q.10 Select the ANTONYM of the given word.

STRAIGHT

Question ID : **2391302801**
Status : **Answered**
Chosen Option : **1**

Ans
1. Crooked
2. Weak
3. Short
4. Long

Q.11 Find the appropriate meaning of the underlined idiom.

A true friend will stand by you through thick and thin.

Question ID : **2391302808**
Status : **Answered**
Chosen Option : **1**

Ans
1. in difficult times
2. under all circumstances
3. during summer time
4. at the last moment

Q.12 Select the option that completes the sentence CORRECTLY.

I don't think you will have _____ difficulty in obtaining your driving license.

Question ID : **2391302794**
Status : **Answered**
Chosen Option : **2**

Ans
1. some
2. any
3. a great deal
4. many

Q.13 In the following sentence, four words or phrases have been underlined. One of them is incorrect. Select the INCORRECT word or phrase from the given options.

If Antarctica has a very cold climate a variety of sea birds is found there.

Question ID : **2391302792**
Status : **Answered**
Chosen Option : **2**

Ans
1. a variety
2. If
3. has

✗ 4. is found

Q.14 Select the option that completes the sentence CORRECTLY.

Next week I _____ to visit my cousin.

Question ID : **2391302796**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. will intend
✓ 2. intend
✗ 3. intending
✗ 4. intended

Q.15 Select the word that best expresses the meaning of the given word.

COMPLIMENT

Question ID : **2391302797**
Status : **Answered**
Chosen Option : **4**

Ans
✓ 1. Admire
✗ 2. Agree
✗ 3. Criticize
✗ 4. Please

Q.16 Select the option that completes the sentence CORRECTLY.

If you have any queries to raise _____ please let me know now.

Question ID : **2391302795**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. up
✗ 2. about
✓ 3. no word required
✗ 4. along

Q.17 Select the option that completes the sentence CORRECTLY.

My cousin felt annoyed with _____ when he saw what had happened due to his ignorance.

Question ID : **2391302793**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. myself
✗ 2. itself
✓ 3. himself
✗ 4. oneself

Q.18 Select the word that best expresses the meaning of the given word.

CONCEAL

Question ID : **2391302799**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Free
✗ 2. Deceive
✗ 3. Detest
✓ 4. Hide

Q.19 Select the phrase that best expresses the meaning of the underline word.

It was a serious offence but he was allowed to go with a warning.

Question ID : **2391302806**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. let out
✗ 2. let down
✓ 3. let off
✗ 4. let aside

Q.20

Question ID : **2391302807**

Select the phrase that best expresses the meaning of the underlined word.

I am grateful to my teacher who persistently scolded me for poor spelling.

Status : **Answered**
Chosen Option : **4**

Ans

1. pulled me up
2. pulled me out
3. pulled me off
4. pulled me through

Comprehension Passage:

Read the following passage and answer the given questions.

A desert is basically a wilderness or a wasteland. There is little moisture and poor soil such as sand gravel or rock. There are few plants to offer shade. Deserts can be described as harsh places. Many are burning hot by day and cold by night.

Every continent has deserts. Much of the western United States is a desert. A desert region called The Outback covers Central Australia. The southern tip of South America is largely desert. Northern Africa is covered by the Sahara, a desert as big as the mainland United States. The Arabian Peninsula, between the Persian Gulf and the Red Sea, is almost entirely desert. A large part of central Asia, from China to the Caspian Sea, is mostly desert. Deserts cover 1/8 of our planet.

The popular belief is that a desert is dry, hot, waterless and without shelter. But this is not entirely correct. For those who have studied it, the desert can be a beautiful place. It is home to a variety of people, animals and plants that have learnt to live under hot and dry conditions. A desert is not always a flat, unchanging wasteland of dry sand. It may have mountains and hills. It may have an oasis, big or small. An oasis is like a green island in the middle of a desert where a spring of a well gives plants and trees a better chance to grow.

All living things need water in order to survive. The few plants and animals that live in deserts have developed the ability to require less water than most plants and animals. Desert plants have adapted to heat and dryness of the desert. Plants such as cacti have special means of storing and conserving water. They often have few or no leaves. Some plants have gotten used to arid environments by growing extremely long roots, allowing them to acquire moisture at or by the water table.

The desert animals also have found a way to solve the heat and water problems the dessert environment creates. Camels can drink a lot of water at one time. They can live without water for days together. The reason is they sweat very little. We sweat because we must keep our body temperature constant. We sweat when it gets hot, and this cools the body. Camels can stand a high body temperature. They don't need to sweat and can therefore retain the water they drink for long periods of time.

SubQuestion No : 21

Q.21 Why has an oasis been called 'green' island?

Ans

✔ 1. It has a source of water that supports vegetation.

✘ 2. It is surrounded by green hills and mountains.

✘ 3. The sand here is conducive for the vegetation.

✘ 4. It is in the middle of a vast desert.

Question ID : **2391302812**
Status : **Answered**
Chosen Option : **4**

Comprehension Passage:

Read the following passage and answer the given questions.

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SubQuestion No : 22

Q.22 Certain plants are able to survive in deserts because they:

Question ID : **2391302813**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. require less water than animals.

✓ 2. have adapted to survive in hot and dry climate.

✗ 3. have thick stems and few leaves.

✗ 4. develop especially long roots.

Comprehension Passage:

Read the following passage and answer the given questions.

A desert is basically a wilderness or a wasteland. There is little moisture and poor soil such as sand gravel or rock. There are few plants to offer shade. Deserts can be described as harsh places. Many are burning hot by day and cold by night.

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SubQuestion No : 23

Q.23 The desert region called 'The Outback' is located in:

Question ID : **2391302811**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ North Africa
2. ✓ Central Australia
3. ✗ Central Asia
4. ✗ South America

Comprehension Passage:

Read the following passage and answer the given questions.

A desert is basically a wilderness or a wasteland. There is little moisture and poor soil such as sand gravel or rock. There are few plants to offer shade. Deserts can be described as harsh places. Many are burning hot by day and cold by night.

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SubQuestion No : 24

Q.24 What is the popular belief about the climatic conditions of a desert?

Question ID : **2391302810**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1.
It is sandy where no rain falls and no vegetation grow.

✘ 2.
It is a region surrounded by mountains and hills.

3. A variety of animals and plants live there.

4. It has vast land which is used for cultivation of flowers.

Comprehension Passage:

Read the following passage and answer the given questions.

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SubQuestion No : 25

Q.25 Which of the following statements is not true according to the passage?

Question ID : **2391302814**
Status : **Answered**
Chosen Option : **2**

An

s

✗ 1. Camels can retain water for a long time because they do not sweat.

✗ 2. About 1/8 area of the earth is covered by deserts.

✓ 3. The Arabian Peninsula between the Persian Gulf and Caspian Sea is entirely desert.

✗ 4. In a desert region there is little moisture and poor soil.

Section : **Professional Knowledge**

Q.1 With increase in moisture content of coal, its:

Question ID : **2391302893**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. clinkering tendency during combustion increases

✗ 2. calorific value increases

✗ 3. None of the other options

✗ 4. bulk density decreases

Q.2 The most important chemical in a self-rescuer is:

Question ID : **2391302860**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. hopcalite

✗ 2. protosorb

✗ 3. calicium bromide

✗ 4. lithium chloride

Q.3 Gross and Net calorific value of coal will be the same if:

Question ID : **2391302892**
Status : **Answered**
Chosen Option : **3**

Ans

✓ 1. hydrogen content is zero

✗ 2. carbon content is very low

✗ 3. ash content is zero

✗ 4. ash content is very high

Q.4 For a cylindrical sample of cross section area A, length L, Young's modulus E, and axial load P, the strain energy stored is:

Question ID : **2391302838**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. P^2L^2/AE

✓ 2. $P^2L/2AE$

✗ 3. P^2L/AE

✗ 4. $PL^2/2AE$

Q.5 World's largest 'robot', a coal dragline featuring automated loading and unloading has the capacity of _____.

Question ID : **2391302882**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. 2000t

✗ 2. None of the other options

✗ 3. 4000t

✓ 4. 3500t

Q.6 The rock bolts used for reducing the curing time and for increasing safety are:

Question ID : **2391302887**
Status : **Answered**
Chosen Option : **3**

Ans
- ✗ 1. Expansion shell bolt
- ✓ 2. Resin bolts
- ✗ 3. Grouted bolts
- ✗ 4. Slot & wedge bolts

Q.7 The backsight on a vertical staff on a benchmark is 2.535 m and the foresight on point B is 3.135 m. If the RL of the benchmark is 250.70 m, the RL of the point is:

Question ID : **2391302854**
Status : **Answered**
Chosen Option : **2**

Ans
- ✗ 1. 247.015 m
- ✓ 2. 250.100 m
- ✗ 3. 253.285 m
- ✗ 4. 253.885 m

Height of Instrument (HI):
HI = BM + BS
= 250.70 + 2.535
= 253.235 in
RL of point B:
= HI - FS
= 253.235 - 3.135
= 250.100 in

Q.8 Stacker is commonly used to work in association with:

Question ID : **2391302827**
Status : **Answered**
Chosen Option : **2**

Ans
- ✗ 1. payloader
- ✓ 2. bucket wheel excavator
- ✗ 3. dragline
- ✗ 4. shovel

Q.9 Why the fleet angle is limited to 1.5°?

Question ID : **2391302869**
Status : **Answered**
Chosen Option : **1**

Ans
- ✓ 1. To reduce wear and tear of the winding rope
- ✗ 2. To reduce side travel on the pulley
- ✗ 3. To allow maximum persons to travel
- ✗ 4. Allowing the use of lesser diameter winding rope

Q.10 The approximate length of a conveyor of loop take up portion of a belt conveyor is A% of the total conveyor length. A is given by:

Question ID : **2391302851**
Status : **Answered**
Chosen Option : **3**

Ans
- ✗ 1. 2%
- ✗ 2. 4%
- ✓ 3. 1%
- ✗ 4. 0.5%

Q.11 In the PERT network, the activity duration is assumed to follow:

Question ID : **2391302864**
Status : **Answered**
Chosen Option : **3**

Ans
- ✗ 1. binomial distribution
- ✗ 2. normal distribution
- ✓ 3. beta distribution
- ✗ 4. weibull distribution

Q.12 Dislocation of bed is caused by structure known as _____.

Question ID : **2391302878**
Status : **Answered**
Chosen Option : **1**

Ans
- ✗ 1. decline fold
- ✓ 2. fault
- ✗ 3. None of the other options
- ✗ 4. anticline fold

Q.13 Which one of these mining applications can not be performed by Geographical Information Systems?

Question ID : **2391302885**
Status : **Answered**
Chosen Option : **1**

Ans
- ✗ 1. Land ownership & mineral claims

✔ 2. Design of blasting in an underground excavation

✘ 3. Environmental quality monitoring

✘ 4. Site selection for housing & dumps

Q.14 Capacity factor of a wire rope is the ratio between:

Question ID : **2391302912**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. breaking load of the rope and weight of unit load of the rope

✘ 2. None of the other options

✔ 3. breaking load of the rope and total rope suspended in it excluding the weight of the rope

✘ 4. breaking load of the rope and total rope suspended in it including the weight of the rope

Q.15 Proximate analysis of coal determines:

Question ID : **2391302899**
Status : **Answered**
Chosen Option : **4**

Ans

✘ 1. moisture, Sulphur, Nitrogen and fixed Carbon

✘ 2. None of the other options

✘ 3. moisture, ash, Sulphur and VM

✔ 4. moisture, ash, fixed carbon and VM

Q.16 Roof falls are more common, if the face is at:

Question ID : **2391302890**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. Parallel to the main cleat

✘ 2. None of the other options

✘ 3. 60 degree to the main cleat

✘ 4. Right angles to the main cleat

Q.17 Which constituent is mainly responsible for easy ignition of coal?

Question ID : **2391302897**
Status : **Answered**
Chosen Option : **4**

Ans

✘ 1. Fixed carbon

✘ 2. Nitrogen

✘ 3. Ash

✔ 4. Volatile matter

Q.18 Maximum number of faces available for working in a shift in a 5 heading board and pillar development district is:

Question ID : **2391302818**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. 12

✘ 2. 15

✔ 3. 13

✘ 4. 10

Q.19 Dust suppression by water has one of the following disadvantages:

Question ID : **2391302841**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. causes the belt to slip

✘ 2. workers take rest during this period

✔ 3. increases humidity in the mine

✘ 4. blasting efficiency becomes poor

Q.20 For more output, a blast should be taken:

Question ID : **2391302820**

Ans
1. along the dip
2. along the strike
3. across the dip
4. across the strike

Status : **Answered**
Chosen Option : **1**

Q.21 In case of an oxygen balance mix of an explosive, the release of energy on detonation is:

Ans
1. Average
2. Maximum
3. Minimum
4. None of the other options

Question ID : **2391302891**
Status : **Answered**
Chosen Option : **2**

Q.22 Drawbar pull of a locomotive is:

Ans
1. None of the other options
2. less than its tractive effort
3. more than its tractive effort
4. equal to its tractive effort

Question ID : **2391302913**
Status : **Answered**
Chosen Option : **3**

Q.23 The machine which is extensively used for direct casting operation in an opencast mine is:

Ans
1. Front end loader
2. Walking dragline
3. Dredger
4. BWE

Question ID : **2391302886**
Status : **Answered**
Chosen Option : **2**

Q.24 Odometer is used for measurement of:

Ans
1. Distance
2. Pressure
3. Temperature
4. Area

Question ID : **2391302880**
Status : **Answered**
Chosen Option : **1**

Q.25 What is the maximum height or width of advanced heading for dewatering of water-logged workings in coal mines?

Ans
1. 3.0 m
2. 2.4 m
3. 3.6 m
4. 2.0 m

Question ID : **2391302909**
Status : **Answered**
Chosen Option : **2**

Q.26 Where the shaft exceeds 45 m in depth, the persons working at the bottom of the shaft shall be protected by a covering, which shall be kept lowered within "A" meters of the bottom of the shaft. "A" is given by:

Ans
1. 22.5
2. 32.5
3. 42.5
4. 52.5

Question ID : **2391302825**
Status : **Answered**
Chosen Option : **1**

Q.27 The recommended scale for plan and sections for a mica mine is:

Ans
1. 1 : 200
2. 1 : 2000
3. 1 : 500

Question ID : **2391302829**
Status : **Answered**
Chosen Option : **1**

✗ 4. 1 : 1000

Q.28 In a point load test on 50 mm dia core specimen, rupture was observed at a load of 5000 kg. Point load strength of the specimen was:

Question ID : **2391302834**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 300 kg/cm²
✓ 2. 200 kg/cm²
✗ 3. 500 kg/cm²
✗ 4. 400 kg/cm²

Q.29 Which has the least volatile matter and hence is the most difficult to ignite:

Question ID : **2391302896**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. sub-bituminous coal
✗ 2. anthracite
✓ 3. coke
✗ 4. bituminous coal

Q.30 A closed traverse ABCDE of perimeter 425 m has a total error of +0.35 m in latitude and −0.44 m in departure. The accuracy of traverse is:

Question ID : **2391302857**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 1 in 1024
✗ 2. 1 in 785
✗ 3. 1 in 556
✓ 4. 1 in 756

Closing error

$$e = \sqrt{(-0.35)^2 + (-0.44)^2} = 0.56\,m$$

Accuracy = P/e = 425/0.56 = 756

Q.31 Given below are the following mining method techniques. Match the appropriate techniques.

Question ID : **2391302870**
Status : **Answered**
Chosen Option : **4**

P. Thick seam extraction	1) Double unit face
Q. Bord and pillar extraction	2) Jet cutting
R. Longwall face development	3) Inclined slicing
S. Hydraulic mining	4) Half moon

Find the correct match.

Ans
✗ 1. P-3, Q-4, R-2, S-1
✗ 2. P-3, Q-2, R-1, S-4
✗ 3. P-1, Q-4, R-2, S-3
✓ 4. P-3, Q-4, R-1, S-2

Q.32 A coal seam of 1.5 m lying at a depth of 150 m from surface with an inclination of 5° is to be worked under normal conditions. Which should be preferred?

Question ID : **2391302816**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. slicing with caving
✗ 2. board and pillar
✗ 3. horizon mining
✓ 4. longwall mining

Q.33 The ratio of length of explosive coloumn to the hole diameter which will work as a spherical charge is:

Question ID : **2391302819**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. L/D>4
✗ 2. L/D<4
✗ 3. L/D>6
✓ 4. L/D<6

Q.34 The length of line measured with a 20 m chain was found to be 536 m. It was afterwards found that the chain was 0.05 m too long. What will be the true length of the line?

Question ID : **2391302830**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 568.5 m
✗ 2. 512.3 m
✗ 3. 587.5 m

True line length/measured line length
= actual chain length/standard chain length
L/L' = CL'/CL
L/536 = 20.05/20
L = 537.3 m

✔ 4. 537.3 m

Q.35 Life of winding rope is not more than ____ years.

Question ID : **2391302875**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 3.5
✘ 2. 4.5
✘ 3. 3
✘ 4. 1.5

Q.36 When one identical fan is installed in paralleled combination to an existing mine fan, then:

Question ID : **2391302907**
Status : **Answered**
Chosen Option : **2**

Ans
✔ 1. Air quantity is doubled and pressure remains same
✘ 2. Pressure is doubled and air quantity remains same
✘ 3. Air quantity as well as pressure is doubled
✘ 4. Air quantity is quadrupled and pressure is doubled

Q.37 In a normal distribution curve, the area between one standard deviation from mean on either side in percent is:

Question ID : **2391302866**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 68
✘ 2. 86
✘ 3. 50
✘ 4. 95

Q.38 The reduced bearing of a line is S 57° 36' W. What will be the whole circle bearing of the line?

Rule for SW quadrant:
WCB = 180° + reduced bearing
WCB = 180' + 57'36' = 237'36'

Question ID : **2391302832**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 212° 24'
✘ 2. 137° 36'
✔ 3. 237° 36'
✘ 4. 327° 36'

Q.39 Hardness of rock is defined by:

Question ID : **2391302833**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. RQD
✔ 2. RMR
✘ 3. Mohr's scale
✘ 4. FOS

Q.40 Why it is mandatory to remove silt from the sump?

Question ID : **2391302848**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. To maximize the head of water
✘ 2. To allow pump khalasi to enter
✔ 3. To maximize the sump capacity
✘ 4. To maintain regular flow of water in mines

Q.41 In ventilation network analysis, Kirchoff's first law is used, which states:

Question ID : **2391302876**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. The algebraic sum of quantities following at junction is zero
✘ 2. The resistance of an airway varies with the square of air velocity

✗ 3. The pressure loss in a closed mesh cannot be predicted

✗ 4. The pressure loss in closed mesh is zero

Q.42 Intake air to a longwall panel has CO at 10 ppm and O_2 at 20.5%, whereas the return air has CO at 30 ppm and O_2 at 20.10%. Find out the Graham's ratio (%) for the oxidation process in panel.

Question ID : **2391302845**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 0.1
✗ 2. 0.4
✗ 3. 0.8
✓ 4. 0.5

Q.43 At the nozzle in hydraulic mining operations, what should be the minimum pressure to be maintained?

Question ID : **2391302872**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 21-35 kgf/cm^2
✓ 2. 40-100 kgf/cm^2
✗ 3. 5-10 kgf/cm^2
✗ 4. 10-20 kgf/cm^2

Q.44 The permissible closing error of an underground traverse having 16 stations measured with 10" theodolite is:

Question ID : **2391302828**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 123 sec
✗ 2. 121 sec
✓ 3. 120 sec
✗ 4. 128 sec

As per CMR 2017
$e = (20 + x)\sqrt{n}$
$= (20 + 10)\sqrt{16}$
$= 120"$

Q.45 Which of the following is added as sensitizers in explosive?

Question ID : **2391302873**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Charcoal
✗ 2. NH_4NO_3
✗ 3. NaCl
✓ 4. NG

Q.46 Three parallel splits of similar cross section and same type of roadway surface are respectively 400 m, 900 m, 1600 m long. The ratio of quantities flowing through them i.e $Q_1 : Q_2 : Q_3$ can be expressed as:

Question ID : **2391302842**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 2 : 3 : 4
✗ 2. 4 : 9 : 16
✗ 3. 1/4 : 1/9 : 1/16
✓ 4. 1/2 : 1/3 : 1/4

Q.47 Calorific value of bituminous coal is about:

Question ID : **2391302901**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 2000 Kcal/kg
✓ 2. 8000 Kcal/kg
✗ 3. 4500 Kcal/kg
✗ 4. 1500 Kcal/kg

Q.48 Over-riding of gallery incidence is most with:

Question ID : **2391302871**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Long wall method
✓ 2. Blasting gallery method
✗ 3. Wide stall method
✗ 4. Short wall method

Q.49 If the swell factor of ore in a shrinkage stope is 1.4, the output from the stope in percent of broken ore is:

Question ID : **2391302823**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 29
✘ 2. 0
✘ 3. 100
✘ 4. 40

Q.50 The preferred shape of an opening in a hydrostatic stress field is:

Question ID : **2391302888**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. an ovaloid
✘ 2. an ellipse
✘ 3. a rectangle
✔ 4. a circle

Q.51 In order to get better safety, the optimum gradient of haul road is:

Question ID : **2391302826**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. 1 in 16
✘ 2. 1 in 8
✘ 3. 1 in 5
✘ 4. 1 in 6

Q.52 What will be the equivalent RMR value as per Bieniawski (1989) for a rock mass rating of 20 based on Q-system?

Question ID : **2391302858**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 55.71
✔ 2. 70.96
✘ 3. 45.30
✘ 4. 46.90

Q.53 Black damp is defined as:

Question ID : **2391302906**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1.
Amount of CO_2 and N_2 present in excess of the percentage over that which is normally present in atmospheric air.
✘ 2.
Amount of CO_2 and CH_4 present in excess of the percentage over that which is normally present in atmospheric air.
✘ 3.
Total amount of CO_2 and N_2 present in mine air.
✘ 4.
Total amount of CO_2 and CH_4 present in mine air.

Q.54 60 m wide longwall panel at a depth of 60 m results in a subsidence trough of width 110 m. The angle of draw is:

Question ID : **2391302839**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. 19.9°
✘ 2. 18.4°
✔ 3. 22.6°
✘ 4. 39.8°

Q.55 The term CMMS stands for?

Question ID : **2391302884**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. Comprehensive Mine Management Systems
✔ 2.
Computerized Maintenance Management Systems
✘ 3. None of the other options
✘ 4. Computerized Mine Management Systems

Match the following:

a) Room and pillar	(i) Arificially supported
b) Shrinkage stopping	(ii)Heavily supported
c) Sub level stopping	(iii) Naturally supported
d) Square set stopping	(iv) Unsupported

Question ID : **2391302877**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. a → (ii), b → (i), c → (iv), d → (iii)
✗ 2. a → (ii), b → (iii), c → (iv), d → (i)
✓ 3. a → (iii), b → (i), c → (iv), d → (ii)
✗ 4. a → (iv), b → (ii), c → (iii), d → (i)

Q.57 Spontaneous combustion of coal on storage, results due to:

Question ID : **2391302898**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. inadequate ventilation
✓ 2. All of the other options
✗ 3. storage in large heaps with small surface to volume
✗ 4. low temperature oxidation

Q.58 While dealing with misfire shot, the reliving hole is drilled at a distance not less than:

Question ID : **2391302874**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 40 cm
✗ 2. 20 cm
✓ 3. 30 cm
✗ 4. 10 cm

Q.59 Function of snub pulley in the belt conveyor system is:

Question ID : **2391302861**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. safety device
✗ 2. braking device
✓ 3. increasing the angle of wrap
✗ 4. cleaning device

Q.60 Automatic contrivance shall be provided in each shaft with an exceeding depth of:

Question ID : **2391302868**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 50 m
✗ 2. 90 m
✗ 3. 70 m
✓ 4. 100 m

Q.61 A measure of dispersion of a sample of data set is:

Question ID : **2391302865**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. median
✓ 2. standard deviation
✗ 3. mode
✗ 4. mean

Q.62 The three time estimates of PERT network are assumed to follow:

Question ID : **2391302863**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. gamma
✗ 2. exponential
✓ 3. beta

✗ 4. normal

Q.63 Jack hammer drills are:

Question ID : **2391302914**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. rotary type drill machine
✗ 2. rotary percussive type drill machine
✗ 3. None of the other options
✓ 4. percussive type drill machine

Q.64 Capacity to continue pumping operation even if air enters into water pipelines is known as _____.

Question ID : **2391302862**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. snore
✗ 2. driver
✗ 3. core
✗ 4. carrier

Q.65 For a typical hard rock with E = 10^5 MPa, Poission ratio = 0.25, the modulus of rigidity in GPa is:

Question ID : **2391302836**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 50
✗ 2. 20
✓ 3. 40
✗ 4. 30

Q.66 Mean air temperature in a D.C. shaft of 400 m depth is 28°C and in the U.C. shaft is 38°C. Motive coloumn will be _____ m.

Question ID : **2391302843**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 12.8
✗ 2. 1.28
✗ 3. 128
✗ 4. 0.128

Q.67 The number of experimental sets of flat jack to determine 3-dimensional state of stress in a rock mass is:

Question ID : **2391302859**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. two
✓ 2. six
✗ 3. one
✗ 4. three

Q.68 What is the track guage for tubs of 1.1 m^3?

Question ID : **2391302849**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 0.8 m
✓ 2. 0.6 m
✗ 3. 1 m
✗ 4. 0.4 m

Q.69 The angle of draw in a trough subsidence helps in determining the:

Question ID : **2391302840**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. plane of fracture
✗ 2. critical width of the opening
✓ 3. extent of surface subsidence
✗ 4. maximum subsidence

Q.70 Gyro attachment is used to determine:

Question ID : **2391302903**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. Magnetic north
✗ 2. Horizontal angle

✔ 3. True North

✘ 4. Horizontal distance

Q.71 A mining equipment has a life of 5 years with no salvage value. Assuming that the depreciation of the equipment is calculated by the straight line method, the average annual value of the equipment in percentage of its original value is:

Question ID : **2391302852**
Status : **Answered**
Chosen Option : **4**

Ans

✘ 1. 60

✘ 2. 50

✘ 3. 40

✔ 4. 20

Q.72 High ash coals:

Question ID : **2391302895**
Status : **Answered**
Chosen Option : **2**

Ans

✔ 1. require large time for carbonization

✘ 2. are soft and friable

✘ 3. None of the other options

✘ 4. produce large quantity of coke oven gas

Q.73 Most modern method of correlation survey in a mine with vertical shaft is:

Question ID : **2391302904**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. By using Gyro, Laser and Nadir Plummet

✘ 2. Weisbach Triangle method

✘ 3. By using Laser and magnetic compass

✘ 4. By suspending single plumb-wire in two shafts

Q.74 The stoichiometric composition of fire damp is:

Question ID : **2391302908**
Status : **Answered**
Chosen Option : **2**

Ans

✘ 1. 5.5% CH4 in air

✔ 2. 9.5% CH4 in air

✘ 3. 14.5% CH4 in air

✘ 4. 5 to 14% CH4 in air

Q.75 Find the amount of correction in 20 m chain for a line measured along a slope of 15°.

Question ID : **2391302856**
Status : **Answered**
Chosen Option : **2**

Ans

✘ 1. 0.568 m

✘ 2. 0.678 m

✔ 3. 0.681 m

✘ 4. 0.786 m

$C = L(1 - \cos\theta)$
$= 20(1 - \cos 150)$
$= 0.68$ m

Q.76 In a mine, the kata factor of instrument is observed at 25 and the time taken by alcohol to fall from upper mark to lower mark is 10 sec. The cooling power will be _____ Semilli calories.

Question ID : **2391302844**
Status : **Answered**
Chosen Option : **1**

Ans

✘ 1. 250

✘ 2. 40

✔ 3. 2.5

✘ 4. 0.4

Q.77 For a delay blasting of 10 circuits a sequential timer is set on 25 ms between circuit initiations. If the nominal firing time of a detonator is 400 ms, the total add on time in ms for 10 circuits will be:

Question ID : **2391302817**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. 400

✘ 2. 650

✔ 3. 625

✘ 4. 500

What will be the back bearing of line AB along N 36° W?

Question ID : **2391302881**
Status : **Answered**
Chosen Option : **4**

Ans
1. 54°
2. 130°
3. 36°
4. 144°

Back bearing = Fore bearing ± 180 °
= (360 – 36) – 1800 = 1440

Q.79 What should be the maximum value of fleet angle in a drum winder?

Question ID : **2391302850**
Status : **Answered**
Chosen Option : **3**

Ans
1. 3.5°
2. 4.5°
3. 1.5°
4. 2.5°

Q.80 If the ratio of critical width of the horizontal workings to the mining depth of a longwall mine is 1.4, the angle of draw in degrees for critical subsidence is:

Question ID : **2391302837**
Status : **Answered**
Chosen Option : **3**

Ans
1. 40
2. 20
3. 35
4. 45

Q.81 The yield load of hydraulic powered support is:

Question ID : **2391302911**
Status : **Answered**
Chosen Option : **2**

Ans
1. equal to its setting load
2. more than its setting load
3. None of the other options
4. less than its setting load

Q.82 In an open pit mine the market price of fresh copper is Rs. 1000 per tonne. The cost of mining as reported is Rs. 250 per tonne. The cost of removal of waste rock is Rs. 80 per tonne of waste. What will be the stripping ratio?

Question ID : **2391302821**
Status : **Answered**
Chosen Option : **2**

Ans
1. 3.68
2. 9.39
3. 3.03
4. 20

Q.83 During Brazillian test a of a cylindrical rock core of 54 mm diameter and 22 mm thickness, failure occurred at diametrical loading of 11.4 kN. The tensile strength of rock in MPa will be:

Question ID : **2391302835**
Status : **Answered**
Chosen Option : **4**

Ans
1. 6.10
2. 2.49
3. 1.24
4. 3.05

Q.84 The process of surface high wall recovery by making openings into the seam without removing the overburden is called _____.

Question ID : **2391302822**
Status : **Answered**
Chosen Option : **1**

Ans
1. auger mining
2. strip mining
3. area mining
4. contour mining

Q.85 Misaligned machine component creates one of the following:

Question ID : **2391302867**
Status : **Answered**
Chosen Option : **2**

Ans
1. power overload
2. bending moment

✗ 3. reduced rpm

✗ 4. machine fatigueness

Q.86 A coal heading 4 m wide and 2.5 m high has an advance of 1 m per cycle. The amount of explosive used in blasting is 6 kg. Taking specific gravity of coal as 1.5, the powder factor is _____.

Question ID : **2391302815**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. 1.66 te/kg

✗ 2. 2.99 te/kg

✗ 3. 3.32 te/kg

✓ 4. 2.50 te/kg

Q.87 Find the correction for the curvature for the distance 2 km.

Question ID : **2391302831**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. 1.04 m

✓ 2. 0.314 m

✗ 3. 4 m

✗ 4. 0.214 m

$C_c = D^2/2R$
Here R is earth radius in km.
$C_c = 2^2/(2 \times 6370)$
$= 0.000314$ km
$= 0.314$ m

Q.88 The relationship of the tensions at the rope entering the wheel (T_1) and the rope leaving the wheel (T_2) in friction winder is given as:

Question ID : **2391302847**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. $T_1/T_2 = e^{\theta}$

✗ 2. $T_1/T_2 = \mu e^{\theta}$

✗ 3. $T_1/T_2 = e^{k\theta}$

✓ 4. $T_1/T_2 = e^{\nu\theta}$

Q.89 The number of satellites and orbital planes in a GPS constellation (US system) are:

Question ID : **2391302855**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. 24 and 6

✗ 2. 21 and 3

✗ 3. 25 and 5

✗ 4. 24 and 4

Q.90 In a contoured map if there are higher values inside the loop it indicates:

Question ID : **2391302889**
Status : **Answered**
Chosen Option : **2**

Ans

✓ 1. Ridge

✗ 2. Valley

✗ 3. Plane land

✗ 4. None of the other options

Q.91 Most popular hydraulic fluid used in power supports is:

Question ID : **2391302910**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. emulsion of 20% oil and 80% water

✗ 2. emulsion of 5% water and 95% oil

✓ 3. emulsion of 5% oil and 95% water

✗ 4. emulsion of 20% water and 80% oil

Q.92 A locomotive weighs 20 tonne and the adhesion to tracks is 2246 N per tonne. What will be the tractive effort?

Question ID : **2391302846**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. 44920

✗ 2. 4583.6

✗ 3. 224.6

✗ 4. 112.3

Q.93 Most of the caking coals are:

Question ID : 2391302894
Status : Answered
Chosen Option : 3

Ans
1. ✗ lignite
2. ✗ None of the other options
3. ✓ bituminous
4. ✗ anthracite

Q.94 The tool used to correct borehole deviation is:

Question ID : 2391302824
Status : Answered
Chosen Option : 2

Ans
1. ✓ string shot
2. ✗ whipstock
3. ✗ rachet
4. ✗ kelly

Q.95 The staff reading at a point A on the floor of a mine is 1.250 m. The R.L. of point A is 120.450 m. What will be the R.L. of the roof point B, if the staff reading at B is 1.560 m?

Question ID : 2391302905
Status : Answered
Chosen Option : 4

Ans
1. ✗ 120.140 m
2. ✗ 120.450 m
3. ✗ 121.450 m
4. ✓ 123.260 m

For A
H.I. = R.L. of A + staff reading at A
= 120.450 + 1.250 = 121.700 in
For B
H.I. = R.L. of B - staff reading at B (minus sign as staff is inverted being against roof)
121.700 = RL of B – 1.560
RL of B = 123.260 m

Q.96 The scales of the mine plans are generally required to be maintained on the scale of:

Question ID : 2391302902
Status : Answered
Chosen Option : 3

Ans
1. ✗ 1 : 4000
2. ✗ 1 : 330
3. ✓ 1 : 2000
4. ✗ 1 : 2500

Q.97 Pop shooting or plaster shooting is a type of:

Question ID : 2391302879
Status : Answered
Chosen Option : 3

Ans
1. ✗ Primary Blasting
2. ✗ Clay Capping
3. ✓ Secondary Blasting
4. ✗ Muffling

Q.98 Among the mentioned mining applications below, which one cannot be performed by GPS?

Question ID : 2391302883
Status : Answered
Chosen Option : 1

Ans
1. ✓ Monitoring of Roadheaders in an underground development gallery
2. ✗ Updating Opencast Mine Information Systems
3. ✗ Tracking of Auxiliary Equipments in Opencast mines
4. ✗ Automation of Truck Dispatch System

Q.99 Hoskold's formula is used for:

Question ID : 2391302853
Status : Answered
Chosen Option : 1

Ans
1. ✗ depreciation
2. ✓ speculative rate of return
3. ✗ ore reserve calculation
4. ✗ salting

Q.100 For washing of fine coal:

Ans
1. None of the other options
2. Heavy media bath is used
3. Flotation is used
4. Jig is used

Question ID : **2391302900**
Status : **Answered**
Chosen Option : **4**

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