



**MAT 2003**

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# Intelligence & Critical Reasoning

## Instructions

Answer these questions based on the Following information.

A team of experts for conducting interviews consists of seven experts Bhushan, Cyriac, Pramila, Ram, Suresh, Shekhar and Unni. Of these Bhushan, Cyriac and Pramila are experts in Social Sciences while Suresh and Unni are experts in Basic Sciences. Ram and Shekhar had exposure in both basic sciences and social sciences. Three panels have to be formed for the interview with a restriction that a panel should have representation from experts with social sciences and basic sciences back ground. Moreover, at least one member should be an expert of only one area.

## Question 1

If Cyriac does not like to be a member of panel with Ram, and Unni was in a panel with Shekhar, then the expert who did not participate in the

- A Pramila
- B Cyriac
- C Bhushan
- D Any of these

Answer: D

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## Question 2

If Pramila did not participate in the interview, then who was the person most likely to be with Unni?

- A Suresh
- B Bhushan
- C Pramila
- D Any of these

Answer: B

## Question 3

Unni does not like to be with Shekhar; Ram does not like to be with Pramila and Bhushan had Suresh as the partner. If both Ram and Pramila attended the interview, then who was the partner to Cyriac?

- A Cyriac did not attend the interview
- B Shekhar
- C Pramila
- D Unni

Answer: A

## Instructions

These questions are based on the following information.

A set of eight candidates A, B, C, D, E, F, G and H are being interviewed by two panels of interviewers: Panel I and Panel II – from 9.30 to 10.50 on a particular day. Each panel will spend about 10 minutes per candidate and at no time during the interview process will a panel be without any candidate. The original schedules of interviews for the eight candidates are shown in the following table:

Candidate	Panel-I Time	Panel-II Time
A	9.30 to 9.40	10.10 to 10.20
B	9.40 to 9.50	10.20 to 10.30
C	9.50 to 10.00	10.30 to 10.40
D	10.00 to 10.10	10.40 to 10.50
E	10.10 to 10.20	9.30 to 9.40
F	10.20 to 10.30	9.40 to 9.50
G	10.30 to 10.40	9.50 to 10.00
H	10.40 to 10.50	10.00 to 10.10

Due to requests from the candidates, the interview schedule was altered for several candidates. The alterations were made in such a way that whenever a change was made, the time schedule for both the panels of a particular candidate was exchanged in entirety with the time schedule of another candidate.

The following alterations were made:

- I. A's place was taken by G
- II. A in turn was accommodated in C's place
- III. C in turn was accommodated in E's place
- IV. E took H's place
- V. H took G's place

#### Question 4

Which of the following candidates Finished the interviews along with E?

- A A
- B C
- C D
- D F

Answer: C

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#### Question 5

Which of the following candidates Finished the interviews before C?

- A B
- B D
- C Both of these
- D None of these

Answer: D

#### Question 6

If G and A had to leave together, then how much time did any of them has to wait?

- A A has to wait 10 minutes
- B G has to wait 20 minutes
- C None of them has to wait

D G has to wait 30 minutes

Answer: B

#### Question 7

Which one of the Following statements is true?

- A G could leave even before E's First interview was over
- B F and left together
- C D was the only candidate who could give company to E
- D All of these

Answer: C

## Free Gk Tests

#### Instructions

Study the information given below to answer these questions.

- (i) There is a family of 5 persons A, B, C, D and E.
- (ii) They are working as a doctor, a teacher, a trader, a lawyer and a farmer.
- (iii) B, an unmarried teacher, is the daughter of A.
- (iv) E, a lawyer, is the brother of C.
- (v) C, is husband of the only Married couple in the Family.
- (vi) A, a farmer, is a father of two sons and an unmarried daughter.
- (vii) Daughter-in-law of A is a doctor.

#### Question 8

Which of the following is a group of female members in the family?

- A B and D
- B D and E
- C A, C and E
- D B and C

Answer: A

#### Question 9

Which of the Following is the married couple?

- A A and B
- B C and D
- C A and D
- D B and D

Answer: B

#### Question 10

Which of the following is a group of male members in the family?

- A A,B and C
- B B and D
- C A,C and E
- D A,C and D

Answer: C

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### Question 11

Who is the doctor in the family?

- A A
- B B
- C C
- D D

Answer: D

### Question 12

Who is the trader in the family?

- A A
- B B
- C C
- D D

Answer: C

### Instructions

On the basis of the following information, answer these questions.

Six people are sitting on the ground in a hexagonal shape. The hexagon's vertices are marked as A, B, C, D, E and F but not in any order. However, all the sides of the hexagon are of same length. A is not adjacent to B or C; D is not adjacent to C or E; B and C are adjacent; F is in the middle of D & C.

### Question 13

If one neighbour of A is D, then who is the other one?

- A B
- B C
- C E
- D F

Answer: C

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Question 14

Who is placed opposite to E?

- A F
- B D
- C C
- D B

Answer: A

Question 15

Who is at the same distance from D as Eis from D?

- A B
- B C
- C D
- D F

Answer: B

Question 16

Which of the following is not a correct neighbouring pair?

- A B & E
- B C & F
- C D & F
- D A & F

Answer: D

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Question 17

Which of the following is in the right sequence?

- A B, C, F
- B A, F, B
- C D, A, B
- D F, A, E

Answer: A

Instructions

In these questions some of the letters are missing. The missing letters are given in the proper sequence as one of the alternatives. Find the correct alternative.

**Question 18**

ab—abb—bba—b

- A aba
- B bba
- C bab
- D baa

**Answer: C**

**Question 19**

rst-vrs-uv-stu-rst-

- A rstrsts
- B uvtrstu
- C uvtrsuv
- D utrvuv

**Answer: D**

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**Question 20**

-c-ca-ab-bc-

- A abcac
- B babca
- C ccabb
- D bcabb

**Answer: B**

**Instructions**

In these questions, choose the appropriate number for the quadrant in which the question mark appears.

**Question 21**

5	4
20	9

3	8
24	11

9	4
?	13

- A 36
- B 117
- C 52
- D 26

Answer: A

**Question 22**

6	7
42	13

4	9
36	13

8	3
?	11

- A 30
- B 24
- C 18
- D 12

Answer: B

## Daily Free Topic Test

**Instructions**

Six products U, V, W, X, Y and Z are to be placed in display windows of a shop. There are six display windows – numbered 1, 2, 3, 4, 5, 6 and one product is to be put in one window. Moreover, U cannot be immediately to the left or immediately to the right of V. W must be immediately to the left of X. Z can not be in window number 6.

**Question 23**

Which of the following products cannot be placed in window no. 1?

- A U
- B V
- C W
- D X

Answer: D

**Question 24**

If X is placed in window no 3, then W must be placed in which window?

- A 1
- B 2



C 4

D 5

Answer: A

**Question 25**

11 U is placed in window no. 5, then which of the following products must be placed in window no. 6?

A V

B W

C X

D Y

Answer: B

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**Instructions**

In each of these questions, two statements are followed by two conclusions numbered I and II. Assume the given statements to be true, even if they seem to bear variance with commonly known facts and then mark your answer as –

**Question 26**

**Statements:**

All players are smokers.

Some smokers are wine-addicts.

**Conclusions:**

I. All smokers are players.

II. Some wine-addicts are smokers.

A If only conclusion I follows

B If only conclusion II follows

C If both the conclusions follow

D If neither I nor II follows

Answer: D

**Question 27**

**Statements:**

All women are ministers.

All ministers are simpleton.

**Conclusions:**

I. All women are simpleton.

II. All ministers are simpleton.

A If only conclusion I follows

B If only conclusion II follows

C If both the conclusions follow

D If neither I nor II follows

Answer: C

**Question 28**

**Statements:**

**All cars are not trains.**

**All cars are four-wheeled vehicles.**

**Conclusions:**

**I. All trains are not four-wheeled vehicles.**

**II. Some trains are four-wheeled vehicles.**

- A If only conclusion I follows
- B If only conclusion II follows
- C If both the conclusions follow
- D If neither I nor II follows

Answer: A

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**Question 29**

**Statements:**

**All jails are guest houses.**

**All guest houses are comfortable.**

**Conclusions:**

**I. All jails are comfortable.**

**II. No jail is comfortable.**

- A If only conclusion I follows
- B If only conclusion II follows
- C If both the conclusions follow
- D If neither I nor II follows

Answer: A

**Instructions**

Study the following information to answer these questions.

A blacksmith has five iron articles A, B, C, D and E each having a different weight.

- (i) A weighs twice as much as B
- (ii) B weighs four and a half times as much as C
- (iii) C weighs half as much as D
- (iv) D weighs half as much as E
- (v) E weighs less than A but more than C

**Question 30**

**Which of the following is the lightest in weight?**

- A A
- B B
- C C

D D

Answer: C

Question 31

E is lighter in weight than which of the other two articles?

A A,B

B D,C

C A,C

D D,B

Answer: A

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Question 32

E is heavier than which of the following two articles?

A D,B

B D,C

C A,C

D A,B

Answer: B

Question 33

Which of the following articles is the heaviest in weight?

A A

B B

C C

D D

Answer: A

Question 34

Which of the following represents the descending order of weights of the articles?

A A, B, E, D, C

B B, D, E, A, C

C A, B, C, D, E

D C, D, E, B, A

Answer: A

## Daily Free Topic Test

### Instructions

From the set of numbers given in the four alternatives, which one is the most similar to the given set:

#### Question 35

Given Set: (6, 15, 28)

- A (50, 59, 71)
- B (46, 56, 66)
- C (60, 69, 72)
- D (60, 69, 82)

Answer: D

#### Question 36

Given Set: (81, 77, 69)

- A (56, 52, 44)
- B (64, 61, 53)
- C (92, 88, 79)
- D (75, 71, 60)

Answer: A

### Instructions

For the following questions answer them individually

#### Question 37

There are many reasons why individuals want to run their own businesses. Some foresee more personal satisfaction if they are successful in launching their own business, while others are interested mainly in the prospect of larger financial rewards. Since 1980s and early 1990s tax regulation and liberal policies have encouraged increasing number of venture capitalists and entrepreneurs to start new enterprises. Since 1990, some one-half million new ventures have been started. Not all have succeeded, of course.

The above statement makes which of the following assumptions?

- A Success in starting a new business depends in large part on sound financial planning.
- B Venture capitalists are motivated by non monetary gains.
- C Social incentives motivate investors just as much as financial rewards.
- D Most new business ventures succeed initially but fail later on.

Answer: C

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#### Question 38

Many business offices are located in buildings having two to eight floors, if a building has more than three floors, it has a lift. If the above statements are true, then which of the following must also be true?

- A Second floors do not have lifts.
- B Seventh floors have lifts.
- C Only floors above the third floors have lifts.
- D All floors may be reached by lifts.

Answer: B

#### Question 39

A highly cohesive work group is a prerequisite for high team performance. Sociologists point that the association between group cohesion and success is owing to the support individual team members give to one another and their acceptance of the group's goals and activities. Each of the following, if true, either provides support for or cannot weaken the sociologists' assumption about the relationship between cohesive and success EXCEPT.

- A A group of Japanese researchers found that successful work teams were headed by dominant leaders.
- B University researchers found that there was a significant correlation between team productivity and the extent to which the team members understood and complied with the group's objectives.
- C American researchers found that successful team members tended to rate their fellow members more favourably.
- D Industrial psychologists in UK found that work groups who tended to participate in after hours social activities were more productive.

Answer: A

#### Question 40

"Some men are certainly intelligent, others are certainly not intelligent, but of intermediate men, we should say, 'intelligent'? Yes, I think, so or no, I shouldn't be inclined to call him intelligent." Which of the following most accurately reflects the intention of the writer of the above ?

- A To call men intelligent who are not strikingly so must be to use the concept with undue imprecision.
- B Every empirical concept has a degree of vagueness.
- C Calling someone intelligent or not depends upon one's whim.
- D There is no need to be as indecisive as the writer of the above.

Answer: C

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### Mathematical Skills

#### Instructions

For the following questions answer them individually

#### Question 41

The sum of the  $6^{th}$  and  $15^{th}$  elements of an arithmetic progression is equal to the sum of  $7^{th}$ ,  $10^{th}$  and  $12^{th}$  elements of the same progression. Which element of the series should necessarily be equal to zero?

- A  $10^{th}$
- B  $8^{th}$

C 1<sup>st</sup>

D None of these

Answer: B

Explanation:

Let the A.P. be  $A_1, A_2, A_3, \dots$  and so on, with first term =  $a$  and common difference =  $d$

Also,  $n^{\text{th}}$  term of an A.P. =  $A_n = a + (n - 1)d$

Acc to ques,

$$\Rightarrow A_6 + A_{15} = A_7 + A_{10} + A_{12}$$

$$\Rightarrow (a + 5d) + (a + 14d) = (a + 6d) + (a + 9d) + (a + 11d)$$

$$\Rightarrow a + 7d = 0$$

Thus,  $A_8 = 0$

$\Rightarrow$  Ans - (B)

## Free Gk Tests

### Question 42

Mr. X's salary is increased by 20%. On the increase, the tax rate is 10% higher. The percentage increase in tax liability is

A 20

B 22

C 23

D Indeterminate

Answer: D

Explanation:

Since, we do not know the tax on the initial salary, we cannot determine the increase in tax liability.

$\Rightarrow$  Ans - (D)

### Question 43

Rohit, Harsha and Sanjeev are three typists who, working simultaneously, can type 216 pages in four hours. In one hour, Sanjeev can type as many pages more than Harsha as Harsha can type more than Rohit. During a period of five hours, Sanjeev can type as many pages as Rohit can during seven hours. How many pages does each of them type per hour?

A 16, 18, 22

B 14, 17, 20

C 15, 17, 22

D 15, 18, 21

Answer: D

Explanation:

Let number of pages typed per hour by Rohit, Harsha and Sanjeev respectively be  $x, y, z$

$$\Rightarrow 4(x + y + z) = 216$$

$$\Rightarrow x + y + z = 54 \text{ -----(i)}$$

Also,  $z - y = y - x$   
 $\Rightarrow x + z - 2y = 0$ -----(ii)

Subtracting equation (ii) from (i), we get :  $y = 18$

$\Rightarrow x + z = 36$ ----- (iii)

Also,  $5z = 7x$ ----- (iv)

Now, solving equations (iii) and (iv), we get :  $x = 15$  and  $z = 21$

$\therefore$  Pages typed per hour by Rohit, Harsha and Sanjeev respectively are : **15,18,21**

$\Rightarrow$  Ans - (D)

#### Question 44

A box of light bulbs contains 24 bulbs. A worker replaces 17 bulbs in the shipping department and 13 bulbs in the accounting department. How many boxes of bulbs did the worker use?

A 1

B  $1\frac{1}{4}$

C  $1\frac{3}{4}$

D 2

Answer: B

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#### Question 45

If there are 3 different roads from Delhi to Mumbai and 4 different roads from Mumbai to Chennai, then how many roads are there from Delhi to Chennai that go through Mumbai?

A 9

B 12

C 16

D 4

Answer: B

#### Explanation:

Number of roads from Delhi to Chennai via Mumbai

$= 3 \times 4 = 12$

$\Rightarrow$  Ans - (B)

#### Question 46

What will Rs. 1000 be worth after three years if it earns interest at the rate of 5% compounded annually?

A 1057

B 1257

C 1157

D 1300

Answer: C

**Explanation:**

Principal = Rs. 1000 and rate of interest = 5% and time period = 3 years

=> Amount when compounded annually =  $P(1 + \frac{r}{100})^t$

$$= 1000(1 + \frac{5}{100})^3$$

$$= 1000 \times (\frac{21}{20})^3$$

$$\approx \text{Rs. } 1157$$

=> Ans - (C)

**Question 47**

A bag contains 2 red, 3 green and 2 blue balls. 2 balls are to be drawn randomly. What is the probability that the balls drawn contain no blue ball?

A  $\frac{5}{7}$

B  $\frac{10}{21}$

C  $\frac{2}{7}$

D  $\frac{11}{21}$

Answer: A

**Explanation:**

There are 2 red, 3 green and 2 blue balls

Probability of drawing blue balls =  $\frac{2}{7}$

=> Probability that the balls drawn contain no blue ball =  $1 - \frac{2}{7}$

$$= \frac{5}{7}$$

=> Ans - (A)

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**Question 48**

If  $p, q, r, s$  are in harmonic progression and  $p > s$ , then

A  $\left(\frac{1}{ps}\right) < \left(\frac{1}{qr}\right)$

B  $q + r = p + s$

C  $\left(\frac{1}{q}\right) + \left(\frac{1}{p}\right) = \left(\frac{1}{r}\right) + \left(\frac{1}{s}\right)$

D None of these

Answer: D

**Question 49**

A worker makes a basket in  $\frac{2}{3}$  of an hour. If he works for  $7\frac{1}{2}$  hours, then how many baskets will he make?



A  $10 \binom{3}{4}$

B  $11 \binom{1}{4}$

C  $12 \binom{1}{2}$

D 13

Answer: B

Explanation:

Baskets made in  $\frac{2}{3}$  hours = 1 basket

=> Baskets made in  $\frac{15}{2}$  hours =  $\frac{3}{2} \times \frac{15}{2}$

=  $\frac{45}{4} = 11\frac{1}{4}$

=> Ans - (B)

Question 50

The slope of a function  $y = x^3 + kx$  at  $x = 2$  is equal to the area under the curve  $z = a^2 + a$  between points  $a = 0$  and  $a = 3$  Then the value of  $k$  is

A 1.5

B 5.5

C 6.5

D Cannot be determined

Answer: A

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Question 51

If 5 men take an hour to dig a ditch, then how long should 12 men take to dig a ditch of the same type?

A 25 minutes

B 30 minutes

C 28 minutes

D 20 minutes

Answer: A

Explanation:

Let time taken by 12 men be  $t$  minutes.

=>  $5 \times 60 = 12 \times t$

=>  $t = 25$  minutes

=> Ans - (A)

Question 52

The difference between the logarithms of sum of the squares of two positive numbers A and B and the sum of logarithms of the individual numbers is a constant C. If  $A = B$ , then C is

- A 2
- B 1.3031
- C  $\log 2$
- D  $\exp(2)$

Answer: C

#### Question 53

How much interest will Rs- 10,000 earn in 9 months at an annual rate of 6 per cent?

- A 450
- B 500
- C 475
- D 600

Answer: A

#### Explanation:

Principal = Rs. 10,000 and rate of interest = 6%

$$\Rightarrow \text{Interest} = \frac{10,000 \times 6 \times 9}{12 \times 100}$$

$$= 50 \times 9 = \text{Rs. } 450$$

$\Rightarrow$  Ans - (A)

### Free Gk Tests

#### Question 54

There are four prime numbers written in ascending order. The product of the first three is 385 and that of the last three is 1001. The first number is

- A 5
- B 7
- C 11
- D 17

Answer: A

#### Explanation:

Prime factorization of :

$$385 = 5 \times 7 \times 11$$

$$1001 = 7 \times 11 \times 13$$

Thus, the 4 prime numbers are : 5,7,11,13

$\Rightarrow$  Smallest one = 5

$\Rightarrow$  Ans - (A)

#### Question 55

A train can travel 20% faster than a car. Both start from the point A at the same time and reach point B 75 km away from A at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is

- A 50 kmph
- B 55 kmph
- C 60 kmph
- D 65 kmph

**Answer: C**

**Explanation:**

Let speed of car =  $10x$  km/hr

=> Speed of train =  $12x$  km/hr

Time taken by both to travel 75 km =  $\frac{75}{10x} = \frac{75}{12x} + \frac{12.5}{60}$

$$\Rightarrow 75\left(\frac{1}{60x}\right) = \frac{12.5}{60}$$

$$\Rightarrow x = \frac{75}{12.5} = 6$$

∴ Speed of car = 60 km/hr

=> Ans - (C)

**Question 56**

Pintoo dealt some cards to Minto and himself from a full pack of playing cards and laid the rest aside. Pintoo then said to Minto, "If you give me a certain number of your cards I will have 4 times as many cards as you have. If I give you the same number of cards, I will have thrice as many cards as you have." How many cards did Pintoo have?

- A 31
- B 32
- C 29
- D 30

**Answer: A**

**Explanation:**

Let number of cards with Pintoo =  $x$  and number of cards laid aside =  $z$

=> Number of cards with Minto =  $(52 - x - z)$

Let number of cards exchanged =  $k$

Acc. to ques, =>  $(x + k) = 4(52 - x - z - k)$

$$\Rightarrow x + k = 208 - 4x - 4k - 4z$$

$$\Rightarrow 5x + 5k + 4z = 208 \text{ -----(i)}$$

Similarly,  $(x - k) = 3(52 - x - z + k)$

$$\Rightarrow x - k = 156 - 3x + 3k - 3z$$

$$\Rightarrow 4x - 4k + 3z = 156 \text{ -----(ii)}$$

By applying 3(i)-4(ii), we get :  $-x + 31k = 0$

$$\Rightarrow x = 31k$$

Now, we know that  $y$  is a constant greater than 0, also since there are only 52 cards, we have  $k = 1$

∴ Number of cards with Pintoo =  $x = 31$

=> Ans - (A)

## Daily Free Topic Test

### Question 57

An express train travelled at an average speed of 100 kmph, stopping for 3 minutes after every 75 km. A local train travelled at a speed of 50 kmph, stopping for 1 minute after every 25 km. If the trains began travelling at the same time, then how many kilometres did the local train travel in the time it took the express train to travel 600 km?

- A 307.5 km
- B 900 km
- C 1200 km
- D 1000 km

Answer: A

### Explanation:

Normal time taken by express train (without stoppage) =  $\frac{600}{100} = 6$  hours

Number of time it stopped =  $\frac{600}{75} = 8$

Thus, it stopped 7 times for a total time of =  $3 \times 7 = 21$  minutes

Now, distance travelled by local train in 6 hours and 21 minutes

= 300 km in 6 hours and 12 minutes (12 stoppages)

Thus, in the last 9 minutes, it will travel =  $\frac{50}{60} \times 9 = 7.5$  km

$\therefore$  Total distance travelled = **307.5 km**

=> Ans - (A)

### Question 58

For an acute angle  $\theta$ ,  $\sin \theta + \cos \theta$  takes the greater value when  $\theta$  is

- A  $30^\circ$
- B  $45^\circ$
- C  $60^\circ$
- D  $90^\circ$

Answer: B

### Explanation:

Let  $f(\theta) = \sin \theta + \cos \theta$

=>  $f'(\theta) = \cos \theta - \sin \theta$

Now, max value of  $f(\theta)$  will be when  $f'(\theta) = 0$

=>  $\cos \theta = \sin \theta$

$\therefore \theta$  is acute, =>  $\theta = 45^\circ$

=> Ans - (B)

### Question 59

HCF of 3240, 3600 and a third number is 36 and their LCM is  $2^4 \times 3^5 \times 5^2 \times 7^2$ . The third number is

- A  $2^4 \times 5^3 \times 7^2$
- B  $2^2 \times 3^5 \times 7^2$
- C  $2^3 \times 3^5 \times 7^2$
- D  $2^5 \times 5^2 \times 7^2$

Answer: B

**Explanation:**

Let the third number be  $x$ . H.C.F. = 36. Prime factorization of :

$$3240 = 2^3 \times 3^4 \times 5$$

$$3600 = 2^4 \times 3^2 \times 5^2$$

$$\Rightarrow x = 2^2 \times 3^n \times k, \text{ where } n \geq 2 \text{ and } k \text{ is any prime number and } k \neq 5$$

$$\text{Also, LCM is } 2^4 \times 3^5 \times 5^2 \times 7^2$$

$$\Rightarrow n = 5 \text{ and } k = 7^2$$

$$\therefore x = 2^2 \times 3^5 \times 7^2$$

$\Rightarrow$  Ans - (B)

## MAT Free Solved Previous Papers

**Question 60**

The cost function at production  $x$  is defined as  $C(x) = 3x^3 - x + 2$  and sale function at A cost  $x$  is defined as  $S(x) = \left(\frac{A}{x^3}\right)$ . Which of the following is true?

- A Min sales =  $\left(\frac{3}{4}\right)^2 A$
- B Min sales =  $\left(\frac{9}{2}\right)^2 A$
- C Max sales =  $\left(\frac{3}{4}\right)^2 A$
- D Max sales =  $\left(\frac{9}{2}\right)^2 A$

Answer: C

**Question 61**

If  $x$  is a positive number, then which of the following fractions has the greatest value?

- A  $\frac{x}{x}$
- B  $\frac{(x+1)}{x}$
- C  $\frac{x}{(x+1)}$
- D  $\frac{(x+2)}{(x+3)}$

Answer: B

**Explanation:**

Let  $x = 10$

(A) :  $\frac{10}{10} = 1$

(B) :  $\frac{10+1}{10} = 1.1$  [MAX]

(C) :  $\frac{10}{11} < 1$

(D) :  $\frac{12}{13} < 1$

=> Ans - (B)

#### Question 62

Which values of  $x$  are satisfied by the inequality  $2x^2 + x - 3 < 0$ ?

A  $-\left(\frac{3}{2}\right) < x < 1$

B  $-1 < x < \left(\frac{2}{3}\right)$

C  $x > 1$

D  $x < \left(\frac{-2}{5}\right)$

Answer: A

#### Explanation:

Expression :  $2x^2 + x - 3 < 0$

=>  $2x^2 - 2x + 3x - 3 < 0$

=>  $(2x + 3)(x - 1) < 0$

Now product of two numbers is negative only if one is positive and other is negative.

Case I :  $(2x + 3) > 0 \Rightarrow x > \frac{-3}{2}$

and  $(x - 1) < 0 \Rightarrow x < 1$

$\therefore \frac{-3}{2} < x < 1$

Case II :  $(2x + 3) < 0 \Rightarrow x < \frac{-3}{2}$

and  $(x - 1) > 0 \Rightarrow x > 1$ , which is not possible.

=> Ans - (A)

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#### Question 63

If the probability that A will live 15 years is  $\left(\frac{7}{8}\right)$  and that B will live 15 years is  $\left(\frac{9}{10}\right)$ , then what is the probability that both will live after 15 years?

A  $\frac{1}{20}$

B  $\frac{63}{80}$

C  $\frac{1}{5}$

D None of these

Answer: B

#### Explanation:

Both the events are independent so if two events are independent say A and B then probability of both happening =  $P(A) \times P(B)$

$$P(\text{A will live 15 more years}) = \frac{7}{8}$$

$$P(\text{B will live 15 more years}) = \frac{9}{10}$$

$$P(\text{A will live 15 more years and B will live 15 more years}) = \frac{7}{8} \times \frac{9}{10} \\ = \frac{63}{80}$$

=> Ans - (B)

#### Question 64

A shopkeeper sold a TV set for Rs. 17,940, with a discount of 8% and gained 19.6%. If no discount is allowed, then what will be his gain per cent?

- A 25%
- B 26.4%
- C 24.8%
- D None of these

Answer: D

#### Explanation:

Selling price = Rs. 17,940

$$\text{Marked price after discount of 8\%} = \frac{17940}{92} \times 100 = \text{Rs. } 19,500$$

$$\text{Also, cost price} = \frac{17940}{119.6} \times 100 = \text{Rs. } 15,000$$

If no discount is allowed, => selling price = Rs. 19,500

$$\therefore \text{Profit \%} = \frac{19500 - 15000}{15000} \times 100 \\ = \frac{4500}{150} = 30\%$$

=> Ans - (D)

#### Question 65

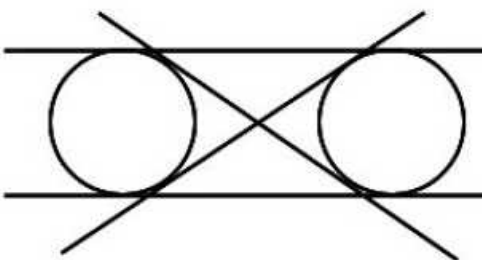
The number of tangents that can be drawn to two non-intersecting circles is

- A 4
- B 3
- C 2
- D 1

Answer: A

#### Explanation:

The number of tangents that can be drawn to two non-intersecting circles is 4.



=> Ans - (A)

## Free Gk Tests

### Question 66

A number is increased by 10% and then reduced by 10%. After this operation, the number

- A Does not change.
- B Decreases by 1%.
- C Increases by 1%.
- D Increases by 0.1%.

**Answer:** B

#### Explanation:

Let number be 100

When it is increased by 10%, => new number = 110

When it is decreased by 10%, => new number =  $\frac{90}{100} \times 110 = 99$

Thus, original number **decrease by 1%**.

#### [Method 2]

$$\% \text{ Change} = 10 + (-10) + \frac{10 \times (-10)}{100}$$

$$= -1\%$$

=> Ans - (B)

### Question 67

The average of 11 numbers is 10.9. If the average of the first six numbers is 10.5 and that of the last six numbers is 11.4, then the middle number is

- A 11.5
- B 11.4
- C 11.3
- D 11.0

**Answer:** A

#### Explanation:

Average of 11 numbers = 10.9

$$\Rightarrow \text{Sum of 11 numbers} = 10.9 \times 11 = 119.9$$

$$\text{Similarly, sum of first six numbers} = 10.5 \times 6 = 63$$

$$\text{and sum of last six numbers} = 11.4 \times 6 = 68.4$$

$$\text{Thus, middle number} = (63 + 68.4) - 119.9 = 11.5$$

=> Ans - (A)

### Question 68

A man sells an article at 5% profit. If he had bought it at 5% less and sold it for Re. 1 less, he would have gained 10%. The costprice of the article is



- A Rs. 200
- B Rs. 150
- C Rs. 250
- D Rs. 240

**Answer: A**

**Explanation:**

Let cost price of the article = Rs.  $100x$

Selling price after 5% profit = Rs.  $105x$

Now, new cost price = Rs.  $95x$

and new selling price = Rs.  $(105x - 1)$

$$\Rightarrow \text{Profit \%} = \frac{105x - 1 - 95x}{95x} \times 100 = 10$$

$$\Rightarrow \frac{10x - 1}{95x} = \frac{1}{10}$$

$$\Rightarrow 100x - 10 = 95x$$

$$\Rightarrow x = \frac{10}{5} = 2$$

$\therefore$  Cost price = **Rs. 200**

$\Rightarrow$  Ans - (A)

## Daily Free Topic Test

**Question 69**

A starts 3 min after B for a place 4.5 km distant B, on reaching his destination, immediately returns and after walking a km meets A. if A can walk 1 km in 18 minutes, then what is B's speed ?

- A 5 kmph
- B 4 kmph
- C 6 kmph
- D 3.5 kmph

**Answer: A**

**Explanation:**

Let B's speed be  $x$  km/hr and A's speed =  $\frac{60}{18} = \frac{10}{3}$  km/hr

Distance covered by B in 3 minutes =  $\frac{x}{20}$  km

Now, time taken by A to travel 3.5 km = Time taken by B to travel 5.5 km - 3 minutes

$$\Rightarrow 3.5 \times \frac{3}{10} = \frac{5.5}{x} - \frac{3}{60}$$

$$\Rightarrow 1.05 + 0.05 = \frac{5.5}{x}$$

$$\Rightarrow x = \frac{5.5}{1.1} = 5 \text{ km/hr}$$

$\Rightarrow$  Ans - (A)

**Question 70**

A company has 6,435 bars of soap, if the company has sold 20 per cent of its stock, then how many bars of soap did it sell?

- A 1237
- B 1257
- C 1287
- D 1300

**Answer: C**

**Explanation:**

$$\text{Number of soap bars sold} = \frac{20}{100} \times 6435$$

$$= 1287$$

=> Ans - (C)

**Question 71**

A dairyman pays Rs. 6.4 per liter of milk. He adds water and sells the mixture at Rs. 8 per liter, thereby making 37.5% profit. The proportion of water to milk received by the customers is

- A 1 : 15
- B 1 : 10
- C 1 : 20
- D 1 : 12

**Answer: B**

**Explanation:**

Let quantity of milk purchased be  $x$  litres and water added be  $y$  litres

Thus, cost price = Rs.  $6.4x$

Selling price = Rs.  $8(x + y)$

Also, profit % = 37.5% =  $\frac{3}{8}$

$$\Rightarrow \frac{8(x+y) - 6.4x}{6.4x} = \frac{3}{8}$$

$$\Rightarrow 1.6x + 8y = 2.4x$$

$$\Rightarrow 8y = 0.8x$$

$$\Rightarrow \frac{y}{x} = \frac{1}{10}$$

=> Ans - (B)

## MAT Free Solved Previous Papers

**Question 72**

Wheels of diameters 7 cm and 14 cm start rolling simultaneously from X and Y, which are 1980 cm apart, towards each other in opposite directions. Both of them make same number of revolutions per second. If both of them meet after 10 seconds, the speed of the smaller wheel is

- A 22 cm/sec.
- B 44 cm/sec.
- C 66 cm/sec.

D 132 cm/sec.

**Answer: C**

**Explanation:**

Distance covered by big wheel in 1 revolution =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 7 = 44 \text{ cm}$$

and by small wheel = 22 cm

Since, distance  $\propto$  speed

Let speed of small wheel =  $x$  cm/s,  $\Rightarrow$  Speed of big wheel =  $2x$  cm/s

Also, relative speed of both wheels =  $\frac{1980}{10} = 198$  cm

$$\Rightarrow x + 2x = 198$$

$$\Rightarrow x = \frac{198}{3} = 66 \text{ cm/s}$$

$\Rightarrow$  Ans - (C)

**Question 73**

What is the eighth term of the sequence 1, 4, 9, 16, 25, .....

A 8

B 64

C 128

D 200

**Answer: B**

**Explanation:**

The given sequence is square of natural numbers, i.e  $(1)^2, (2)^2, (3)^2, (4)^2$  and so on.

Thus, eighth term =  $(8)^2 = 64$

$\Rightarrow$  Ans - (B)

**Question 74**

A bicycle originally costs Rs 100 and was discounted 10%. After three months it was sold after being discounted 15%. How much was the bicycle sold for?

A 55.5

B 95.25

C 76.5

D None of these

**Answer: C**

**Explanation:**

Purchase price of cycle =  $\frac{90}{100} \times 100 = \text{Rs. } 90$

After another discount of 15%, selling price =  $\frac{85}{100} \times 90$

= Rs. 76.5

$\Rightarrow$  Ans - (C)

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### Question 75

$\left(\frac{1}{2}\right) \log_{10} 25 - 2 \log_{10} 3 + \log_{10} 18$  equals

- A 18
- B 1
- C  $\log_{10} 3$
- D None of these

**Answer: B**

### Explanation:

Expression :  $\left(\frac{1}{2}\right) \log_{10} 25 - 2 \log_{10} 3 + \log_{10} 18$

$$= \left(\frac{1}{2}\right) \log_{10} (5)^2 - 2 \log_{10} 3 + \log_{10} (3^2 \times 2)$$

Using,  $\log (a \times b) = \log a + \log b$  and  $\log a^b = b \log a$

$$= \log_{10} 5 - 2 \log_{10} 3 + 2 \log_{10} 3 + \log_{10} 2$$

$$= \log_{10} (5 \times 2) = \log_{10} 10 = 1$$

=> Ans - (B)

### Question 76

A bag contains Rs. 216 in the form of one rupee, 50 paise and 25 paise coins in the ratio of 2 : 3 : 4. The number of 50 paise coins is

- A 96
- B 144
- C 114
- D 141

**Answer: B**

### Explanation:

Let number of one rupee, 50 paise and 25 paise coins be  $2x$ ,  $3x$  and  $4x$  respectively.

$$\text{Total amount} = (1 \times 2x) + (0.5 \times 3x) + (0.25 \times 4x) = 216$$

$$\Rightarrow 2x + 1.5x + x = 4.5x = 216$$

$$\Rightarrow x = \frac{216}{4.5} = 48$$

$$\therefore \text{Number of 50 paise coins} = 3 \times 48 = 144$$

=> Ans - (B)

### Question 77

The length of the longest rod that can be placed in a room which is 12 m long 9 m broad and 8 m high is

- A 27 m
- B 19 m
- C 17 m

D 13 m

Answer: C

Explanation:

Length of longest rod will be placed as a diagonal of length =  $\sqrt{l^2 + b^2 + h^2}$

$$= \sqrt{(12)^2 + (9)^2 + (8)^2}$$

$$= \sqrt{144 + 81 + 64} = \sqrt{289}$$

$$= 17 \text{ m}$$

=> Ans - (C)

## Free Gk Tests

Question 78

Two trains of equal length are running on parallel lines in the same direction at 46 km and 36 km per hr. The faster train passes the slower train in 36 sec. The length of each train is

A 50 m.

B 80 m.

C 72 m.

D 82 m.

Answer: A

Explanation:

Let length of each train =  $x$  m

$$\text{Relative speed} = (46 - 36) \times \frac{5}{18} = \frac{50}{18} \text{ m/s}$$

$$\Rightarrow \frac{x+x}{18} = 36$$

$$\Rightarrow \frac{36x}{50} = 36$$

$$\Rightarrow x = 50 \text{ m}$$

=> Ans - (A)

Question 79

The remainder when 784 is divided by 342 is

A 0

B 1

C 49

D 341

Answer: B

Question 80

In a 800 m race around a stadium having the circumference of 200 m, the top runner meets the last runner on the 5th minute of the race. If the top runner runs at twice the speed of the last runner, what is the time taken by the top runner to finish the race?

A 20 min

- B 15 min
- C 10 min
- D 5 min

**Answer:** C

**Explanation:**

Let A be the top runner and B be the last runner

Both A and B starts running at same time.

After 5 mins A and B meet and A completes 400m and B completes 200m (Ratio of speed is 2:1)

After another 5 mins A completes 800m and B completes 400m. Thus A finishes the race

=> Time taken by A = 5+5=10mins

=> Ans - (C)

## Daily Free Topic Test

### Data Analysis & Sufficiency

**Instructions**

These questions are based on the following table. The table shows the number of emergencies attended by 6 fire brigade substations during May - October 2002.

Sub Section	May	June	July	Aug	Sep	Oct
A	12	15	17	21	13	17
B	18	21	15	18	18	19
C	10	11	19	21	23	18
D	17	17	19	12	18	10
E	12	15	18	10	21	11
F	14	15	12	13	18	19

**Question 81**

Number of emergencies attended by the 6 substations was the same in the months of

- A May & June
- B June & July
- C August & September
- D June & October

**Answer:** D

**Explanation:**

Number of emergencies attended by the 6 substations in :

May = 12+18+10+17+12+14 = 83

June = 15+21+11+17+15+15 = 94

July = 17+15+19+19+18+12 = 100

Aug = 21+18+21+12+10+13 = 95

Sep = 13+18+23+18+21+18 = 111

$$\text{Oct} = 17+19+18+10+11+19 = 94$$

Thus, emergencies attended were same in **June and October**.

=> Ans - (D)

## MAT Free Solved Previous Papers

### Question 82

Which of the following substations showed a greater increase in the number of emergencies attended in August as compared to July?

A A

B E

C D

D C

**Answer:** A

### Explanation:

Required difference in the number of emergencies attended in August as compared to July

$$(A) : A = 21-17 = 4 \quad \text{[MAX]}$$

$$(B) : E = 10-18 = -8$$

$$(C) : D = 12-19 = -7$$

$$(D) : C = 21-19 = 2$$

=> Ans - (A)

### Question 83

Which substation attended to the maximum number of complaints in the given period?

A A

B B

C C

D F

**Answer:** B

### Explanation:

Number of complaints attended by :

$$(A) : A = 12+15+17+21+13+17 = 95$$

$$(B) : B = 18+21+15+18+18+19 = 109 \quad \text{[MAX]}$$

$$(C) : C = 10+11+19+21+23+18 = 102$$

$$(D) : F = 14+15+12+13+18+19 = 91$$

=> Ans - (B)

### Question 84

Which two months aggregated over 36% of the total number of emergencies in the six-month period?

A May and June

B July and October

C August and September

D July and September

Answer: D

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**Instructions**

Answer these questions based on the data given in the following table. The table shows the installment amounts for monthly repayments (in Rupees) on housing society loans for different periods.

	<b>YEARS</b>			
<b>Loan</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>
1,00,000	1250	1050	900	850
2,00,000	2500	2050	1800	1600
10,00,000	12950	10300	9000	8450
15,00,000	19400	15450	13500	12650
20,00,000	25900	20600	18000	16800

**Question 85**

How much more money would be paid on a loan of Rs. 20,00,000 taken out over 20 years compared to the same loan taken over a period of 15 years?

A Rs. 3,00,000

B Rs. 4,25,000

C Rs. 5,50,000

D Rs. 6,12,000

Answer: D

**Explanation:**

Amount to be repaid while taking a loan of Rs. 20,00,000 with a repayment period of 15 years

$$= 20600 \times 15 \times 12 = \text{Rs. } 37,08,000$$

Amount to be repaid while taking a loan of Rs. 20,00,000 with a repayment period of 20 years

$$= 18000 \times 20 \times 12 = \text{Rs. } 43,20,000$$

$$\therefore \text{Cumulative financial impact} = \text{Rs. } (43,20,000 - 37,08,000) = \text{Rs. } 6,12,000$$

=> Ans - (D)

**Question 86**

What is the total amount repaid over 25 years on a loan of Rs. 15,00,000?

A Rs. 22,50,000

B Rs. 37,95,000

C Rs. 45,30,000

D Rs. 55,70,000

Answer: B

**Explanation:**



Amount to be repaid while taking a loan of Rs. 15,00,000 with a repayment period of 25 years

$$= 12650 \times 25 \times 12 = \text{Rs. } 37,95,000$$

=> Ans - (B)

#### Question 87

The monthly repayment on a loan of Rs. 15,00,000 over 20 years is reduced to Rs. 12500. By how much would this reduce the total amount on the loan over the full period?

A Rs. 1,30,000

B Rs. 2,40,000

C Rs. 2,24,000

D Rs. 1,26,000

Answer: B

#### Explanation:

Amount to be repaid while taking a loan of Rs. 15,00,000 with a repayment period of 20 years when EMI is Rs. 13,500

$$= 13500 \times 20 \times 12 = \text{Rs. } 32,40,000$$

Amount to be repaid while taking a loan of Rs. 15,00,000 with a repayment period of 20 years when EMI is Rs. 12,500

$$= 12500 \times 20 \times 12 = \text{Rs. } 30,00,000$$

$$\therefore \text{Cumulative financial impact} = \text{Rs. } (32,40,000 - 30,00,000) = \text{Rs. } 2,40,000$$

=> Ans - (B)

#### [Method 2]

$$\text{Required difference} = (13500 - 12500) \times 20 \times 12 = \text{Rs. } 2,40,000$$

=> Ans - (B)

Free Gk Tests

#### Question 88

Instead of taking a loan of Rs. 10,00,000 with a repayment period of 15 years, the society proposes to take a loan of Rs. 15,00,000 to be paid back in 10 years to provide for a generator set. What is the cumulative financial impact?

A Rs. 4,54,000

B Rs. 4,74,000

C Rs. 5,67,000

D Cannot be assessed

Answer: B

#### Explanation:

Amount to be repaid while taking a loan of Rs. 10,00,000 with a repayment period of 15 years

$$= 10300 \times 15 \times 12 = \text{Rs. } 18,54,000$$

Amount to be repaid while taking a loan of Rs. 15,00,000 with a repayment period of 10 years

$$= 19400 \times 10 \times 12 = \text{Rs. } 23,28,000$$

$$\therefore \text{Cumulative financial impact} = \text{Rs. } (23,28,000 - 18,54,000) = \text{Rs. } 4,74,000$$

=> Ans - (B)

#### Instructions

Answer these questions based on the data given in the table below. The table shows the trends in the relative value in the market of select groups of commodities (1999 - 2003):

Commodities	YEARS				
	1999	2000	2001	2002	2003
Milk	95	92	86	72	76
Cereals	75	68	62	66	60
Fats and Oils	76	70	68	62	58
Gas	82	76	100	98	96
Vegetables	80	62	64	84	88
Fruits	79	74	72	66	73

**Question 89**

What is the average difference in the relative value of the six commodities in 2003 compared to 1999?

- A +8
- B -5
- C -6
- D +4

**Answer: C**

**Explanation:**

Difference in the relative value of the six commodities in 2003 compared to 1999

$$= (76 - 95) + (60 - 75) + (58 - 76) + (96 - 82) + (88 - 80) + (73 - 79)$$

$$= (-19) + (-15) + (-18) + (14) + (8) + (-6) = -36$$

$$\Rightarrow \text{Required average} = \frac{-36}{6} = -6$$

$\Rightarrow$  Ans - (C)

**Question 90**

Which value showed the greatest amount of change in 1999 compared to 2003?

- A Milk
- B Gas
- C Fats & Oils
- D Vegetables

**Answer: C**

**Explanation:**

Amount of change in 1999 compared to 2003

$$(A): \frac{95-76}{76} \times 100 = 25\%$$

$$(B): \frac{96-82}{96} \times 100 \approx 14.5\%$$

$$(C): \frac{76-58}{58} \times 100 \approx 30\% \quad \text{[MAX]}$$

$$(D): \frac{88-80}{88} \times 100 \approx 9.09\%$$

$\Rightarrow$  Ans - (C)

**Question 91**

Which commodity showed the least variation in value over the period 1999-2003?

- A Cereals
- B Gas
- C Vegetables
- D Fruits

**Answer: D**

**Explanation:**

The commodity which showed the least variation in value over the period 1999-2003 is the one which has the least difference in value between 1999 and 2003, which clearly is fruits :  $\frac{79-73}{79} \times 100 \approx 7.5\%$

=> Ans - (D)

**Question 92**

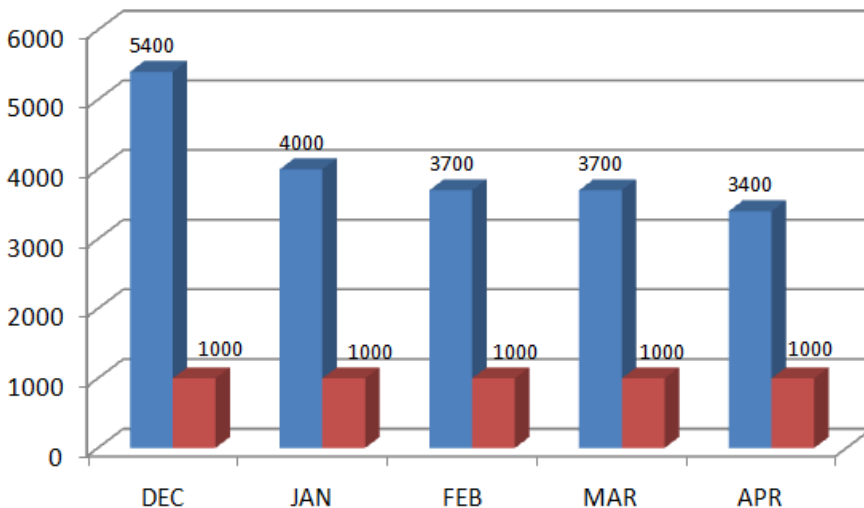
For which commodities is there a clearly discernible trend of decreasing relative value between 1999 - 2003?

- A Cereals and Gas
- B Milk, Cereals, Fats & Oils
- C Milk, Gas, Fats & Oils
- D Vegetables, Fats & Oils

**Answer: B**

**Instructions**

Answer these questions based on the graph given below. The graph shows the net receipts (shaded) and mortgage advances (unshaded) from December 2000 to April 2001 for a building society in Rs. lakh.



**Question 93**

In which two months were the same amount of building society mortgage advances made?

- A December & January
- B January & February

C February & March

D March & April

Answer: D

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### Question 94

In which month was there the greatest excess of building society net receipts over mortgage advances?

A December

B January

C February

D March

Answer: A

#### Explanation:

The ratio of net receipts over mortgage advances will be greatest in the month which has the highest net receipts (since mortgage advances are same for all), which is in the month of **December**.

=> Ans - (A)

### Question 95

What was the ratio of the society mortgage advances to net receipts in April 2001?

A 1 : 8

B 1 : 6

C 1 : 3

D 1 : 4

Answer: C

#### Explanation:

Net receipts in April 2001 = 3400

Mortgage advances in April 2001 = 1000

=> Required ratio =  $\frac{1000}{3400}$

$\approx 1 : 3$

=> Ans - (C)

### Question 96

Assume that, by the end of May 2001, the building society net receipts and mortgage advances had fallen by 50% and 25% respectively, compared to the figures for April 2001. What would the building society turnover (obtained by adding net receipts to mortgage advances) have been for May 2001 in Rs. lakh?

A 1,800

B 2,200

C 2,400

D 2,100

Answer: C

Explanation:

Net receipts (in Rs. lakhs) for May 2001 =  $\frac{50}{100} \times 3400 = 1700$

Advances (in Rs. lakhs) for May 2001 =  $\frac{75}{100} \times 1000 = 750$

Total turnover (in Rs. lakhs) =  $1700 + 750 = 2450 \approx 2400$

=> Ans - (C)

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Instructions

Answer these questions based on the table given below. The table shows number of new female and male employees engaged by 5 employers from 1999 to 2003.

Empolyer	Gender of Employees	1999	2000	2001	2002	2003	Total
A	Female	4	4	5	10	12	35
	Male	5	6	8	12	12	43
B	Female	10	11	9	13	15	58
	Male	12	12	13	23	14	74
C	Female	67	66	74	57	89	353
	Male	13	11	10	6	9	49
D	Female	4	6	8	2	9	29
	Male	3	5	8	6	4	26
E	Female	4	5	4	3	2	18
	Male	4	5	2	6	3	20
Total		126	131	141	138	169	705

Question 97

What was the total number of new employees(female and male)in all the companies in 1999 & 2000?

A 234

B 257

C 235

D 256

Answer: B

Explanation:

Total number of new employees(female and male)in all the companies in 1999 & 2000

=  $126 + 131 = 257$

=> Ans - (B)

Question 98

What is the average number of new female employees per companyin 2001?

A 25

B 30

C 20

D 18

**Answer: C**

**Explanation:**

Total number of new female employees per company in 2001

$$= 5+9+74+8+4 = 100$$

$$\Rightarrow \text{Required average} = \frac{100}{5} = 20$$

$\Rightarrow$  Ans - (C)

**Question 99**

**Of the total number of the new male employees in all the five companies in 2002, what percentage did companies B, C and D employ collectively ?**

A 66%

B 62%

C 65%

D 67%

**Answer: A**

**Explanation:**

Total male employees in 2002 =  $12+23+6+6+6 = 53$

Male employees by B, C and D in 2002 =  $23+6+6 = 35$

$$\Rightarrow \text{Required \%} = \frac{35}{53} \times 100$$

$$\approx \frac{2}{3} \times 100 = 66\%$$

$\Rightarrow$  Ans - (A)

## Free Gk Tests

**Question 100**

**What was the ratio of the new female employees to new male employees in Company in 2000?**

A 1 : 6

B 6 : 1

C 2 : 3

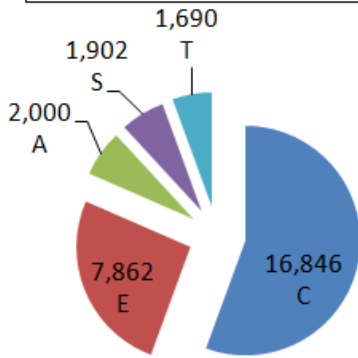
D 3 : 2

**Answer: C**

**Instructions**

The pie chart given below shows the funding arrangements for National Highways Development Projects: Phase 1. Study the chart carefully to answer these questions.

**Funding arrangement for NHDP-1  
(Total cost. Rs. 30,300 crore)**



- Cess/market borrowing
- External assistance
- Annuity
- SPVS
- Toll

**Question 101**

Near about 25% of the funding arrangement is through

- A Cess/Market borrowing
- B External assistance
- C Annuity
- D SPVS

**Answer: B**

**Explanation:**

$$25\% \text{ of funding} = \frac{25}{100} \times 30,300$$

= Rs. 7575 crore which is nearly equal to amount of **External Assistance**.

=> Ans - (B)

**Question 102**

The angle of the segment formed at the centre of the pie chart, representing Cess/Market borrowing is approximately

- A 90°
- B 100°
- C 180°
- D 200°

**Answer: D**

**Explanation:**

Angle of the segment formed at the centre of the pie chart, representing Cess/Market borrowing

$$= \frac{16846}{30300} \times 360^\circ$$

$$= 200.15 \approx 200\%$$

=> Ans - (D)

**Question 103**

If the toll is to be collected through an outsourced agency by allowing a maximum of 10% commission, then how much amount should be permitted to be collected by the outsourced agency, so that the project is supported with Rs. 1690 Crore?

- A Rs. 1690 Crore
- B Rs. 1859 Crore
- C Rs. 16900 Crore
- D Inadequate data

**Answer: B**

**Explanation:**

Commission charged by the outsourced agency = 10% and cost of project = Rs. 1690 crore

$$\Rightarrow \text{Amount permitted to be collected} = 1690 + \left(\frac{10}{100} \times 1690\right)$$

$$= 1690 + 169 = 1859 \text{ crore}$$

$\Rightarrow$  Ans - (B)

**Instructions**

The table below gives the details of foreign tourist arrivals and foreign exchange earnings during the period 1995-1996 to 2001-2002. Answer these questions based on the data given in the following table.

**FOREIGN TOURIST ARRIVALS AND FOREIGN EXCHANGE EARNINGS**

Year	Foreign tourist arrivals(in lakh)	Percent change	Estimated foreign exchange(in millions US \$)	Percent change
1995-96	2190	-	2713	-
1996-97	2334	6.6	2878	6.1
1997-98	2371	1.6	2914	1.3
1998-99	2397	1.1	2993	27
1999-2000	2505	4.5	3036	1.4
2000-01	2699	7.7	3168	4.3
2001-02	2423	-10.2	2910	-8.1

**Question 104**

The maximum percentage increase in foreign tourist arrivals during the given period has been in

- A 2001-2002
- B 2000-2001
- C 1999-2000
- D 1996-1997

**Answer: B**

**Explanation:**

Percentage increase in foreign tourist arrivals during the period :

2001-2002 = Number of tourists decreased (no need to calculate)

$$2000-2001 = \frac{2699 - 2505}{2505} \times 100 \approx 8\% \quad [\text{MAX}]$$

$$1999-2000 = \frac{2505 - 2397}{2397} \times 100 \approx 4\%$$

$$1996-1997 = \frac{2334 - 2190}{2190} \times 100 = 6.5\%$$



=> Ans - (B)

**Question 105**

The estimated foreign exchange earnings have been steadily increasing from the period

- A 1995-1996 to 2001-2002
- B 1995-1996 to 2000-2001
- C 1999-2000 to 2001-2002
- D None of these

**Answer: B**

**Explanation:**

The estimated foreign exchange earnings decreased from the period 2000-01 to 2001-02, thus first and third options are eliminated, hence the estimated foreign exchange earnings have been steadily increasing from the period **1995-96 to 2000-01**.

=> Ans - (B)

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**Question 106**

"As a result of September 11, 2001 incidents in the United States, the tourist arrivals dropped by about 10 percent, when compared with the previous year."

- A The data given in the table supports the above statement.
- B The above statement is not supported by the data given in the table.
- C Additional information is required to arrive at the above conclusion.
- D None of these.

**Answer: A**

**Explanation:**

Number of tourists who arrived in 2000-01 were 2699 lakhs and those who arrived in 2001-02 were 2423 lakhs, and thus the arrival dropped by 10.2 percent.

Thus, the data given in the table supports the above statement.

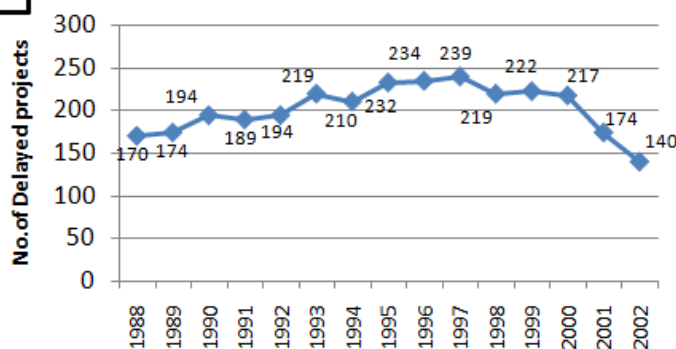
=> Ans - (A)

**Instructions**

Time and cost over-runs have been a major problem affecting the implementation of Central Sector Projects. The trend of time over-runs and cost over-runs are given in the graphs below. Answer these questions based on these graphs.

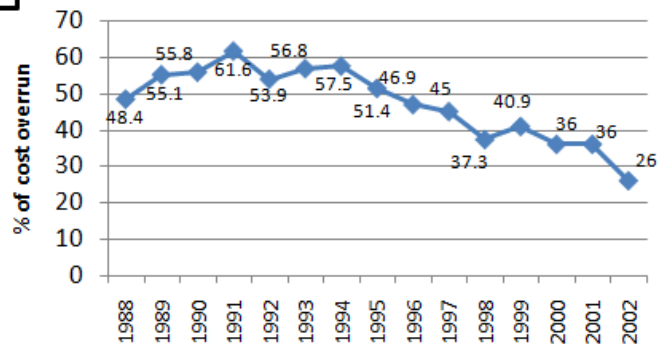
**Central Sector Projects**

Trends of time overrun with reference to original schedule



**Central Sector Projects**

Trends of time overrun with reference to original schedule

**Question 107**

The highest number of delayed projects during the given period was in the year

- A 1991
- B 1994
- C 1997
- D 1996

Answer: C

**Explanation:**

Number of delayed projects during the years :

(A) : 1991 = 189

(B) : 1994 = 210

(C) : 1997 = 239 [MAX]

(D) : 1996 = 234

=> Ans - (C)

**Question 108**

The highest incidents of cost over-run during the given period has been in the year

- A 1991
- B 1994
- C 1997
- D Inadequate data

Answer: A

**Explanation:**

Cost over-run during the year

1991 = 61.6% [MAX]

1994 = 57.5%

1997 = 45%

=> Ans - (A)

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**Question 109**

The number of delayed projects have been the same in the years

- A 1990 and 1992
- B 1989 and 2001
- C Both 1 & 2 above
- D None of these

**Answer:** C

**Explanation:**

Number of delayed projects in the years :

(A) : 1990 and 1992 are 194 each

(B) : 1989 and 2001 are 174 each

Thus, projects delayed are same in both set of years.

=> Ans - (C)

**Question 110**

The percentage cost over-runs have been the same in the years 2000 and 2001. It implies that

- A The cost over-runs have been the same.
- B The cost over-run in 2000 has been more than the cost over-run in 2001.
- C The cost over-run in 2000 has been less than the cost over-run in 2001.
- D None of these.

**Answer:** A

**Explanation:**

The percentage cost over-runs have been the same in the years 2000 and 2001, i.e. 36%. It simply implies that the cost over-runs have been the same for both years.

=> Ans - (A)

**Instructions**

Each question below has two statements, I and II. Mark your answer as:

**Question 111**

For an equation  $ax^2 + bx + c = 0$ , its roots are

- I. Real and different if  $b^2 > 4ac$ .
- II. Imaginary and equal if  $b^2 < 4ac$ .

- A If statement I is True, but not the other one.
- B If statement II is True, but not the other one.
- C If both the statements are True.
- D If neither of the statements is True.

**Answer:** A

**Explanation:**

For an equation  $ax^2 + bx + c = 0$ ,

the roots are :

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Now, if  $b^2 > 4ac$ , roots are real and different.

If  $b^2 = 4ac$ , roots are equal.

If  $b^2 < 4ac$ , roots are imaginary.

Thus, only first statement is true.

=> Ans - (A)

## Free Gk Tests

### Question 112

For on equation  $ax^3 + bx^2 + cx + d = 0$ , if its roots are  $\alpha, \beta$  and  $\gamma$ , then

I.  $\alpha + \beta + \gamma = \frac{c}{a}$

II.  $\alpha \beta \gamma = \frac{d}{a}$

- A If statement I is True, but not the other one.
- B If statement II is True, but not the other one.
- C If both the statements are True.
- D If neither of the statements is True.

Answer: D

#### Explanation:

$ax^3 + bx^2 + cx + d = 0$ , if its roots are  $\alpha, \beta$  and  $\gamma$ , then

$$\alpha + \beta + \gamma = \frac{-b}{a}$$

$$(\alpha\beta) + (\beta\gamma) + (\gamma\alpha) = \frac{c}{a}$$

$$\alpha\beta\gamma = \frac{-d}{a}$$

Thus, neither of the statements is true.

=> Ans - (D)

### Question 113

For a differential expression

I.  $\frac{d}{dx}(\sin^2(3x)) = 2 \cos(3x)$

II.  $\frac{d}{dx}(a^u) = a^u(\log a) \frac{du}{dx}$

- A If statement I is True, but not the other one.
- B If statement II is True, but not the other one.
- C If both the statements are True.
- D If neither of the statements is True.

Answer: B

#### Explanation:

I.  $\frac{d}{dx}(\sin^2(3x)) = 2\sin(3x) \times 3 = 6\sin(3x)$

Hence, first statement is not true.

$$\text{II. } \frac{d}{dx}(a^u) = a^u(\log a) \frac{du}{dx}$$

Hence, second statement is true.

=> Ans - (B)

#### Question 114

If  $y = 2x$ , then

$$\text{I. } \sin y = \frac{2 \tan x}{1 + \tan^2 x}$$

$$\text{II. } \cos y = \frac{2 \tan x}{1 - \tan^2 x}$$

A If statement I is True, but not the other one.

B If statement II is True, but not the other one.

C If both the statements are True.

D If neither of the statements is True.

**Answer: A**

**Explanation:**

$$\sin(2\theta) = \frac{2 \tan \theta}{1 + \tan^2 \theta}$$

$$\text{and } \cos(2\theta) = \frac{1 - \tan^2 \theta}{1 + \tan^2 \theta}$$

Thus, if  $y = 2x$ , then only first statement is true.

=> Ans - (A)

## Daily Free Topic Test

#### Question 115

IF  $z = x + iy$ , where  $i = (-1)$ , then

I.  $z = 0$ , when  $x = 0, y \neq 20$

II. If  $a + bi = c + di$ , then  $a = c, b = d$

A If statement I is True, but not the other one.

B If statement II is True, but not the other one.

C If both the statements are True.

D If neither of the statements is True.

**Answer: B**

**Explanation:**

It is given that  $z = x + iy$ , where  $i = (-1)$

If  $x = 0$ , then  $z = iy$

Hence, first statement is not true.

II: If  $a + bi = c + di$ , then  $a = c, b = d$

If an equation contains both real and imaginary numbers, then the real numbers are equal, and the coefficient of imaginary numbers are also equal.

Hence, second statement is true.

=> Ans - (B)

**Instructions**

In each of these questions, two statements I and II follow a question. Mark your answer as:

**Question 116**

There are three sets  $A, B$  and  $C$ . Find  $A \cap (B \cap C)$

- I.  $A \cup B$  and  $A \cup C$  are known.
- II.  $A \cap B$  and  $A \cap C$  are known

- A If the question can be answered by using any one statement alone, but not by using other statement alone.
- B If the question can be answered by using either of the statements alone.
- C If the question can be answered by using both the statements together, but it cannot be answered by using either of the statements alone.
- D If the question cannot be answered even by using both the statements together.

Answer: A

**Explanation:**

$$A \cap (B \cap C) = (A \cap B) \cap (A \cap C)$$

Thus, we need to know the value of both  $(A \cap B)$  and  $(A \cap C)$  to find the solution, which is given only in statement II.

Thus, the question can be answered by using one statement alone, but not by using other statement alone.

=> Ans - (A)

**Question 117**

A moving train moves  $Y$  meters in  $t$  seconds. Find its acceleration.

- I.  $Y = t^3 - 4t^2 + 16t - 2$
- II. Velocity at that moment was 20 m/sec.

- A If the question can be answered by using any one statement alone, but not by using other statement alone.
- B If the question can be answered by using either of the statements alone.
- C If the question can be answered by using both the statements together, but it cannot be answered by using either of the statements alone.
- D If the question cannot be answered even by using both the statements together.

Answer: C

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**Question 118**

Find the sum of a Geometric series 1, 3, 9, 27, 81 ..... for  $N$  terms.

- I.  $N^{th}$  term is 729.
- II. Next term after the  $N^{th}$  term is thrice of it.

- A If the question can be answered by using any one statement alone, but not by using other statement alone.
- B If the question can be answered by using either of the statements alone.

- C If the question can be answered by using both the statements together, but it cannot be answered by using either of the statements alone.
- D If the question cannot be answered even by using both the statements together.

**Answer: A**

**Explanation:**

Sum of ' $n$ ' terms of G.P. =  $\frac{a(r^n - 1)}{r - 1}$

Now, using the first statement, if we know the  $n^{\text{th}}$  term, then we can find the value of  $n$  and hence the sum of  $n$  terms.

Now, the second statement states that the next term after the  $N^{\text{th}}$  term is thrice of it, which only means that the common ratio  $r = 3$ , and thus we cannot find the sum using this statement.

Hence, the question can be answered using only one statement alone.

=> Ans - (A)

**Question 119**

Find  ${}^{25}C_{10}$ .

I.  ${}^{24}C_{14} = a$

II.  ${}^{24}C_9 = b$

- A If the question can be answered by using any one statement alone, but not by using other statement alone.
- B If the question can be answered by using either of the statements alone.
- C If the question can be answered by using both the statements together, but it cannot be answered by using either of the statements alone.
- D If the question cannot be answered even by using both the statements together.

**Answer: B**

**Question 120**

Meena wants to Find  $\log_{70} 96$ .

I. She knows the value of  $\log_{96} 70$

II. She knows the value of  $\log_{10} 70$

- A If the question can be answered by using any one statement alone, but not by using other statement alone.
- B If the question can be answered by using either of the statements alone.
- C If the question can be answered by using both the statements together, but it cannot be answered by using either of the statements alone.
- D If the question cannot be answered even by using both the statements together.

**Answer: A**

**Explanation:**

Using statement I, we know that  $\log_{96} 70 = k$  (say)

Now,  $\log_{70} 96 = \log_{96} 70 = \frac{1}{k}$

Thus, I statement is sufficient alone.

But, we cannot get the solution using second statement alone.

Thus, the question can be answered by using only one statement alone, but not by using another statement alone.

=> Ans - (A)



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### Language Comprehension

#### Instructions

Given below is an analysis of the employment scenario in the country. Study it critically to answer these questions.

#### Passage I:

In view of the centrality of the employment objective in the overall process of socio - economic development as also to ensure availability of work opportunities in sufficient numbers, Special/ Group On Targeting Ten Million Employment Opportunities Per year Over The Tenth Plan Period was constituted by the Planning Commission under the Chairmanship of Dr. S.P. Gupta, Member, Planning Commission. Considering the need for generating employment opportunities which are gainful, the Special Group has recommended the use of Current Daily Status for measuring employment, as this measure of employment is net of the varying degrees of underemployment experienced by those who are otherwise classified employed on usual status basis. The group has noted the decline in the rate of growth of population, labour and work force, but an increase in the unemployment rate during 1993-94 and 1999-2000, although the overall growth performance of the economy has been better than the previous decade. In view of the declining employment elasticity of growth, observed during the period 1994-2000, the Group has recommended that over and above the employment generated in the process of present structure of growth, there is a need to promote certain identified labour intensive activities. These sectors are agriculture and allied activities, small and medium industries, information technology, construction, tourism, financial sector, education and health, etc. With proper policy initiatives taken in these labour intensive sectors, an additional 20 million jobs will be created during the Tenth Plan. The report also identified ministry wise programmes/targets for achieving the ten million employment opportunities per year.

The Special Group recommended policies and programmes which would enable the skill levels of the labour force to match those required for the new jobs to be created during the Tenth Plan. The recommendations of the Special Group have been suitably incorporated in the employment strategy for the Tenth Five Year Plan by the Planning Commission.

Organised sector employment as on March 31, 2001 was 27.8 million out of which public sector employment stood at 19.1 million and private sector 8.7 million. The public sector accounted for about 69 percent of the total employment in the organised sector in 2001. There was a marginal decrease of 0.6 percent in employment in the organised sector in 2001 as compared to the previous year. While employments in the public sector declined by 0.9 percent in 2001 over 2000, employment in the private sector increased by 0.1 percent. Only a small percentage (8 to 9 percent) of the total workforce of the country is employed in the organised sector. While employment growth in the private organised sector significantly improved in the 1990s, the growth of employment in the public sector was negligible. Since the public sector accounts for more than two thirds of the total organised sector employment, there was slow down of the overall growth in the organised sector employment.

#### Question 121

Which one of the following is incorrect as per the findings of the special group constituted by the Planning Commission?

- A Decline in the rate of growth of population.
- B Increase in the unemployment rate during the last decade.
- C Improved overall growth performance of the economy.
- D Increase in the rate of growth of labour and workforce.

Answer: D

### Free Gk Tests

#### Question 122

Which is/are the labour intensive sectors out of the following identified for promotion by the special group?

- A Agriculture
- B Information technology
- C Construction



D All of the above

Answer: D

**Question 123**

What is the forecasted number of jobs that will be generated during the 10<sup>th</sup> plan with proper policy initiatives?

A 10 million

B 20 million

C 30 million

D 40 million

Answer: B

**Question 124**

Public Sector accounts for more than ..... of the total organised sector employment and only a small percentage ..... of the total workforce of the country is working in the organised sector.

A One-third; Seven to Eight

B Two-third; Eight to Nine

C One-fourth; Six to Seven

D One-Fifth; Nine to Five

Answer: B

## Daily Free Topic Test

### Instructions

Read the following passage to answer these questions.

### Passage II:

We are the failed generation—we who are now in our 40s and 50s. We do not have to look far to realise that our generation has failed. The India we inherited was wonderful, but the one that we have bequeathed our children is degraded in every way. We are the citizens of transition, with personal memories of our childhood when we lived in a good, simple world where laws and morals had their place. And now we have first hand experience of an India stifled by corruption and injustice, with breakdowns on every front. There is no point getting defensive about our failure. There is no point denying it either. Perhaps time has come for us to face up to reality and try and understand why we Failed. We were good and talented and grew up in a relatively safe and protected environment. Then why and where did we go wrong? Perhaps we must first rewind a bit. Our grandparents were the generation of freedom fighters. They were brave and committed men and women fired with a vision of a free India. They made sacrifices, donated money and property, their youth and even lived to achieve their goal. They were incredibly disciplined. And then came our parents generation. They wanted to build a new India, a modern India where all citizens were equal. They were incredibly thrifty. They worked hard and saved money and believed the best they could give their children was a good education. And then came my generation, born in safety and security. We benefitted from a good education. Our nationalistic goals had whittled down—we only wanted to make a difference. But we did not really manage to because we were incredibly ambitious. We wanted to create a separate identity, push the frontiers of our personal capabilities and professional parameters to a new high. We took pride in being unlike the rest. Highly individualistic, we became the generation that abrogated civic responsibility. That hurt the social fabric—we wanted the best for our family, but community and country could look after itself. Sure, we inherited problems from our parents' generation. But we did not do anything to set it right. So they got worse and around us India started to crumble. We saw it, were conscious enough to protest, but not concerned enough to step in and stem the rot. We were unconcerned because we were caught up in our own personal pursuits. We love to make a virtue of tolerance and indifference, as also permissiveness. It is indifference, when we do not care deeply enough to do something about our problems. It is not tolerance but permissiveness when we are too lazy to intervene. As we strove to prove our worth in professional pursuits, role happily left nation building to politicians and bureaucrats. We abdicated our responsibility, our personal role in shaping India's destiny. Politics and civic action soon became too dirty for us to soil our hands, our name, our reputations. Some of us who belatedly want to do something about

it, now discover that the system is too atrophied, set in its ways, to let us enter. So we stand outside wringing our hands. Perhaps secretly glad that we cannot enter this murky world. After all, we have accumulated too much to lose and in any case why bother. The system is too far gone and we would be fools to sacrifice the comforts of our cocooned world. And our children, they worship money. And when it is their parents' money, they love it even more. Nowhere in the world do teenagers spend their parents money as freely and without compunction as they do here. We are to be blamed for that too because we are being permissive, not liberal. Parents are so involved in their work that they do not have time for their children. They buy children's affection with guilt-money. So kids now have cars, electronic gadgets, designer clothes. India is a fading figment of their parents' nostalgia. All they want is a job that will give them good money so that they can pursue their materialistic pursuits —preferably in America. But can you blame them? Look at the India they are living in—pollution is high, crime is endemic, brute power is law, civic amenities deplorable, justice nonexistent, Merit has no place. It is caste or connections that work. There are cases of affluence amidst unbelievable deserts of deprivation How long is India really sustainable? Can it really remain stable and peaceful amidst such grotesqueills and inequities. Often we are optimistic because we are afraid to be pessimistic. Impending scenarios scare the living daylights out of us. So we collectively believe that things will improve and gladly cite a variety of instances to prove that there are areas of growth and excellence. We want to be optimistic because we do not want to give in to despair. After all, what is life without hope?

**Question 125**

**The author believes that he belongs to a failed generation because**

- A India is today stifled with poverty and corruption
- B He believes he is morally responsible for not being able to hand over an unblemished India to the next generation
- C He believes that his generation has not accepted failure gracefully
- D He is pessimistic

**Answer: A**

**Question 126**

**The author believes that the earlier generation was mainly concerned with**

- A Saving money for their children
- B Changing the face of India
- C Self sacrifice
- D Giving their children a good education

**Answer: A**

**Question 127**

**The author thinks that his generation did not succeed in making a difference because**

- A It overlooked nationalistic goals
- B Its objectives were unrealistic to be met
- C In its quest for personal excellence, it forgot its duties to the society
- D It did not manage to create a personal identity for itself

**Answer: C**

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**Question 128**

**While questioning India's sustainability, the author points out that**

- A Terrorism spread by brutes is rampant
- B Caste divide still exists which over powers merit
- C There are pockets of prosperity in the midst of widespread poverty
- D The pollution rate is alarmingly high causing denudation

**Answer: C**

**Question 129**

**In the opinion of the author the teenagers of today are spoilt by their parents because**

- A Parents want their children to have as nice a childhood as theirs
- B Parents do not have time for their children so that they compensate with luxuries
- C Parents become nostalgic and indulge their children with expensive items
- D Parents want to fulfill their children's dreams of materialistic pursuits in America

**Answer: B**

**Instructions**

Study the Following passage to answer these Questions:

**Passage III:**

Nothing is sure but death and taxes, and of course that north is north and south is south, and thus it has always been, so they say. But they'd be wrong. You can perhaps be sure about death and taxes, but you might want to reconsider the rest of it. In fact, at many times in our planet's history, north has become south and south has become north, in a process called magnetic reversal.

Paleogeologists have discovered the existence of these mysterious phenomena (in a field study known as paleomagnetism) by investigating rocks. When rocks are being formed from magmas, atoms within their crystals respond to the earth's magnetic field by "pointing" towards the magnetic north pole. By age dating the rocks and noting their magnetic alignment, scientists can determine where on earth the north pole was located at that time because as the rocks solidified, they trapped that information within them. The study of ancient lava flows has revealed that at certain periods in the earth's history magnetic north was directly opposite its present location. In fact, it has been determined that the north/south reversal has occurred on average every 500,000 years and that the last reversal took place about 700,000 years ago. Scientists call those periods of "normal" polarity (the magnetic orientation of our modern era) and "reversed" polarity (the magnetic orientation of reverse situation) by the name "magnetic chrons."

Although the fact of such reversals is clear, why and how they happen and their effects on the planet are subjects of considerable debate. Because no one knows precisely how the earth's magnetic field is produced, it becomes difficult to say how it might be reversed. Among explanations proposed are a reversal of the direction of convection currents in the liquid outer core of the earth and a collision between the earth and a meteorite or comet. And while the precise effects of a reversal are not known, there can be little doubt that the earth would receive during the process a great deal more damaging ultraviolet radiation than it now does and that such occurrences have been correlated with the extinction of certain species in the geologic past.

**Question 130**

**The main purpose of the passage is to**

- A Present opposing hypotheses concerning the earth's magnetic field and argue that one of them is adequate
- B Explain what is meant by 'normal' polarity
- C Set forth a time table for magnetic reversal
- D Explain the process of magnetic reversal and how it was discovered

**Answer: D**

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### Question 131

'Magnetic reversal' refers to

- A The reversal of direction in ancient lava flows
- B A reversal of the direction of convection currents in the outer core of the earth
- C North becoming south and south becoming north
- D The atoms in rock crystal pointing towards the magnetic north pole

Answer: C

### Question 132

According to the passage, which of the following was crucial to the discovery of magnetic reversal?

- A The rapid change from 'normal' to 'reversal' polarity
- B Lava flows 'pointing' to magnetic north
- C Solidification of rocks formed from magmas
- D The extinction of certain species 700,000 years ago

Answer: C

### Question 133

One can infer from the passage that

- A If the earth collides with a meteorite, the magnetic field will be reversed
- B A magnetic reversal could present a damage to humans
- C The earth's magnetic field was produced about 700,000 years ago
- D In spite of past reversals, 'normal' polarity is now firmly established

Answer: B

## Free Gk Tests

### Instructions

In these questions, each word in capital letters is followed by four words or phrases. Choose the one which is similar in meaning to the word given in capital letters.

### Question 134

FURLOUGH

- A Soliders holiday
- B Wild growth
- C Wooden plough
- D Till

**Answer: A**

**Question 135**  
**PUNCTILIOUS**

- A Prude
- B Wasteful
- C Meticulous
- D Timid

**Answer: C**

**Question 136**  
**ENCOMIUM**

- A Verve
- B Eulogy
- C Doggerel
- D Force

**Answer: B**

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**Question 137**  
**INVIDIOUS**

- A Irritable
- B Harsh
- C Sinful
- D Unpopular

**Answer: A**

**Question 138**  
**LACHRYMOSE**

- A Terse
- B Mournful
- C Indecent
- D Lecherous

**Answer: B**

**Instructions**

In each of these Questions, a word is given in Capital letters followed by four options. Select the one which is farthest in meaning from

the given word.

**Question 139**

**CONSOLE**

- A Balm
- B Comfort
- C Keyboard
- D Solace

**Answer: C**

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**Question 140**

**PROLIFERATE**

- A Reproduce
- B Thrive
- C Impel
- D Burgeon

**Answer: C**

**Question 141**

**REMOTE**

- A Secluded
- B Distant
- C Slight
- D Compunction

**Answer: D**

**Question 142**

**IMMACULATE**

- A Spotless
- B Sinless
- C Omnipresent
- D Innocent

**Answer: C**

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**Question 143**

**OBLITERATE**

- A Delete
- B Demur
- C Expunge
- D Eliminate

**Answer: B**

**Instructions**

Choose the option which contains a pair of words related to each other in the same way as the pair given in capital letters.

**Question 144**

**STABLE : ERRATIC : :**

- A Beautiful : Large
- B Compact : Clumsy
- C Puny : Mammoth
- D Huge : Untidy

**Answer: B**

**Question 145**

**WHIP : FLAY::**

- A Pigeon : Peace
- B Chain : Punish
- C Birth : Reward
- D Switch : Chastise

**Answer: B**

**Question 146**

**IRK : APPEASE::**

- A Appreciate : Deprave
- B Quibble : Clarify
- C Ridicule : Decorate
- D Stupefy : Debilitate

**Answer: C**

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**Question 147**

**PLAGIARIZE : BORROW::**

- A Pilfer : Steal
- B Explode: Ignite
- C Export : Obtain
- D Purify : Filter

**Answer: C**

**Question 148**

**KING : CROWN::**

- A Priest : Mitre
- B Soldier : Gun
- C Teacher : Chalk
- D Sculptor : Chisel

**Answer: A**

## Daily Free Topic Test

**Instructions**

In each of the sentences given in these questions, two parts of the sentence are left blank. Choose the set of words for the blank that fits the meaning of the sentence as a whole in the best possible way:

**Question 149**

The village headman was unlettered, but he was no fool, he could see through the \_\_\_\_ of the businessman's proposition and promptly ..... him down.

- A Deception -- forced
- B Naivete -- turned
- C Potential -- forced
- D Sophistry -- turned

**Answer: D**

**Question 150**

The newly-opened restaurant at the District Centre ..... to the tastes of people from all walks of life and one is likely to find an ..... group there

- A Appeals - archetypal
- B Panders - connoisseur
- C Caters - eclectic
- D Inhibits - diverse

**Answer: C**



**Question 151**

We must try to understand his momentary ..... for he has ..... more strain and anxiety than any among us.

- A Vision -- forgotten
- B Aberration -- undergone
- C Outcry -- described
- D Senility --- understood

**Answer: B**

## MAT Free Solved Previous Papers

**Instructions**

In each of these questions, in the given sentences, a part of the sentence is underlined. Beneath each sentence, four different ways of phrasing the underlined part are indicated. Choose the best alternative.

**Question 152**

Eaten in Portugal only, the Indian viewed the potato with suspicion for they assumed it had poisonous properties since only the white-skinned people consumed it.

- A Indians viewed the potato with suspicion for they
- B Indians were suspicious of the potato, and they
- C Potato was viewed with suspicion by Indians who
- D Potato was suspicious to Indians, and it was

**Answer: C**

**Question 153**

Though he was more faster than his opponent on the field, his chances of winning the race was low as he lacked the killer instinct.

- A Though he was more faster than his opponent on the field
- B As he was more faster than his opponent on the field
- C Though he was more fast from his opponent on the field
- D Though he was faster than his opponent on the field

**Answer: D**

**Question 154**

The local library has recommended that the books put up for the used book sale should be in good condition and should have no writing in them or be underlined.

- A And should have no writing in them or be underlined.
- B And should not have writing in them or not be underlined.
- C And contain no writing or underlining.

D Without containing writing or underlining.

Answer: A

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Question 155

The news of her elopment soon circulated around the small town.

- A Circulated round the small town.
- B Circulated in the small town
- C Was circulating across the small town.
- D Wascirculating within the small town.

Answer: B

Instructions

In each of these questions, each sentence has four underlined words or phrases marked A, B, C and D. Choose one word or phrase that must be changed for the sentence to be correct.

Question 156

He is one (A) of the shrewdest men (B) that is (C) in the (D) administration.

- A A
- B B
- C C
- D D

Answer: C

Question 157

No sooner had he (A) come from Mumbai when (B) he was asked (C) to proceed to (D) Delhi.

- A A
- B B
- C C
- D D

Answer: B

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Question 158

Drug abuse have (A) become one of (B) our most (C) serious social problems. (D)

- A A

B B

C C

D D

Answer: A

Question 159

Alexander Calder, who was originally (A) interested in (B) mechanical engineering later (C) became a sculpture. (D)

A A

B B

C C

D D

Answer: D

Question 160

Studying (A) the science of (B) logic is one way to (C) cultivate one's reason (D) skills.

A A

B B

C C

D D

Answer: D

## Daily Free Topic Test

### Indian & Global Development

#### Instructions

For the following questions answer them individually

Question 161

Who is not a well known Indian Fashion designer?

A Ravi Bajaj

B Rohit Bal

C Shefali Talwar

D Suneet Verma

Answer: C

**MAT Free Solved Previous Papers**

**Question 162**

**'Bottle neckinflation' means**

- A No rise in prices despite increase in aggregate demand
- B Rise in prices without increase in aggregate demand
- C Decline in prices due to increase in aggregate demand
- D Noneof these

**Answer: B**

**Question 163**

**The United Nations cameinto existence in the year**

- A 1945
- B 1950
- C 1946
- D 1947

**Answer: A**

**Question 164**

**Kalpakkam Atomic Power Plant located in**

- A Rajasthan
- B Orissa
- C Tamil Nadu
- D UP

**Answer: C**

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**Question 165**

**Whois not a well known personality in the field of advertising?**

- A Alyque Padamsee
- B Frank Simoes
- C Kamlesh Pande
- D Anurag Mathur

**Answer: D**

**Question 166**

**Ashok Leyland is owned by the**

- A Tatas
- B Birlas
- C Hindujas
- D None of these

**Answer: C**

**Question 167**

**World Population Day is observed on**

- A July 15
- B July 11
- C October 8
- D September 5

**Answer: B**

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**Question 168**

**Which company uses the adline, 'Knowing is everything'?**

- A BBC World
- B Star
- C Sony
- D Zee

**Answer: A**

**Question 169**

**The book 'Cricket My Style' is written by**

- A Sunil Gavaskar
- B Sachin Tendulkar
- C Kapil Dev
- D Mohinder Amarnath

**Answer: C**

**Question 170**

**Varishtha Pension Bima Yojaria has been launched by**

- A National Insurance Co.

- B United India Insurance Co.
- C LIC of India
- D Oriental Insurance Co.

**Answer: C**

## Daily Free Topic Test

**Question 171**

Makers of which tyres sponsor Indian racing ace Narain Karthikeyan?

- A JK
- B MRF
- C Dunlop
- D MOdi

**Answer: B**

**Question 172**

The part of profit or other surpluses of a company distributed proportionately among shareholders is called

- A Preference Share
- B Equily Share
- C Face Value
- D None of these

**Answer: B**

**Question 173**

Tenth Five-Year Plan covers the period

- A 2001-2006
- B 2002-2007
- C 2003-2008
- D 2000-2005

**Answer: B**

## MAT Free Solved Previous Papers

**Question 174**

Recession in the market implies

- A Slump in trade & industry dueto fall in demand

- B Increase in trade and industry due to rise in demand
- C No change in trade and industry due to stability in demand
- D None of these

**Answer: A**

**Question 175**

**In the recent past, Reliance has found the gas in**

- A Mumbai off shore
- B Mahanadi basin
- C Krishna-Godavari basin
- D Kaveri basin

**Answer: C**

**Question 176**

**River Ganga does not pass through the State of**

- A UP
- B Bihar
- C Haryana
- D West Bengal

**Answer: C**

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**Question 177**

**Which brand/company uses the ad line "We know India better"?**

- A Max New York Life Insurance
- B LIC of India
- C Amul
- D Bajaj

**Answer: B**

**Question 178**

**Hirakud Dam Project has been built over the river**

- A Ganga
- B Yamuna
- C Godavari

D Mahanadi

Answer: D

Question 179

Kaziranga National Park is located in

A Bihar

B West Bengal

C UP

D None of these

Answer: D

## Free Gk Tests

Question 180

The capital of New Zealand is

A Hamilton

B Sofia

C Logos

D Wellington

Answer: D

Question 181

Which is South Korea's largest car manufacturing company?

A Hyundai

B Honda

C Suzuki

D Toyota

Answer: A

Question 182

Which petroleum company has introduced an improved quality petrol called 'Speed'?

A Bharat Petroleum

B Indian Oil

C Hindustan Petroleum

D None of these

Answer: A



## Daily Free Topic Test

### Question 183

To permit operations of private life insurance companies in India, Government of India revised the Insurance Regulatory and Development Authority (IRDA) Act in the year

- A 1999
- B 1998
- C 2000
- D 2001

Answer: A

### Question 184

Ex-officio Chairman of Rajya Sabhais the

- A Prime Minister of India
- B Deputy Prime Minister of India
- C Vice-President of India
- D President of India

Answer: C

### Question 185

Nandan Nilekani is associated with which company?

- A Satyam Computers
- B Wipro
- C Infosys
- D Polaris

Answer: C

## MAT Free Solved Previous Papers

### Question 186

Farakka Barrage is located in

- A Tripura
- B Bihar
- C West Bengal
- D Jharkhand

Answer: C

**Question 187**

**WLL stands for**

- A Wireless in Local Loop
- B Walking Land Line
- C Walking Loop Line
- D Wireless Land Line

**Answer: A**

**Question 188**

**Headquarters of World Trade Organisation (WTO) is located in**

- A New York
- B Tokyo
- C Geneva
- D Berlin

**Answer: C**

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**Question 189**

**NABARD stands For**

- A National Bank of Agriculture and Regional Development
- B National Bank for Agriculture and Rural Development
- C National Bureau of Aeronautical Research and Development
- D None of these

**Answer: B**

**Question 190**

**Sania Mirza of India won the Girls Wimbledon Doubles Championship 2003 partnering with**

- A Sunitha Rao
- B Isha Lakhani
- C Sanaa Bhambri
- D Alisa Kleybanova

**Answer: D**

**Question 191**

**Which is the largest tea producing country in the world?**

- A Kenya
- B Indonesia
- C China
- D India

**Answer: D**

## Free Gk Tests

### Question 192

Suvidha Fixed Deposit scheme was launched by which bank?

- A IDBI
- B ICICI
- C SBI
- D City Bank

**Answer: A**

### Question 193

Philip Kotler is a widely known personality in the field of

- A Fine arts
- B Sports
- C Music
- D Management

**Answer: D**

### Question 194

BPO is an abbreviation for

- A Bharat Petroleum Organisation
- B Business Process Outsourcing
- C Business Products Outsourcing
- D Bharat Pesticides Outlet

**Answer: B**

## Daily Free Topic Test

### Question 195

Which of the following countries does not belong to the group of G-8 nations?

- A Italy
- B Canada
- C Germany
- D Australia

**Answer: D**

**Question 196**

**Hamburg Masters Hockey Trophy 2003 was won by**

- A India
- B Australia
- C Germany
- D Pakistan

**Answer: A**

**Question 197**

**In the last decade, population growth rate of which State has been the lowest in the country?**

- A Kerala
- B Tamil Nadu
- C Andhra Pradesh
- D Orissa

**Answer: A**

## **MAT Free Solved Previous Papers**

**Question 198**

**K.L.M. Royal Airlines belongs to**

- A Italy
- B Japan
- C Netherlands
- D Austria

**Answer: C**

**Question 199**

**. Who among the following persons is closely associated with the leading company ITC Ltd?**

- A M.S. Banga
- B K. Gopalkrishnan

C Yogi Deveshwar

D Deepak Satwalekar

Answer: C

**Question 200**

Which one of the following is not manufacturing mobile telephone handsets?

A Samsung

B Nokia

C Videocon

D Sony

Answer: C

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