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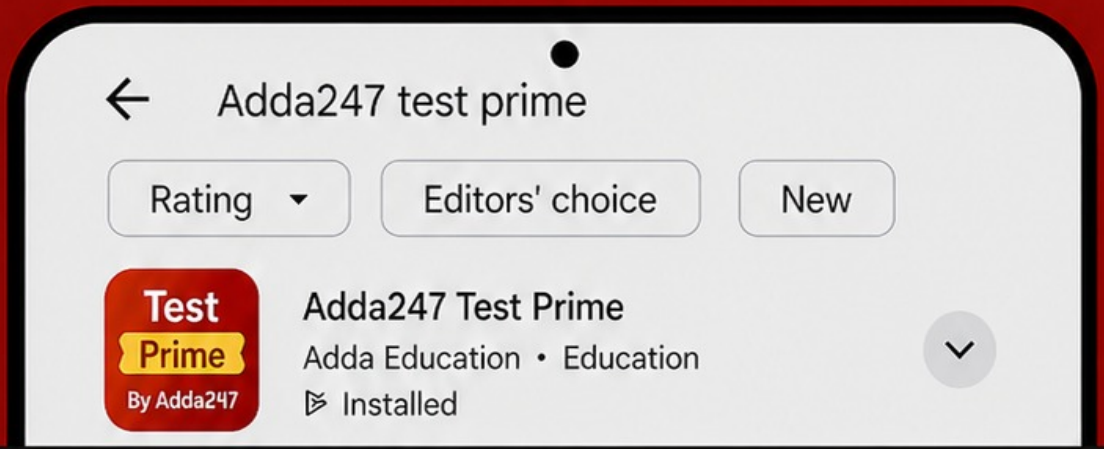

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Ans
✔ 1. An instant messaging application
✘ 2. A rapid search engine
✘ 3. An app-based advertising portal
✘ 4. A free game exchange platform

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

Q.6 Who was the twenty-fourth Jain Tirthankara?

Ans
✘ 1. Parasnath
✔ 2. Mahavira
✘ 3. Rishabha
✘ 4. Gomateshwara

Question ID : **501373886**
Status : **Answered**
Chosen Option : **2**

Q.7 Who is the current Vice President of India?

Ans
✘ 1. Nasim Zaidi
✘ 2. S. M. Krishna
✘ 3. Sumitra Mahajan
✔ 4. Mohammad Hamid Ansari

Question ID : **501373907**
Status : **Answered**
Chosen Option : **4**

Q.8 Identify the ore from which Aluminum is extracted.

Ans
✘ 1. Malachite
✔ 2. Bauxite
✘ 3. Uraninite
✘ 4. Argentite

Question ID : **501373896**
Status : **Answered**
Chosen Option : **2**

Q.9 Who won 2016 Chess Championship title?

Ans
✘ 1. Gary Kasparov
✘ 2. Vishwanathan Anand
✔ 3. Magnus Carlsen
✘ 4. Sergey Karjakin

Question ID : **501373899**
Status : **Answered**
Chosen Option : **3**

Q.10 Which of the following is the hottest planet in the Solar system?

Ans
✘ 1. Mercury
✘ 2. Mars
✘ 3. Jupiter
✔ 4. Venus

Question ID : **501373894**
Status : **Answered**
Chosen Option : **4**

Q.11 Who is the founder of IT giant Infosys?

Ans
✘ 1. Vishal Sikka
✘ 2. Nandan Nilekani
✔ 3. Narayana Murthy

Question ID : **501373893**
Status : **Answered**
Chosen Option : **3**

✗ 4. Azim Premji

Q.12 Which schedule of the Indian Constitution has provisions regarding powers, authority and responsibilities of Panchayats?

Question ID : **501373884**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Twelfth Schedule
✓ 2. Eleventh Schedule
✗ 3. Eighth Schedule
✗ 4. Tenth Schedule

Q.13 Which is the deepest point on earth?

Question ID : **501373900**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Challenger Deep in Mariana Trench
✗ 2. Tagebau Hambach mine, Germany
✗ 3. Milwaukee Deep
✗ 4. Voronya cave, Georgia

Q.14 Which of the following is India's highest point?

Question ID : **501373889**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Mt. Everest
✗ 2. K1
✗ 3. Nanda Devi
✓ 4. Kanchenjunga

Q.15 What is 'Jallikattu'?

Question ID : **501373904**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. A traditional bull-taming sport popular in Tamil Nadu
✗ 2. A bull worship festival at Pashupatinath temple, Nepal
✗ 3. A popular watersport enjoyed by the Marina beach, Chennai
✗ 4. The traditional name for "People's Leader" in Tamil

Q.16 Where has India's first floating elementary school been inaugurated?

Question ID : **501373905**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Loktak Lake, Manipur
✗ 2. Lake Pichola, Udaipur
✗ 3. Naini Jheel, Nainital
✗ 4. Dal Lake, Srinagar

Q.17 In 2016, who became the second woman Prime Minister of Great Britain?

Question ID : **501373903**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Angela Merkel
✗ 2. Melania Trump
✗ 3. Margaret Thatcher

✔ 4. Theresa May

Q.18 What does SIDBI stand for?

Question ID : **501373892**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. Synchronised Investment Deployment Board of India
✘ 2. Strategic Industries Development Board of India
✘ 3. Small-scale Investment and Deployment Bank of India
✔ 4. Small Industries Development Bank of India

Q.19 Which of the following statements about the President of India is correct?

Question ID : **501373883**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. The President of India must be a member of Rajya Sabha.
✘ 2. The President of India must be a member of Lok Sabha.
✘ 3. The President of India shall be a member of a House of the Legislature of any State.
✔ 4. The President of India shall not be a member of either House of Parliament or of a House of the Legislature of any State.

Q.20 Who was the Governor General of India during the "First War of Independence of 1857"?

Question ID : **501373887**
Status : **Answered**
Chosen Option : **2**

Ans
✔ 1. Lord Canning
✘ 2. Lord Dalhousie
✘ 3. Lord Warren Hastings
✘ 4. Lord Cornwallis

Q.21 Who was the last Mughal emperor of India?

Question ID : **501373888**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. Alamgir II
✘ 2. Ahmad Shah Bahadur
✔ 3. Bahadur Shah II
✘ 4. Aurangzeb

Q.22 Identify the nearest planet from the Sun.

Question ID : **501373895**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. Neptune
✘ 2. Jupiter
✘ 3. Mars
✔ 4. Mercury

Q.23 Which film won in the 'Best Film' category in the 70th British Academy Film Awards (BAFTA) given away in February 2017?

Question ID : **501373902**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. The Jungle Book

2. Manchester by the Sea
3. Moonlight
4. La La Land

Q.24 Who among the following won the 2016 Asian Champions (Women's) Trophy?

Question ID : **501373898**
Status : **Answered**
Chosen Option : **3**

Ans
1. China
2. Australia
3. India
4. Iran

Q.25 Who became the first Indian woman to be nominated as a member of the International Olympic Committee (IOC)?

Question ID : **501373906**
Status : **Answered**
Chosen Option : **3**

Ans
1. Sumitra Mahajan
2. Sonia Gandhi
3. Nita Ambani
4. Supriya Sule

Section : **Numerical Ability**

Q.1 The curved surface area of a hemisphere is 72π cm^2, then its radius is:

Question ID : **501373929**
Status : **Answered**
Chosen Option : **3**

Ans
1. 8 cm
2. 7 cm
3. 6 cm
4. 5 cm

Q.2 If two is added to the denominator of a rational number it becomes 1 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 : **501373913**
Status : **Answered**
Chosen Option : **1**

Ans
1. -22
2. -2
3. 2
4. 22

Q.3 If x_1 and x_2 are the roots of the equation $2x^2 + 3x - 9 = 0$ then the equation which has the roots $\frac{1}{x_1}$ and $\frac{1}{x_2}$ is:

Question ID : **501373925**
Status : **Answered**
Chosen Option : **3**

Ans
1. $9x^2 + 3x - 2 = 0$
2. $-9x^2 - 3x - 2 = 0$
3. $9x^2 - 3x - 2 = 0$
4. $9x^2 - 3x + 2 = 0$

Q.4 If y exceeds x by 15% then x is less than y by what percent?

Question ID : **501373930**
Status : **Marked For Review**
Chosen Option : **2**

Ans
1. $13\frac{1}{25}$
2. $13\frac{1}{23}$
3. $13\frac{1}{24}$

✗ 4. $13\frac{1}{22}$

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

Question ID : **501373908**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 30
✗ 2. 5
✗ 3. 10
✓ 4. 60

Q.6 An army of 2100 men has provision for 50 days. After 10 days due to injuries some of them left and the food were now enough for next 50 days for remaining men. The number of men left is:

Question ID : **501373915**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 400
✓ 2. 420
✗ 3. 410
✗ 4. 650

Q.7 For a positive integer n, $2^{5n} - 5^{2n}$ is divisible by:

Question ID : **501373910**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 2
✗ 2. 3
✓ 3. 7
✗ 4. 5

Q.8 The number of terms in the sequence 5, 20, 80, 320, ……., 5120 is:

Question ID : **501373932**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 9
✗ 2. 7
✓ 3. 6
✗ 4. 8

Q.9 If the sum of 2 numbers is 185, their LCM is 1700 and HCF is 5. Then the difference between 2 numbers is:

Question ID : **501373909**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 15
✗ 2. 10
✗ 3. 25
✗ 4. 20

Q.10 In a chemistry lab two beakers A and B contains 36% and 40% 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 : **501373923**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 19 : 46
✓ 2. 29 : 46
✗ 3. 29 : 55
✗ 4. 29 : 45

Q.11 The average of 7 numbers is 28. The average of first three of them is 23 and the last three of them is 42. Then the fourth number is:

Question ID : **501373912**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 3
✗ 2. 2
✓ 3. 1
✗ 4. 0

Q.12 A can finish the work in 30 days and B in 40 days. They both work together for 5 days and then B leaves. How many days will A take to complete the remaining work?

Ans
1. 22 days ✗
2. 21.75 days ✗
3. 21.25 days ✓
4. 21 days ✗

Question ID : **501373921**
Status : **Answered**
Chosen Option : **3**

Q.13 Mr. Vivek divides Rs. 1703 such that 4 times the 1st share, thrice the 2nd share and twice the third share amount to the same. Then the value of the 2nd share is:

Ans
1. Rs. 452 ✗
2. Rs. 524 ✓
3. Rs. 520 ✗
4. Rs. 542 ✗

Question ID : **501373914**
Status : **Answered**
Chosen Option : **2**

Q.14 If $-5 \le x \le 3$ and $-1 \le y \le 0$, then the minimum value of $2y - 3x$ is:

Ans
1. -8 ✗
2. -9 ✗
3. -11 ✓
4. -10 ✗

Question ID : **501373911**
Status : **Answered**
Chosen Option : **4**

Q.15 Find x , given $5(\sqrt{5})^{x+6} = (\sqrt{5})^{2x+7}$:

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

Question ID : **501373924**
Status : **Answered**
Chosen Option : **1**

Q.16 If three sides of the triangle is given 18 cm, 41 cm and 41 cm. Then the area of triangle is:

Ans
1. 375 cm^2 ✗
2. 350 cm^2 ✗
3. 360 cm^2 ✓
4. 400 cm^2 ✗

Question ID : **501373926**
Status : **Answered**
Chosen Option : **3**

Q.17 A train 130 meters long travelling at 54 km/hr crosses the bridge in 30 sec. Then the length of the bridge is:

Ans
1. 320 meters ✓
2. 350 meters ✗
3. 325 meters ✗
4. 375 meters ✗

Question ID : **501373927**
Status : **Answered**
Chosen Option : **1**

Q.18 Ms. Hema invests Rs. 8000 for six months at 20% per annum compounded quarterly. The total amount she gets after 6 months is:

Ans
1. Rs. 8820 ✓
2. Rs. 8880 ✗
3. Rs. 8800 ✗

Question ID : **501373918**
Status : **Answered**
Chosen Option : **1**

✗ 4. Rs. 8802

Q.19 Mr. Arun row a boat with the stream at 10 km/hr and against the stream in 5 km/hr. In still water, his rate of rowing in km/h is:

Question ID : **501373928**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 2
✓ 2. 2.5
✗ 3. 1
✗ 4. 3

Q.20 Due to economic surges the price of eggs suddenly reduced to 40%. This enabled a woman to buy 64 more for $ 30. Then the reduced price per dozen is:

Question ID : **501373919**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. $ 2
✓ 2. $ 2.25
✗ 3. $ 2.75
✗ 4. $ 2.5

Q.21 A flight has to travel between 2 cities A and B, 2000 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:

Question ID : **501373920**
Status : **Answered**
Chosen Option : **1**

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

Q.22 In a bio gas plant the population of yeast bacteria increases at a rate of 19% 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 years is:

Question ID : **501373917**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. 41%
✓ 2. 44%
✗ 3. 45%
✗ 4. 40%

Q.23 The number of terms in the sequence 20, 25, 30, ..., 160 is:

Question ID : **501373931**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 22
✓ 2. 29
✗ 3. 23
✗ 4. 26

Q.24 Pipe A can fill the tank 5 times faster than pipe B, if pipe A and B together fill the tank in 50 minutes, then pipe B alone can fill the tank in:

Question ID : **501373922**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 300 minutes
✗ 2. 345 minutes
✗ 3. 330 minutes
✗ 4. 350 minutes

Q.25 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. 315. The amount invested by Mr. Shiva is:

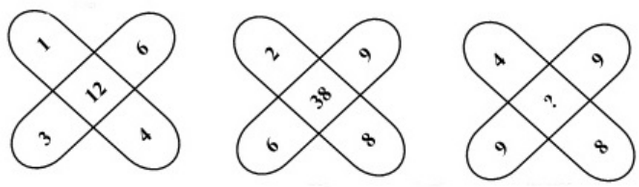
Question ID : **501373916**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Rs. 1400
✗ 2. Rs. 1450
✗ 3. Rs. 1405

✗ 4. Rs. 1500

Section : **Reasoning**

Q.1 Find the missing number from the given alternatives.



Question ID : **501373949**
Status : **Marked For Review**
Chosen Option : **4**

Ans
✗ 1. 42
✗ 2. 41
✗ 3. 51
✓ 4. 49

Q.2 Hemant is older than Bipin. Vinod is older than Sudhanshu. Mamta is not as old as Vinod but is older than Bipin. Sudhanshu is not as old as Bipin. Who is the youngest?

Question ID : **501373941**
Status : **Answered**
Chosen Option : **3**

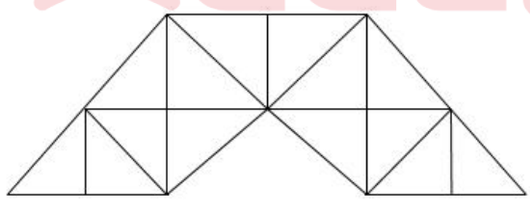
Ans
✗ 1. Mamta
✗ 2. Bipin
✓ 3. Sudhanshu
✗ 4. Hemant

Q.3 Five friends are sitting around a circular table. Rahul is to the right of Pramod and is second to the left of Sachin. Tushant is not between Pramod and Sachin. Kamal is second to the right of Tushant. Who is second to the left of Rahul?

Question ID : **501373943**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Tushant
✓ 2. Kamal
✗ 3. Pramod
✗ 4. Sachin

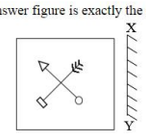
Q.4 How many triangles are there in the following figure?



Question ID : **501373957**
Status : **Answered**
Chosen Option : **1**

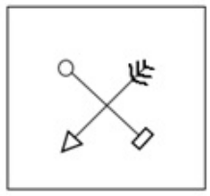
Ans
✗ 1. 30 or more
✗ 2. 14
✓ 3. 29
✗ 4. 25

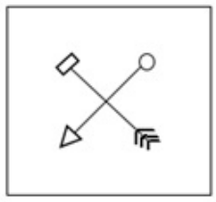
Q.5 Which of the answer figure is exactly the mirror image of the question figure, when the mirror is held on the line X Y?

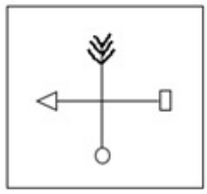


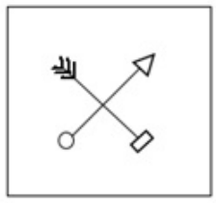
Question ID : **501373955**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. 

✗ 2. 

✗ 3. 

✓ 4. 

Q.6 Dinesh walks 2 km towards South and turns to his right and walks 3 km. He then turns to his right and walks 4 km and turns again to his right and walks another 3 km. He then turns left and walks 1 km and stops there. How far and in which direction is Dinesh from the starting point?

Question ID : **501373950**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 5 km West
✓ 2. 3 km North
✗ 3. 3 km East
✗ 4. 5 km South

Q.7 Identify the word which belongs to the class of given words.
Ring, Bracelet, Necklace , _____

Question ID : **501373936**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Bangle
✗ 2. Gold
✗ 3. Jewellery
✗ 4. Ornament

Q.8 Choose the correct alternative that will complete the given number series.

2, 9, 28, 65, ? , 217

Question ID : **501373940**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. 126
✗ 2. 102
✗ 3. 146
✗ 4. 193

Q.9

Question ID : **501373935**
Status : **Answered**

Select the related number from the given alternatives.

Chosen Option : **3**

29 : 65 : : 43 : ?

Ans
1. 86
2. 76
3. 93
4. 92

Q.10 'R' is the husband of 'Q'. 'P' is the daughter of 'R'. 'S' is the husband of 'P'. 'E' is the daughter of 'S'. What is the relationship of 'E' to 'Q'?

Question ID : **501373942**
Status : **Answered**
Chosen Option : **3**

Ans
1. Cousin
2. Daughter
3. Grand Daughter
4. Niece

Q.11 From the given alternatives select the word which cannot be formed using the letters of the given words.

EXAMINATION

Question ID : **501373945**
Status : **Answered**
Chosen Option : **3**

Ans
1. NATION
2. INMATE
3. EXAMINE
4. ANIMATION

Q.12 The age of Manish is half of that of his mother. His mother is 9 years younger to his father; and Manish is 7 years older than his sister. The age of his father is three times that of his sister, What is the age of Manish?

Question ID : **501373944**
Status : **Answered**
Chosen Option : **2**

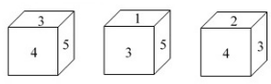
Ans
1. 27 years
2. 30 years
3. 33 years
4. 32 years

Q.13 What is related to 'Sympathy' in the same way as 'Virtue' is related to 'Vice'?

Question ID : **501373933**
Status : **Marked For Review**
Chosen Option : **2**

Ans
1. Emotion
2. Cruelty
3. Kindness
4. Charity

Q.14 Three positions of a cube are shown below. Which number will be opposite to the face containing 4?



Question ID : **501373956**
Status : **Answered**
Chosen Option : **2**

Ans
1. 2
2. 1
3. 5
4. 6

Q.15 Find the odd number pair from the given alternatives.

Question ID : **501373938**
Status : **Answered**

Ans

1. 24 – 48
2. 60 – 79
3. 12 – 72
4. 84 – 96

Chosen Option : **2**

Q.16 Select the related letters from the given alternatives.

ADGJ : QTWZ : : BEHK : ?

Question ID : **501373934**
Status : **Answered**
Chosen Option : **3**

Ans

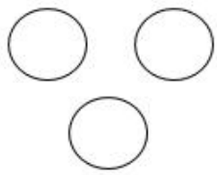
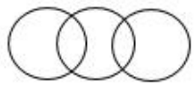
1. NQTV
2. PQWZ
3. PSVY
4. CFIL

Q.17 Identify the diagram that best represents the relationship among classes given below.

Boy , Girl, Student

Question ID : **501373953**
Status : **Answered**
Chosen Option : **2**

Ans

1. 
2. 
3. 
4. 

Q.18 If '×' means 'addition', ' – ' means 'division', ' ÷ ' means 'subtraction' and ' + ' means 'multiplication', then what will be the value of $16 + 5 - 10 \times 6 \div 3 = ?$

Question ID : **501373947**
Status : **Answered**
Chosen Option : **2**

Ans

1. 8
2. 11
3. 15
4. 9

Q.19 In a row of boys, Sandeep is eleventh from the right and Deepak is also eleventh from the left. When Sandeep and Deepak interchange their positions, Deepak becomes seventeenth from the left. How many boys are there in the row?

Question ID : **501373951**
Status : **Answered**
Chosen Option : **3**

Ans

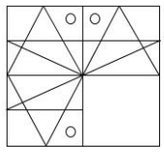
1. 25
2. 30
3. 27
4. 26

Q.20

Question ID : **501373954**
Status : **Answered**

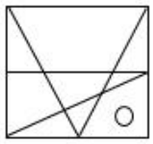
Select the figure from the alternatives which will complete the pattern in given question figure.

Chosen Option : **4**

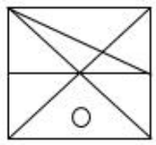


Ans

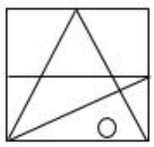
✗ 1.



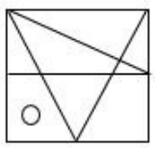
✗ 2.



✗ 3.



✓ 4.



Q.21 Select the one which is different from other three alternatives.

Question ID : **501373937**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. BCKL

✓ 2. LNST

✗ 3. EFNO

✗ 4. HIQR

Q.22 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 : **501373952**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1.
All bats are balls. All stumps are bats. Therefore, all balls are stumps.

✓ 2.
All fruits are flowers. All vegetables are fruits. Therefore, all vegetables are flowers.

✗ 3.
All trains are roads. All buses are trains. Therefore, all roads are buses.

✗ 4.
All R's are T's. All T's are Q's. Therefore, all Q's are R's.

Q.23 In a certain code language SHOWER is written as RINXDS. How will REPORT be written in that code language?

Question ID : **501373946**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. PERTRO

✗ 2. SDQPSS

✓ 3. QFOPQU

✗ 4. QFOQUP

Q.24 Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

11 * 7 = 72, 14 * 7 = 147, 17 * 9 = ?

Question ID : **501373948**
Status : **Answered**
Chosen Option : **1**

Ans

✗ 1. 240

2. 175
3. 208
4. 233

Q.25 Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
_ l m _ j l _ k _ _ m k j l m _

Question ID : **501373939**
Status : **Marked For Review**
Chosen Option : **3**

Ans
1. j k m j l j
2. j l m k j m
3. j k m l j j
4. j k m j l k

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.

This book is not only beautifully printed yet is free from mistakes.

Question ID : **501373958**
Status : **Answered**
Chosen Option : **4**

Ans
1. is
2. not only
3. from
4. yet is

Q.2 Select the word that is spelled INCORRECTLY.

Question ID : **501373974**
Status : **Answered**
Chosen Option : **3**

Ans
1. monarchy
2. monetary
3. momentery
4. monastery

Q.3 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.

I think most of the problems could be overcomed if we tried hard enough.

Question ID : **501373961**
Status : **Answered**
Chosen Option : **1**

Ans
1. could be
2. overcomed
3. most of the
4. I think

Q.4 Select the option that completes the sentence CORRECTLY.

The last rays of the sun _____ fading away when I reached home.

Question ID : **501373962**
Status : **Answered**
Chosen Option : **3**

Ans
1. are
2. will be
3. were
4. was

Q.5 Select the option that completes the sentence CORRECTLY.

The plan _____ is quite sound but I don't like the way it is being implemented.

Question ID : **501373964**
Status : **Answered**

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

Chosen Option : **2**

Q.6 Select the word that best expresses the meaning of the underlined word.

If you abstain from unnecessary criticism, you will be happier in life.

Question ID : **501373968**
Status : **Answered**
Chosen Option : **1**

Ans
1. avoid
2. indulge
3. differ
4. deny

Q.7 Select the ANTONYM of the given word.

ELEGANT

Question ID : **501373969**
Status : **Answered**
Chosen Option : **4**

Ans
1. natural
2. neat
3. tactless
4. awkward

Q.8 Select the option that completes the sentence CORRECTLY.

We do not accept any liability _____ damage or losses.

Question ID : **501373963**
Status : **Answered**
Chosen Option : **3**

Ans
1. at
2. with
3. for
4. against

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.

His parents prohibited him against joining the modeling career.

Question ID : **501373959**
Status : **Answered**
Chosen Option : **3**

Ans
1. His
2. prohibited
3. against
4. modeling career

Q.10 Select the option that best expresses the meaning of the underlined phrase/group of words.

Several houses had to be demolished to decongest the road.

Question ID : **501373975**
Status : **Answered**
Chosen Option : **4**

Ans
1. put down
2. taken down
3. pulled down
4. broken down

Q.11 Select the ANTONYM of the given word.

INNOCENT

Question ID : **501373970**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. naive
✗ 2. unfamiliar
✗ 3. childlike
✓ 4. guilty

Q.12 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 need to improve your voice control in case to win the singing competition.

Question ID : **501373960**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. in case
✗ 2. your
✗ 3. need to
✗ 4. to win

Q.13 Select the word that is spelled INCORRECTLY.

Question ID : **501373973**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. emmission
✗ 2. emerge
✗ 3. emergency
✗ 4. eminence

Q.14 Select the option that best expresses the meaning of the underlined phrase/group of words.

His evidence has revealed the involvement of his neighbor in the crime.

Question ID : **501373976**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. brought about
✗ 2. brought off
✓ 3. brought out
✗ 4. brought round

Q.15 Select the word that is spelled INCORRECTLY.

Question ID : **501373972**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. finaly
✗ 2. finale
✗ 3. final
✗ 4. finely

Q.16 Select the word that best expresses the meaning of the underlined word.

A corrupt officer is a disgrace to the whole department.

Question ID : **501373966**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. disgust
✗ 2. disturbance
✗ 3. scandal
✓ 4. shame

Q.17 Select the ANTONYM of the given word.

FINITE

Question ID : **501373971**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. limited
✗ 2. deep
✓ 3. endless
✗ 4. wide

Q.18 Find the appropriate meaning of the underlined idiom.

Value education should be a part and parcel of any education system.

Question ID : **501373977**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. an essential part
✗ 2. a plus part
✗ 3. an additional part
✗ 4. an important part

Q.19 Select the word that best expresses the meaning of the underlined word.

He made some very pertinent comments. They would certainly help us revise the project.

Question ID : **501373967**
Status : **Answered**
Chosen Option : **1**

Ans
✗ 1. thoughtful
✓ 2. relevant
✗ 3. applied
✗ 4. related

Q.20 Select the option that completes the sentence CORRECTLY.

You are annoyed with me, _____?

Question ID : **501373965**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. don't you
✓ 2. aren't you
✗ 3. are you
✗ 4. do you

Comprehension Passage:

Read the following passage and answer the given questions.

Providing stable freshwater supplies is a priority for every country in the world. Yet stable supplies are increasingly hard to come by in many countries, as water-related risks increase. For example, recent droughts threatened GDP growth in the United States. Monsoon floods killed hundreds and displaced thousands in India. Increased competition for water may impact energy production in China, and the list goes on.

World Resource Institute's Aqueduct project recently evaluated, mapped, and scored water risks like these in 100 river basins and 180 nations—the first such country-level water assessment of its kind. We found that 36 countries face "extremely high" levels of baseline water stress. This means that more than 80 percent of the water available is withdrawn annually by agricultural, domestic, and industrial users leaving businesses, farms, and communities vulnerable to scarcity. Such situations severely threaten national water security and economic growth--especially if a country does not have adequate water-management plans in place.

This information is highly relevant for a country's economy, environment, and communities.

It's also important for countries to understand the underlying natural factors that drive their water-related risks and respond accordingly. Extremely high levels of baseline water stress, for example, don't necessarily mean that a country will fall victim to scarcity. Armed with the right information, countries facing extremely high stress can implement management and conservation strategies to secure their water supplies.

Singapore, for example, has the highest water stress ranking. The country is densely populated and has no freshwater lakes or aquifers, and its demand for water far exceeds its naturally occurring supply. Yet the country is consistently held up as an exceptional water manager. Singapore invests heavily in technology, international agreements, and responsible management, allowing it to meet its freshwater needs. Advanced rainwater capture systems contribute 20 percent of Singapore's water supply, 40 percent is imported from Malaysia, grey water reuse adds 30 percent, and desalination produces the remaining 10 percent of the supply to meet the country's total demand. These forward-thinking and innovative management plans provide a stable water supply for Singapore's industrial, agricultural, and domestic users—even in the face of significant baseline water stress.

SubQuestion No : 21

Q.21

Question ID : **501373982**
Status : **Answered**
Chosen Option : **1**

Singapore is held as an example for water management. Match the strategies with the actual practice.

a. use of technology	i. import from Malaysia
b. international agreement	ii. rain water capture
c. responsible management	iii. desalination and grey water use

Ans

1. ✗ a - ii, b - i, c - iii
2. ✗ a - ii, b - iii, c - i
3. ✓ a - iii, b - i, c - ii
4. ✗ a - i, b - ii, c - iii

Comprehension Passage:

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SubQuestion No : 22

Q.22 In water stressed countries, which of the following consume more water according to the passage?

Question ID : **501373981**
Status : **Answered**
Chosen Option : **1**

Ans ✔ 1. industries

2. farms
3. businesses
4. communities

Comprehension Passage:

Read the following passage and answer the given questions.

Providing stable freshwater supplies is a priority for every country in the world. Yet stable supplies are increasingly hard to come by in many countries, as water-related risks increase. For example, recent droughts threatened GDP growth in the United States. Monsoon floods killed hundreds and displaced thousands in India. Increased competition for water may impact energy production in China, and the list goes on.

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SubQuestion No : 23

Q.23 Which statement is NOT correct according to the passage?

Question ID : **501373983**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. In highly water stressed countries more than 80% water is used by agriculture, domestic and industrial users.

✗ 2. Forward-thinking and innovative management plans can provide a stable water supply for a country.

✓ 3. Extremely high levels of baseline water stress mean that a country will fall victim to scarcity.

✗ 4. Forward-thinking and innovative management plans can provide a stable water supply for a country.

Comprehension Passage:

Read the following passage and answer the given questions.

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SubQuestion No : 24

Q.24 In many countries stable water supply is difficult because:

Ans ✔ 1. water related risks are on an increase

Question ID : **501373980**
Status : **Answered**
Chosen Option : **1**

2. there is an increased competition for water

3. they have a high baseline water stress level

4. providing fresh water is a priority for them

Comprehension Passage:

Read the following passage and answer the given questions.

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SubQuestion No : 25

Q.25 The main purpose of the passage is to:

Ans ✔ 1.

Question ID : **501373979**
Status : **Answered**
Chosen Option : **1**

warn the water stressed countries to take necessary steps to manage water scarcity

✗ 2. stress why it is important to analyze water risk at the country level

✗ 3. report the baseline water stress study on 180 countries

✗ 4. show that extremely high water stress can be managed

Section : **Professional Knowledge**

Q.1 As per maximum shear stress theory of failure. The relation between yield strength in shear (τ_y) and yield strength in tension (σ_t) is:

Question ID : **5013731061**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. $\tau_t = 1.2\sigma_t$

✗ 2. $\tau_t = 0.7\sigma_t$

✗ 3. $\tau_t = 0.3\sigma_t$

✓ 4. $\tau_t = 0.5\sigma_t$

Q.2 Which micrometer is used for measuring the span between the teeth of a gear?

Question ID : **5013731004**
Status : **Answered**
Chosen Option : **2**

Ans

✗ 1. Blade micrometer

✗ 2. Screw thread micrometer

✓ 3. Disc micrometer

✗ 4. Dial micrometer

Q.3 What is the correct sequence of operations in powder metallurgy?

Question ID : **5013731006**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. Compacting, Sintering, Blending, Production of metal powder

✗ 2. Production of metal powder, Compacting, Sintering, Blending

✓ 3. Production of metal powder, Blending, Compacting, Sintering

✗ 4. Production of metal powder, Blending, Sintering, Compacting

Q.4 An element is subjected to pure shear stress $(+\tau_{xy})$. What will be the Principal stress induced in the element?

Question ID : **5013731081**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. $(\sigma_{1,2} = \pm 2\tau_{xy})$

✗ 2. $(\sigma_{1,2} = 0)$

✗ 3. $(\sigma_{1,2} = \tau_{xy}/2)$

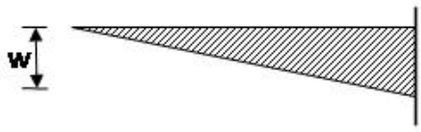
✓ 4. $(\sigma_{1,2} = \pm \tau_{xy})$

Q.5 A cantilever carries a concentrated load (W) at its free end. Its Shear force diagram will be:

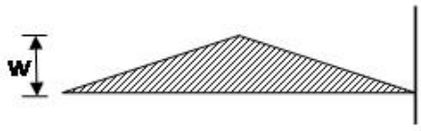
Question ID : **5013731060**
Status : **Answered**
Chosen Option : **1**

Ans

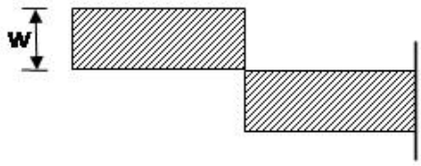
✗ 1.



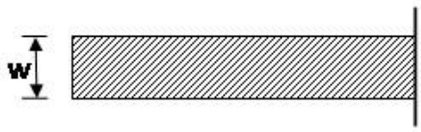
✗ 2.



✗ 3.



✓ 4.



Q.6 A closed system of constant volume experiences a temperature rise of 50 °C when a certain process occurs. The heat transferred in the process is 100 kJ. The specific heat at constant volume for the pure substance comprising the system is 1 kJ/kg ° C, and the system contains 3 kg of this substance. Work done in this case is:

Question ID : **5013731043**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. 50 kJ

✗ 2. – 100 kJ

✓ 3. – 50 kJ

✗ 4. 100 kJ

Q.7 In natural convection heat transfer, Nusselt number is a function of:

Question ID : **5013731035**
Status : **Answered**
Chosen Option : **4**

Ans

✗ 1. Reynolds number and Prandtl number

✗ 2. Prandtl number and Rayleigh number

✗ 3. Reynolds number and Grashof number

✓ 4. Prandtl number and Grashof number

Q.8 Choose the correct order of tool materials arranged, according to the decreasing order of their hot hardness.

Question ID : **501373984**
Status : **Answered**
Chosen Option : **2**

Ans

✓ 1. Ceramics, Cermets, Tungsten Carbide, HSS

✗ 2. Cermets, Ceramics, Tungsten Carbide, HSS

✗ 3. Tungsten Carbide, Ceramics, Cermets, HSS

✗ 4. Cermets, Tungsten Carbide, Ceramics, HSS

Q.9 The angular motion of a disc is defined by the relation $(\theta = 3t + t^3)$, where θ is in radians and t is in seconds. What will be the angular position after 2 seconds?

Question ID : **5013731057**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. 14 rad

✗ 2. 12 rad

✗ 3. 18 rad

✗ 4. 16 rad

Q.10 A copper pipe carrying refrigerant at T°C is covered by cylindrical insulation of thermal conductivity k W/ mK. The heat transfer co-efficient over the insulation surface is h W/ m^2K. The critical thickness of insulation would be:

Question ID : **5013731034**
Status : **Answered**

Ans
✔ 1. k/h
✘ 2. 2 k/h
✘ 3. 2 h/k
✘ 4. h/k

Chosen Option : **1**

Q.11 Which one of the following is not the controllable process parameter in ECM?

Ans
✘ 1. Inter electrode gap
✘ 2. Voltage
✔ 3. Pulse on time
✘ 4. Feed rate

Question ID : **5013731015**
Status : **Answered**
Chosen Option : **3**

Q.12 In which of the following non-traditional machining processes, tool wear doesn't occur?

Ans
✘ 1. EDM
✘ 2. USM
✔ 3. ECM
✘ 4. EBM

Question ID : **501373985**
Status : **Answered**
Chosen Option : **4**

Q.13 In a turning tool, crater wear occurs on _____.

Ans
✘ 1. base
✘ 2. flank face
✔ 3. rake face
✘ 4. shank

Question ID : **5013731017**
Status : **Answered**
Chosen Option : **3**

Q.14 _____ is the capacity of material to absorb energy when it is elastically deformed and then upon unloading, to have this energy recovered.

Ans
✘ 1. Toughness
✘ 2. Tensile strength
✘ 3. Plasticity
✔ 4. Resilience

Question ID : **501373997**
Status : **Answered**
Chosen Option : **4**

Q.15 Which force is acting on the core when the metal is poured into mould cavity?

Ans
✘ 1. Gravity
✘ 2. Inertia
✔ 3. Buoyancy
✘ 4. Drag

Question ID : **501373990**
Status : **Answered**
Chosen Option : **3**

Q.16 During a simple sensible heating process, the relative humidity _____.

Ans
✘ 1. increases
✔ 2. decreases
✘ 3. is zero
✘ 4. remains constant

Question ID : **5013731040**
Status : **Answered**
Chosen Option : **2**

Q.17 The head loss due to friction in turbulent flow through a pipe is:

Question ID : **5013731031**

Ans
1. directly proportional to velocity
2. inversely proportional to square of velocity
3. inversely proportional to velocity
4. directly proportional to square of velocity

Status : **Answered**
Chosen Option : **2**

Q.18 The gating ratio refers to the cross sectional areas of:

Ans
1. Sprue : In-gate : Runner
2. Sprue : Runner : In-gate
3. In-gate : Runner : Sprue
4. Runner : Sprue : In-gate

Question ID : **501373991**
Status : **Answered**
Chosen Option : **2**

Q.19 If u and v represents velocity components in x and y directions of a two-dimensional potential flow, then $\frac{\partial u}{\partial x}$ is equal to:

Ans
1. $\frac{\partial v}{\partial x}$
2. $\frac{\partial v}{\partial y}$
3. $\frac{\partial u}{\partial y}$
4. $-\frac{\partial v}{\partial y}$

Question ID : **5013731027**
Status : **Answered**
Chosen Option : **4**

Q.20 What is the atomic packing factor of BCC structure?

Ans
1. 0.64
2. 0.68
3. 0.74
4. 0.52

Question ID : **501373998**
Status : **Answered**
Chosen Option : **2**

Q.21 If the proportion of oxygen is less than the proportion of acetylene in oxy acetylene gas welding, the flame produced is _____.

Ans
1. Plasma arc
2. Carburizing flame
3. Oxidizing flame
4. Neutral flame

Question ID : **501373987**
Status : **Answered**
Chosen Option : **2**

Q.22 Kaplan turbine is a:

Ans
1. low discharge, high head turbine
2. high discharge, low head turbine
3. low discharge, low head turbine
4. high discharge, high head turbine

Question ID : **5013731038**
Status : **Answered**
Chosen Option : **2**

Q.23 Which of the following welding method is not a solid state welding process?

Question ID : **5013731011**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Friction welding
✗ 2. Forge welding
✓ 3. Resistance spot welding
✗ 4. Ultra-sonic welding

Q.24 Which is the isothermal reversible reaction in which a solid phase is converted into two or more intimately mixed solids on cooling?

Question ID : **5013731001**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Peritectoid
✗ 2. Peritectic
✗ 3. Eutectic
✓ 4. Eutectoid

Q.25 Elliptical gear train used in differential gear of automobile helps in:

Question ID : **5013731077**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. Reducing jerk
✗ 2. Assisting in speed change
✗ 3. Reducing speed
✓ 4. Turning

Q.26 The cutting speed of the tool in turning operation is:

Question ID : **5013731007**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Directly proportion to diameter of the workpiece
✗ 2. Inversely proportional to the workpiece
✗ 3. Inversely proportional to the square of the workpiece
✗ 4. Directly proportional to the square of the diameter of the workpiece

Q.27 A car starting from rest attains a maximum speed of 100 kmph in 20 seconds. What will be its acceleration assuming it is uniform?

Question ID : **5013731054**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $1.0\ m/s^2$
✓ 2. $1.4\ m/s^2$
✗ 3. $1.8\ m/s^2$
✗ 4. $2.0\ m/s^2$

Q.28 A disc with mass moment of inertia (I) and an angular velocity ω rad/s is spinning about the axis of spin. The angular velocity of precession of the axis of spin is (ω_p), the causing precession will be given by:

Question ID : **5013731075**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $(I\omega^2\omega_p)$
✓ 2. $(I\omega\omega_p)$
✗ 3. $\left(\frac{1}{2}I\omega^2\omega_p\right)$

✗ 4. $\left(\frac{1}{2} I\omega\omega_p\right)$

Q.29 Two walls of same thickness and cross-sectional area have thermal conductivities in the ratio 1:2. If the ratio of temperature drop across the two walls is 2:3, what is the ratio of heat flow?

Question ID : **5013731032**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. 1 : 2
✓ 2. 1 : 3
✗ 3. 2 : 1
✗ 4. 3 : 1

Q.30 A hole of diameter (d) is to be punched through a sheet metal of thickness (t) How much force is required to punch the hole if the ultimate shear stress of the sheet metal is (τ) ?

Question ID : **5013731065**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. $dt\tau$
✗ 2. $\frac{\pi}{4} d^2 t\, \tau$
✓ 3. $\pi dt\tau$
✗ 4. $\frac{\pi}{4} d^2\, \tau$

Q.31 Which of the following locating device is used to locate cylindrical jobs?

Question ID : **5013731024**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Drill jigs
✓ 2. V-blocks
✗ 3. Angle plates
✗ 4. Metal pins

Q.32 In rolling process, roll separation force can be reduced by:

Question ID : **5013731005**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. increasing the roll diameter
✗ 2. increasing the friction between the rolls and workpiece
✗ 3. providing backup roll
✓ 4. reducing the roll diameter

Q.33 The frequency of the vibrations generated by the transducer in ultra-sonic machining will in the order of _____.

Question ID : **5013731014**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 10 kHz
✗ 2. 5 kHz
✗ 3. 2 kHz
✓ 4. 20 kHz

Q.34 An eye bolt is to be used for lifting a load of 70 KN and the tensile stress is not to exceed 100 MPa. The core diameter of the bolt will be given by:

Question ID : **5013731067**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. $\left(\frac{2100}{\pi}\right)^{1/2}$
✓ 2. $\left(\frac{2800}{\pi}\right)^{1/2}$

✗ 3. $\left(\frac{210}{\pi}\right)^{1/2}$

✗ 4. $\left(\frac{280}{\pi}\right)^{1/2}$

Q.35 A heat engine which receives 80 kJ of heat at 100 °C and rejects 70 kJ of heat to the ambient at 30 °C is to be designed. The thermal efficiency of the heat engine is:

Question ID : **5013731049**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. 70%
✗ 2. Can not be determine.
✗ 3. 1.88%
✓ 4. 12.5%

Q.36 In flat belt drive the condition for maximum power transmission is given by: (where T maximum tension and T_c centrifugal tension in belt)

Question ID : **5013731078**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. $T = 3T_c$
✗ 2. $T = 2T_c$
✗ 3. $T = \pi T_c$
✗ 4. $T = 3\pi T_c$

Q.37 How many elements are present in tool signature of a single point cutting tool used for turning operation?

Question ID : **5013731021**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 5
✗ 2. 6
✓ 3. 7
✗ 4. 8

Q.38 What is the coordination number for simple cubic structure?

Question ID : **501373999**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 4
✗ 2. 8
✗ 3. 12
✓ 4. 6

Q.39 Which of the following is the best suited for production of hallow pipes?

Question ID : **501373993**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1. Centrifugal casting
✗ 2. Investment casting
✗ 3. Continuous casting
✗ 4. Hot chamber die casting

Q.40 What is the maximum possible theoretical efficiency of a heat engine operating with a hot reservoir of gases at 2127 °C, when the cooling water available is at 27 °C?

Question ID : **5013731045**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 98.8%
✗ 2. 90%
✓ 3. 87.5%
✗ 4. 100%

Q.41

A ball and a socket joint is example of _____ pair.

Question ID : **5013731083**
Status : **Answered**
Chosen Option : **2**

Ans
1. Screw ✗
2. Spherical ✓
3. Turning ✗
4. Rolling ✗

Q.42 Though vibration cannot be eliminated completely, it can be suppressed to a greater extent using:

Question ID : **5013731072**
Status : **Answered**
Chosen Option : **1**

Ans
1. Damper ✓
2. Accumulator ✗
3. Receiver ✗
4. Reducer ✗

Q.43 In Euler's formula, the ratio of the effective length of column to least radius of gyration of the cross section is known as:

Question ID : **5013731064**
Status : **Answered**
Chosen Option : **2**

Ans
1. Expansion ratio ✗
2. Slenderness ratio ✓
3. Thickness ratio ✗
4. Compression ratio ✗

Q.44 Which of the following is used as a dielectric medium in EDM?

Question ID : **5013731023**
Status : **Answered**
Chosen Option : **4**

Ans
1. Salt solution ✗
2. Silicon carbide solution ✗
3. Al_2O_3 solution ✗
4. Kerosene ✓

Q.45 Which of the following is NOT an input for material requirement planning?

Question ID : **5013731010**
Status : **Answered**
Chosen Option : **2**

Ans
1. Bill of materials ✗
2. Purchase order ✓
3. Inventory record file ✗
4. Master production schedule ✗

Q.46 Tolerances for a hole and shaft assembly having a nominal size of 40 mm are as follows:

Hole = $40^{+0.06}_{+0.02}$ mm and shaft = $40^{-0.06}_{-0.08}$ mm

Determine MML of hole.

Question ID : **5013731002**
Status : **Answered**
Chosen Option : **3**

Ans
1. 39.94 mm ✗
2. 40.06 mm ✗
3. 40.02 mm ✓
4. 39.92 mm ✗

Q.47 In belt drive power transmitted is given by:
(where T_t , T_s and v are tight side tension, slack side tension and linear velocity of belt respectively)

Question ID : **5013731079**
Status : **Answered**
Chosen Option : **3**

Ans
1. $= (T_t - T_s)/2v$ ✗
2. $= (T_t + T_s)/2v$ ✗

✔ 3. $= (T_t - T_s)v$

✘ 4. $= (T_t + T_s)v$

Q.48 In which of the following operations performed on lathe machine, chips does not occur?

Question ID : **5013731013**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. Knurling

✘ 2. Boring

✘ 3. Reaming

✘ 4. Threading cutting

Q.49 If a particle is in static equilibrium, then the work done by the system of forces acting on that particle is:

Question ID : **5013731052**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. Negative

✘ 2. Infinity

✔ 3. Zero

✘ 4. Positive

Q.50 In turning operation, the typical ratio of heat generated in chip, tool and workpiece is in the order of:

Question ID : **501373989**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. 70 : 20 : 10

✘ 2. 10 : 70 : 20

✘ 3. 10 : 20 : 70

✘ 4. 70 : 10 : 20

Q.51 The pressure inside a Pelton turbine casing during working _____.

Question ID : **5013731037**
Status : **Answered**
Chosen Option : **2**

Ans

✘ 1. increases

✔ 2. remains constant

✘ 3. decreases

✘ 4. first decreases and then increases

Q.52 The stress-concentration factor (K) is:

Question ID : **5013731058**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. ratio of maximum stress occurring near discontinuity to average stress at critical section.

✘ 2. ratio of minimum stress occurring near discontinuity to average stress at critical section.

✘ 3. ratio of average stress at critical section to minimum stress occurring near discontinuity.

✘ 4. ratio of average stress at critical section to maximum stress occurring near discontinuity.

Q.53 A Wahl's stress factor (K_s) is:
(where C spring index)

Question ID : **5013731069**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. $\left(\frac{4C-1}{4C-4}+\frac{0.615}{2C}\right)$

✘ 2. $\left(\frac{4C-4}{4C-4}+\frac{0.615}{C}\right)$

✔ 3. $\left(\frac{4C-1}{4C-4}+\frac{0.615}{C}\right)$

✘ 4. $\left(\frac{4C-1}{4C-1}+\frac{0.615}{C}\right)$

Q.54 The position of a particle in rectilinear motion is given by the equation ($x = t^3 - 2t^2 + 10t - 4$), where x is in meters and t is in seconds. What will be the velocity of the particle at $3s$?

Question ID : **5013731053**
Status : **Answered**
Chosen Option : **2**

Ans
✘ 1. 20 m/s
✔ 2. 25 m/s
✘ 3. 15 m/s
✘ 4. 30 m/s

Q.55 When water glides over the runner blades of a hydraulic reaction turbine:

Question ID : **5013731036**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. pressure remains constant
✔ 2. pressure decreases
✘ 3. pressure first increases and then decreases
✘ 4. pressure increases

Q.56 A shaft with torsional stiffness (q) has a disc of mass moment of inertia (I) attached at the end, then the natural frequency (f_n) of free torsional vibration of the shaft is given by:

Question ID : **5013731071**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. $f_n = 2\mu\sqrt{qI}$
✘ 2. $f_n = \frac{1}{2\mu}\sqrt{qI}$
✔ 3. $f_n = \frac{1}{2\mu}\sqrt{\frac{q}{I}}$
✘ 4. $f_n = 2\mu\sqrt{\frac{q}{I}}$

Q.57 Electron beam machining can be carried out in _____.

Question ID : **501373986**
Status : **Answered**
Chosen Option : **4**

Ans
✘ 1. open air
✘ 2. pressurized air
✘ 3. water
✔ 4. vacuum

Q.58 If a moment M acting on a rigid body causes an angular displacement θ then work done by the moment is given by:

Question ID : **5013731051**
Status : **Answered**
Chosen Option : **1**

Ans
✔ 1. $M * \theta$
✘ 2. $3M * \theta$
✘ 3. $4M * \theta$
✘ 4. $2M * \theta$

Q.59 The principle most commonly followed for locating workpieces in a fixture is:

Question ID : **501373996**
Status : **Answered**
Chosen Option : **3**

Ans
✘ 1. 2 - 3 - 1

✗ 2. 1 - 2 - 3

✓ 3. 3 - 2 - 1

✗ 4. 1 - 3 - 2

Q.60 Natural frequency (ω_n) of a passenger car whose weight is w Newton and whose suspension has a combined stiffness of k N/mm is given by:

Question ID : **5013731074**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. $\omega_n = \sqrt{\frac{1}{km}}$

✗ 2. $\omega_n = \sqrt{km}$

✓ 3. $\omega_n = \sqrt{\frac{k}{m}}$

✗ 4. $\omega_n = \sqrt{\frac{km}{2}}$

Q.61 Which of the following are provided in mould so as to increase the heat extraction capacity of the sand mould?

Question ID : **5013731022**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. Chaplets

✗ 2. Core

✓ 3. Chills

✗ 4. Cope

Q.62 The work transfer per unit mass for a steady flow process with reversible adiabatic compression is:

Question ID : **5013731042**
Status : **Answered**
Chosen Option : **1**

Ans

✓ 1. $\int vdp$

✗ 2. $\int sdT$

✗ 3. $\int pdv$

✗ 4. $\int Tds$

Q.63 Which of the following is pessimistic time estimate as per PERT?

Question ID : **5013731008**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1.
The most probable time considering all conditions.

✗ 2.
The shortest possible time in which an activity can be completed.

✓ 3.
The maximum time that would be required to complete an activity.

✗ 4.
The minimum time that would be required to complete an activity.

Q.64 In Mohr's circle σ_1 and σ_2 are the principle stress acting at point on the component. The maximum shear stress τ_{max} is given by:

Question ID : **5013731063**
Status : **Answered**
Chosen Option : **3**

Ans

✗ 1. $\tau_{max} = \left(\frac{\sigma_1 * \sigma_2}{2}\right)$

2. $\tau_{max} = \left(\frac{\sigma_{1*}\sigma_2}{4}\right)$

3. $\tau_{max} = \left(\frac{\sigma_{1-}\sigma_2}{2}\right)$

4. $\tau_{max} = \left(\frac{\sigma_{1+}\sigma_2}{4}\right)$

Q.65 In Bernoulli's equation, $\frac{p}{\rho g} + \frac{v^2}{2g} + Z$, each term represents:

Question ID : **5013731029**
Status : **Answered**
Chosen Option : **3**

Ans

1. total energy per unit mass
2. total energy per unit volume
3. total energy per unit weight
4. total energy per unit flow area

Q.66 Mechanism is said to be converted to structure if the degree of freedom of mechanism reduced to:

Question ID : **5013731082**
Status : **Answered**
Chosen Option : **3**

Ans

1. 3
2. 1
3. 0
4. 2

Q.67 The thickness of laminar boundary layer at a distance x from the leading edge over a flat plate varies as:

Question ID : **5013731030**
Status : **Answered**
Chosen Option : **3**

Ans

1. $x^{-1/2}$
2. $x^{1/3}$
3. $x^{1/2}$
4. x

Q.68 The property relation for enthalpy change, dh is:

Question ID : **5013731048**
Status : **Answered**
Chosen Option : **2**

Ans

1. $Tds - pdv$
2. $Tds + vdp$
3. $Tds - vdp$
4. $Tds + pdv$

Q.69 The period (T) for the pendulum with length (l) and placed at the gravitational acceleration (g) is given by:

Question ID : **5013731073**
Status : **Answered**
Chosen Option : **1**

Ans

1. $T = 2\pi\sqrt{\frac{l}{g}}$
2. $T = 2\pi\sqrt{lg}$
3. $T = 3\pi\sqrt{\frac{l}{g}}$
4. $T = 3\pi\sqrt{lg}$

Q.70 The following limits are specified in a limit system, to give a clearance fit between a hole and a shaft:

Hole = $25^{+0.02}_{-0.01}$ mm and Shaft = $25^{-0.004}_{-0.02}$ mm

Determine tolerance on shaft.

Question ID : **5013731000**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ 0.012 mm
2. ✓ 0.016 mm
3. ✗ 0.018 mm
4. ✗ 0.014 mm

Q.71 A polar moment of Inertia (I) for hollow shaft with external diameter (D) and internal diameter (d) is given by:

Question ID : **5013731070**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✗ $32D^4/\pi d^4$
2. ✗ $\pi(D^4 - d^4)/64$
3. ✓ $\pi(D^4 - d^4)/32$
4. ✗ $32(D^4 - d^4)/\pi$

Q.72 Sand and oxide layers adhering to the casting are removed by which of the following processes?

Question ID : **5013731018**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ Heating
2. ✓ Shot blasting
3. ✗ Gas cutting
4. ✗ Air cooling

Q.73 A steady, incompressible flow is given by $u = x^2 + y^2$ and $v = 2xy$. What is the convective acceleration along x direction at the point (1, 1)?

Question ID : **5013731028**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✗ 12 unit
2. ✗ 6 unit
3. ✓ 8 unit
4. ✗ 24 unit

Q.74 What happens to the liquid level, when a small diameter tube is inserted into a liquid whose contact angle is 125°?

Question ID : **5013731026**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ Liquid level in the tube will fall first and then rise.
2. ✓ Liquid level in the tube falls.
3. ✗ Liquid level in the tube remains constant.
4. ✗ Liquid level in the tube rises.

Q.75 If v_1 and v_2 are the initial velocities of two bodies making direct collision and if u_1 and u_2 are their respective velocities after collision then the coefficient of restitution is given by:

Question ID : **5013731056**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✓ $(u_1 - u_2)/(v_2 - v_1)$
2. ✗ $(u_1 - u_2)/(v_1 - v_2)$
3. ✗ $(u_1 + u_2)/(v_1 + v_2)$
4. ✗ $(v_1 - v_2)/(u_1 - u_2)$

Q.76 In blanking operation, clearance is provided to:

Question ID : **501373995**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Stripper
✗ 2. Die
✓ 3. Punch
✗ 4. Die and Punch

Q.77 In which of the following processes, metal moulds are used?

Question ID : **5013731019**
Status : **Answered**
Chosen Option : **2**

Ans
✗ 1. Sand casting
✗ 2. Investment casting
✗ 3. Shell moulding
✓ 4. Die casting

Q.78 If m is the mass of the body and g is the acceleration due to gravity then the gravitational force is given by:

Question ID : **5013731050**
Status : **Answered**
Chosen Option : **4**

Ans
✗ 1. $m * g^3$
✗ 2. $m * g^2$
✗ 3. m/g
✓ 4. $m * g$

Q.79 How much force will be exerted by the floor of the lift on a passenger of 80 Kg mass when lift is accelerating downward at 0.81 m/s^2?

Question ID : **5013731055**
Status : **Answered**
Chosen Option : **3**

Ans
✗ 1. 740 N
✗ 2. 700 N
✓ 3. 720 N
✗ 4. 680 N

Q.80 Helmholtz function is expressed as:

Question ID : **5013731046**
Status : **Answered**
Chosen Option : **3**

Ans
✓ 1. $u - Ts$
✗ 2. $-sdT + vdp$
✗ 3. $h - Ts$
✗ 4. $u + pv$

Q.81 Which of the following is true for self locking screw?

Question ID : **5013731062**
Status : **Answered**
Chosen Option : **1**

Ans
✓ 1.
The coefficient of friction is equal to or greater than the tangent of the helix angle.
✗ 2.
The coefficient of friction is half of the tangent of the helix angle.
✗ 3.
The coefficient of friction is twice of the tangent of the helix angle.
✗ 4.
The coefficient of friction is less than the tangent of the helix angle.

Q.82

Question ID : **5013731068**

The spring rate or stiffness (k) of the spring is given by: (where w load and δ deflection of spring)

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

Ans
1. ✗ $k = 2w\delta$
2. ✗ $k = \delta/w$
3. ✗ $k = w\delta$
4. ✓ $k = w/\delta$

Q.83 Cold chamber die casting is suitable for which of the material listed below?

Question ID : **501373994**
Status : **Answered**
Chosen Option : **3**

Ans
1. ✓ Brass
2. ✗ Tin
3. ✗ Zinc
4. ✗ Lead

Q.84 In turning, chip thickness ratio will be _____.

Question ID : **5013731012**
Status : **Answered**
Chosen Option : **4**

Ans
1. ✗ equal to zero
2. ✗ greater than two
3. ✗ greater than one
4. ✓ less than one

Q.85 The viscosity of liquids decreases with increase in temperature due to:

Question ID : **5013731025**
Status : **Answered**
Chosen Option : **1**

Ans
1. ✓ decreased cohesive forces
2. ✗ increased cohesive forces
3. ✗ decreased molecular momentum transfer
4. ✗ increased molecular momentum transfer

Q.86 Which of the following involves planning the production output levels of major product lines produced by the firm?

Question ID : **5013731009**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ Material requirement planning
2. ✗ Master production schedule
3. ✗ Computer aided process planning
4. ✓ Aggregate production planning

Q.87 Acceleration of the reciprocating mass of a slider-crank mechanism is given by:
(where ω is angular speed of the crank, θ is angle of inclination of the crank with the line of stroke, r is radius of crank and n is ratio of the length of the connecting rod to the crank radius)

Question ID : **5013731076**
Status : **Answered**
Chosen Option : **2**

Ans
1. ✗ $r\omega^2\left(sin2\theta + \frac{sin2\theta}{n}\right)$
2. ✗ $r\omega^2\left(sin\theta + \frac{sin2\theta}{n}\right)$
3. ✗ $r\omega^2\left(cos2\theta + \frac{cos2\theta}{n}\right)$

✔ 4. $r\omega^2\left(cos\theta+\frac{cos2\theta}{n}\right)$

Q.88 Joule-Thomson coefficient is given by:

Question ID : **5013731047**
Status : **Answered**
Chosen Option : **3**

Ans

✘ 1. $\left(\frac{\partial p}{\partial T}\right)_h$

✘ 2. $\left(\frac{\partial T}{\partial h}\right)_p$

✘ 3. $\left(\frac{\partial h}{\partial p}\right)_T$

✔ 4. $\left(\frac{\partial T}{\partial p}\right)_h$

Q.89 A thin cylindrical pressure vessel of 500 mm internal diameter is subjected to an internal pressure of 2 N/mm^2.What will be the hoop stress if the thickness of the vessel is 20 mm?

Question ID : **5013731066**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. 25 N/mm^2

✘ 2. 23 N/mm^2

✘ 3. 27 N/mm^2

✘ 4. 29 N/mm^2

Q.90 In resistance welding the voltage supplied is:

Question ID : **5013731016**
Status : **Answered**
Chosen Option : **2**

Ans

✘ 1. 100 V

✔ 2. 1 V

✘ 3. 500 V

✘ 4. 1000 V

Q.91 What is the number of cycles completed per second for a four stroke diesel engine running at 6000 rpm?

Question ID : **5013731039**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. 50

✘ 2. 500

✘ 3. 6000

✘ 4. 3000

Q.92 The temperature distribution at a certain instant of time in a slab during a process is given by $T = 2x^2 + x + 5$, where x is in cm and T is in K. If the thermal diffusivity is 0.0002 cm^2/s, the rate of change of temperature with time is given by:

Question ID : **5013731033**
Status : **Answered**
Chosen Option : **4**

Ans

✔ 1. 0.0008 K/s

✘ 2. 0.0004 K/s

✘ 3. − 0.0004 K/s

✘ 4. − 0.0008 K/s

Q.93 When a shaft with diameter (d) is subjected to pure bending moment (M_b), the bending stress (σ_b) induced in the shaft is given by:

Question ID : **5013731059**
Status : **Answered**
Chosen Option : **1**

Ans

✔ 1. $\sigma_b = \left(\frac{32\ M_b}{\pi d^3}\right)$

2. $\sigma_b = \left(\frac{64\,M_b}{\pi d^3}\right)$

3. $\sigma_b = \left(\frac{64\,M_b}{\pi d^2}\right)$

4. $\sigma_b = \left(\frac{32\,M_b}{\pi d^2}\right)$

Q.94 In Electric discharge machining, temperature produced by the spark between tool and work piece while machining will be in the order of _____.

Question ID : **501373988**
Status : **Answered**
Chosen Option : **2**

Ans

1. 10 °C
2. 10000 °C
3. 100 °C
4. 1000 °C

Q.95 In a reversible adiabatic process the ratio $\left(\frac{T_1}{T_2}\right)$ is equal to:

Question ID : **5013731044**
Status : **Answered**
Chosen Option : **3**

Ans

1. $(v_1 v_2)^{\frac{\gamma-1}{\gamma}}$
2. $\left(\frac{v_1}{v_2}\right)^{\frac{\gamma-1}{\gamma}}$
3. $\left(\frac{p_1}{p_2}\right)^{\frac{\gamma-1}{\gamma}}$
4. $\left(\frac{p_2}{p_1}\right)^{\gamma}$

Q.96 According to the Ernst and Merchant theory, the relation between the shear angle (Φ), friction angle (β) and rake angle (α) in single point cutting tool in turning is as follows:

Question ID : **5013731003**
Status : **Answered**
Chosen Option : **2**

Ans

1. $2\Phi + \beta + \alpha = 90°$
2. $2\Phi + \beta - \alpha = 90°$
3. $\Phi + 2\beta - \alpha = 45°$
4. $2\Phi + \beta - \alpha = 45°$

Q.97 The Coriolis component of acceleration is applicable for which of the following mechanisms?

Question ID : **5013731080**
Status : **Answered**
Chosen Option : **3**

Ans

1. Pantograph
2. Crank-slider mechanism
3. Quick return motion mechanism (Slotted Lever)
4. Four bar chain

Q.98 In Brayton cycle, heat addition is a _____.

Question ID : **5013731041**
Status : **Answered**
Chosen Option : **4**

Ans

1. constant enthalpy process
2. constant entropy process

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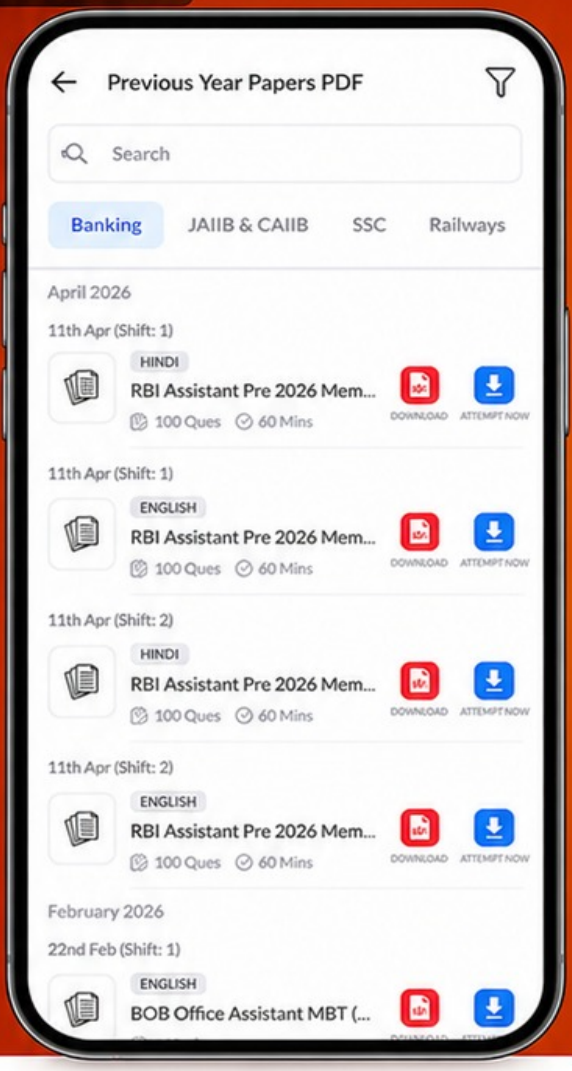

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3. constant volume process

4. constant pressure process

Q.99 HSS tool is used to machine a 20 mm diameter steel shaft, at a spindle speed of 1000 revolutions per minute. What is the cutting speed?

Question ID : **5013731020**
Status : **Answered**
Chosen Option : **2**

Ans

1. π m/min
2. $20\ \pi$ m/min
3. π mm/min
4. $20\ \pi$ mm/min

Q.100 According to Chvorinov, following is the correct formula for solidification time (T_s), where k = Mould casting constant, V = volume of casting, SA = surface area.

Question ID : **501373992**
Status : **Answered**
Chosen Option : **3**

Ans

1. $T_s = V\,(SA/k)^2$
2. $T_s = k\,(SA/v)^2$
3. $T_s = k\,(V/SA)^2$
4. $T_s = V\,(k/SA)^2$