









# **NIMCET**

# **Previous Year Paper** 2013



## 120 Questions

#### Que. 1

If 
$$A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 1 \\ 0 & -2 & 4 \end{bmatrix}$$
 and  $6A^{-1} = A^2 + cA + dI$ . where  $A^{-1}$  is inverse of A, I is the identity matrix

then (c, d) is

- 1. (-6, 11)
- 2. (6, -11)
- 3. (11, -6)
- 4. (6, 11)

Correct Option - 1

Que. 2 Let  $\vec{a} = \hat{j} - \hat{k}$  and  $\vec{c} = \hat{i} - \hat{j} - \hat{k}$ . Then the vector  $\vec{b}$  satisfying  $(\vec{a} \times \vec{b}) + \vec{c} = 0$  and  $\vec{a} \cdot \vec{b} = 3$ , is

- $1. \quad -\hat{\mathbf{i}} + \hat{\mathbf{j}} 2\hat{\mathbf{k}}$
- 2.  $2\hat{i} \hat{j} + 2\hat{k}$
- 3.  $\hat{\mathbf{i}} \hat{\mathbf{j}} 2\hat{\mathbf{k}}$
- $4. \quad \hat{\mathbf{i}} + \hat{\mathbf{j}} 2\hat{\mathbf{k}}$

Correct Option - 1

Que. 3 Find the number of elements in the union of 4 sets A, B, C and D having 150, 180, 210 and 240 elements respectively, given that each pair of sets has 15 elements in common. Each triple of sets has 3 elements in common and  $A \cap B \cap C \cap D = \phi$ 

- 1. 616
- 2. 512
- 3. 111
- 4. 702

Correct Option - 4

Que. 4 If the straight line ax + by + c = 0 always passes through (1, -2), then a, b, c are in

- 1. A.P.
- 2. H.P.
- 3. G.P.
- 4. None of these

Correct Option - 1

Que. 5 A six faced die is a biased one. It is thrice more likely to show an odd number than to show an even number. It is thrown twice. The probability that the sum of the numbers in the two throws is even is

- 1. 4/8
- 2. 5/8
- 3. 6/8
- 4. 7/8

Que. 6 If  $I_n = \int_0^{\frac{\pi}{4}} \tan^n \theta \, d\theta$ , then  $I_8 + I_6$  equals:

- 1.  $\frac{1}{4}$
- 2.  $\frac{1}{5}$
- 3.  $\frac{1}{6}$
- 4.  $\frac{1}{7}$

Correct Option - 4

Que. 7 Let  $\triangle ABC$  be a triangle whose area is  $10\sqrt{3}$  units with side lengths |AB| = 8 units and |AC| = 5 units. Find possible values of the angle A.

- 1. 60° or 120°
- 2. 45° or 135°
- 3.  $30^{\circ}$  only
- 4. 90° only

Correct Option - 1

Que. 8 Person A can hit a target 4 times in 5 attempts. Person B - 3 times in four attempts. Person C - 2 times in 3 attempts. They fire a volley. The probability that the target is hit atleast two times is

- 1. 3/4
- 2. 1/2
- 3. 5/6
- 4. 1

Correct Option - 3

Que. 9 The value of the integral  $\int_0^{\pi/2} \frac{\sqrt{\sin x}}{\sqrt{\sin x} + \sqrt{\cos x}} dx \text{ is}$ 

- 1. 0
- 2.  $-\frac{\pi}{4}$
- 3.  $\frac{\pi}{2}$
- 4.  $\frac{\pi}{4}$

Correct Option - 4

Que. 10

If  $\omega$  is a cube root of unity, then find the value of the determinant  $\begin{vmatrix} 1+\omega & \omega^2 & -\omega \\ 1+\omega^2 & \omega & -\omega^2 \end{vmatrix}$  is  $\frac{1+\omega^2}{\omega^2+\omega} = \frac{1+\omega^2}{\omega^2+\omega} = \frac{1+\omega^2}{\omega} = \frac{1+\omega^2}{$ 

- 1. 3ω
- 2. -3ω
- 3.  $3\omega^2$
- 4.  $-3\omega^2$

Que. 11 If the vectors  $2\hat{i} - 3\hat{j}$ ,  $\hat{i} + \hat{j} - \hat{k}$  and  $3\hat{i} - \hat{k}$  form the three co-terminous edges of a parallelepiped, then the volume of parallelepiped is:

- 1. 8
- 2. 10
- 3. 4
- 4. 14

Correct Option - 3

Que. 12 In a GP consisting of positive terms, each term equals the sum of the next two terms. Then the common ratio of the GP is:

- 1.  $\frac{1-\sqrt{5}}{2}$
- 2.  $\frac{\sqrt{5}}{2}$
- 3.  $\sqrt{5}$
- $4. \qquad \frac{\sqrt{5}-1}{2}$

Correct Option - 4

Que. 13 If  $f(x) = \tan^{-1} \left[ \frac{\sin x}{1 + \cos x} \right]$ , then what is the first derivative of f(x)?

- 1. 1/2
- 2. -1/2
- 3. 2
- 4. -2

Correct Option - 1

Que. 14 The solution of  $\sin x + 1 = \cos x$ , such that  $0 \le x < 2\pi$ , is:

- 1. 0, π
- 2.  $0, \frac{\pi}{2}$
- 3.  $\frac{\pi}{2}$ ,  $\frac{3\pi}{2}$
- 4.  $0, \frac{3\pi}{2}$

Correct Option - 4

Que. 15 Let  $T_n$  denote the number of triangles which can be formed by using the vertices of a regular polygon of n sides. If  $T_{n+1}$  -  $T_n = 21$ , then n equals:

- 1. 5
- 2. 7
- 3. 6
- 4. 4

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Que. 16 If  $\overline{X}_1$  and  $\overline{X}_2$  are the means of two distributions such that  $\overline{X}_1 < \overline{X}_2$ , and  $\overline{X}$  is the mean of the combined distribution, then:

- $1. \quad \overline{X} < \overline{X}_1$
- 2.  $\overline{X} > \overline{X}_2$
- $\overline{X} = \frac{\overline{X}_1 + \overline{X}_2}{2}$
- 4.  $\overline{X}_1 < \overline{X} < \overline{X}_2$

Correct Option - 4

**Que. 17** The area enclosed within the curve |x| + |y| = 1 (in square units) is:

- 1.  $\sqrt{2}$
- 2. 1
- 3. √3
- 4. 2

Correct Option - 4

Que. 18 Let f(x) be a polynomial function of second degree and f(1) = f(-1). If a, b, c are in AP, then f'(a), f'(b), f(c) are in:

- 1. GP
- 2. HP
- 3. AGP
- 4. AP

Correct Option - 4

Que. 19 Find the point at which the tangent to the curve  $y = \sqrt{4x - 3} - 1$  has its slope  $\frac{2}{3}$ .

- 1. (3, 3)
- 2. (3, 2)
- 3. (2, 3)
- 4. (2, 2)

Correct Option - 2

Que. 20 Atal speaks the truth in 70% of the cases and George speaks the truth in 60% cases. In what percentage of cases are they likely to contradict each other in stating the same fact?

- 1. 44%
- 2. 45%
- 3. 46%
- 4. 47%

Correct Option - 3

Que. 21 A man observes the angle of elevation of the top of mountain to be 30°. He walks 1000 feet nearer and finds the angle of elevation to be 45°. What is the distance of the first point of observation from the foot of the mountain?

- 1.  $500\sqrt{3}(\sqrt{3}+1)$ ft
- 2.  $500(\sqrt{3}+1)$ ft



- 3.  $500(\sqrt{3}-1)$ ft
- 4.  $500\sqrt{3}(\sqrt{3}-1)$ ft

Que. 22 The sum of first n terms of an arithmetic series is 216. The value of the first term is n and the value of the n<sup>th</sup> term is 2n. The common difference d is:

- 1. 1
- 2.  $\frac{2}{3}$
- 3.  $\frac{3}{2}$
- 4.  $\frac{12}{11}$

Correct Option - 4

Que. 23 Forces  $3\hat{i} + 2\hat{j} + 5\hat{k}$  and  $2\hat{i} + \hat{j} - 3\hat{k}$  are acting on a particle and displace it from the point  $2\hat{i} - \hat{j} - 3\hat{k}$  to the point  $4\hat{i} - 3\hat{j} + 7\hat{k}$ . The work done by the force is:

- 1. 18 units.
- 2. 30 units.
- 3. 24 units.
- 4. 36 units.

Correct Option - 3

Que. 24 The value of  $9\frac{1}{3}9\frac{1}{9}9\frac{1}{27}... \infty$  is:

- 1. 3
- 2. 6
- 3. 9
- 4. None of these

Correct Option - 1

Que. 25 The minimum value of the function  $y = 2x^3 - 21x^2 + 36x - 20$  is:

- 1. -120
- 2. -126
- 3. -128
- 4. None of these

Correct Option - 3

Que. 26 In how many different ways can the letters of the word "CORPORATION" be arranged so that all the vowels always come together?

- 1. 810
- 2. 1440
- 3. 2880
- 4. 50400

If  $log_x y = 100$  and  $log_2 x = 10$ , then the value of y is: **Que. 27** 

- 1.
- $2^{100}$ 2.
- 3. 21000
- 210000 4.

Correct Option - 3

The equation of the line parallel to the line 2x - 3y = 7 and passing through the middle point of the **Que. 28** line segment joining the points (1, 3) and (1, -7) is:

- 1. 2x - 3y - 4 = 0
- 2. 2x - 3y + 4 = 0
- 2x 3y 8 = 03.
- 2x 3y + 8 = 0

Correct Option - 3

In a  $\triangle$  ABC, (c + a + b)(a + b - c) = ab. The measure of the angle C is: **Que. 29** 

- 1. 3
- 2.
- 3.
- 4. None of these

Correct Option - 3

The number of non-negative integers less than 1000 that contain the digit 1 are: **Oue. 30** 

- 1.
- 2. 93
- 3.  $10^2 - 9^2$
- $10^3 9^3$ 4.

Correct Option - 4

**Que. 31** The lines 3x - 4y + 4 = 0 and 6x - 8y - 7 = 0 are tangents to the same circle. The radius of this circle is:

- 1.
- $\frac{3}{2}$   $\frac{3}{4}$ 2.
- 3.
- 4. 10

Correct Option - 2

The area of the parallelogram whose diagonals are  $\vec{a}=3\hat{i}+\hat{j}-2\hat{k}$  and  $\vec{b}=\hat{i}-3\hat{j}+4\hat{k}$  is: **Que. 32** 

- 1.  $10\sqrt{3}$
- 2.  $5\sqrt{3}$
- 3.  $10\sqrt{2}$
- 4.  $5\sqrt{2}$

Que. 33 If  $\sin x + a \cos x = b$ , then what is the expression for  $|a \sin x - \cos x|$  in terms of a and b?

- 1.  $\sqrt{a^2 b^2 1}$
- 2.  $\sqrt{a^2+b^2-1}$
- 3.  $\sqrt{a^2+b^2+1}$
- 4.  $\sqrt{a^2-b^2+1}$

Correct Option - 4

Que. 34 If A and B are two events such that  $P(A \cup B) = \frac{5}{6}$ ,  $P(A \cap B) = \frac{1}{3}$  and  $P(\bar{B}) = \frac{1}{2}$ , then the

events A and B are:

- 1. Dependent.
- 2. Independent.
- 3. Mutually exclusive.
- 4. None of these.

Correct Option - 2

Que. 35 If three vectors  $2\hat{\imath} - \hat{\jmath} + \hat{k}$ ,  $\hat{\imath} + 2\hat{\jmath} - 3\hat{k}$  and  $3\hat{\imath} + \lambda\hat{\jmath} + 5\hat{k}$  are co-planar, then  $\lambda$  is:

- 1. -1
- 2. -2
- 3. -3
- 4. -4

Correct Option - 4

Que. 36 The equation of the base of an equilateral triangle is x + y = 2 and one vertex is (2, -1). The length of the side of the triangle is:

- 1.  $\sqrt{\frac{3}{2}}$
- $2. \quad \sqrt{2}$
- 3.  $\sqrt{\frac{2}{3}}$
- 4.  $\sqrt{\frac{20}{3}}$

Correct Option - 3

Que. 37 The total number of numbers that can be formed by using the digits 5, 3 and 7 only, if no repetitions are allowed, is:

- 1. 39
- 2. 105
- 3. 15



4. 27

Correct Option - 3

Que. 38

If 
$$x = a \cos t$$
,  $y = b \sin t$ , then  $\frac{d^2y}{dx^2}$  is:

- 1.  $-\frac{b^4}{a^2v^3}$
- $2. \qquad -\frac{b^4}{a^2x^3}$
- 3.  $\frac{b}{av^4}$
- 4.  $\frac{a^4}{bx^3}$

Correct Option - 1

Que. 39

A random variable X has the distribution law as given below:

X	1	2	3	
P(X=x)	0.3	0.4	0.3	

The variance of the distribution is:

- 1. 0.4
- 2. 0.6
- 3. 0.2
- 4. None of these

Correct Option - 2

**Que. 40** The value of  $\tan \theta + 2 \tan 2\theta + 4 \tan 4\theta + 8 \cot 8\theta$  is:

- 1.  $\cot \theta$
- 2.  $\tan \theta$
- 3.  $\sin \theta$
- 4.  $\cos \theta$

Correct Option - 1

**Que. 41** The sum of the integers between 200 and 400, that are multiples of 7, is:

- 1. 8729
- 2. 8700
- 3. 8972
- 4. 8279

Correct Option - 1

Que. 42 The value of  $\lim_{x\to 0} \frac{\tan x - x}{x^2 \tan x}$  is equal to:

- 1. 0
- 2. 1

- 3.  $\overline{2}$
- 4.

**Que. 43** Two fair dice are rolled. What is the probability that the total score is a prime number?

- 1.
- 2.
- 3.
- 4.

Correct Option - 2

Find the equation of the circle which passes through (-1, 1) and (2, 1), and having centre on the line **Que. 44** x + 2y + 3 = 0.

- $2x^2 + 2y^2 2x + 7y 13 = 0$ 1.
- $x^2 + y^2 2x + 7y 13 = 0$ 2.
- $2x^2 + 2y^2 + 2x + 7y 13 = 0$ 3.
- $x^2 + y^2 + 2x + 7y 13 = 0$

Correct Option - 1

**Que. 45** Let  $\vec{a}$ ,  $\vec{b}$  and  $\vec{c}$  be the position vectors of the three vertices A, B, C of a triangle respectively. Then the area of this triangle is given by:

- $egin{aligned} rac{1}{2}(ec{\mathbf{a}} imesec{\mathbf{b}})ec{\mathbf{c}} \ rac{1}{2}|ec{\mathbf{a}} imesec{\mathbf{b}}+ec{\mathbf{b}} imesec{\mathbf{c}}+ec{\mathbf{c}} imesec{\mathbf{a}}| \end{aligned}$
- $\vec{a} imes \vec{b} + \vec{b} imes \vec{c} + \vec{c} imes \vec{a}$
- None of these

Correct Option - 2

The sum of the focal distances of any point on the ellipse  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ , a < b, with eccentricity **Que. 46** 

e, is given by:

- 1. 2ae
- 2. 2b
- 3. 2a 4. 2be

Correct Option - 2

If  $\sin x + \sin^2 x = 1$ , then  $\cos^4 x + \cos^2 x$  is equal to: **Que. 47** 

- 1. 0
- 2. 1

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- 3. -1
- 4. 2

Correct Option - 2

Que. 48 An experiment succeeds twice as often as it fails. The probability that in the next six trials there will be at least four successes, is:

- 1.  $\frac{240}{729}$
- 2.  $\frac{496}{729}$
- 3.  $\frac{220}{729}$
- 4.  $\frac{233}{729}$

Correct Option - 2

Que. 49 The sum of the first 40 terms of the series  $-1^2 + 2^2 - 3^2 + 4^2 - \dots$  is:

- 1. 360
- 2. 400
- 3. 820
- 4. 440

Correct Option - 3

Que. 50 If  $\tan \alpha = \frac{m}{m+1}$  and  $\tan \beta = \frac{1}{2m+1}$ , then  $\alpha + \beta$  is equal to:

- 1.  $\frac{\pi}{3}$
- 2.  $\frac{\pi}{4}$
- 3.  $\frac{\pi}{6}$
- 4.  $\pi$

Correct Option - 2

Que. 51 A train takes 18 seconds to pass completely through a station 162 m long and 15 seconds through another station 120 m long, at the same speed. What is the length of the train, in meters?

- 1. 70
- 2. 80
- 3. 90
- 4. 100

Correct Option - 3

Que. 52 In a row of children facing North, Shamika is third to the right of Nikhil, who is 17<sup>th</sup> from the right end of the row. Ravi is 5th to the left of Shamika and is 20<sup>th</sup> from the left end. Totally how many children are there in the row?

- 1. 37
- 2. 38

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- 3. 39
- 4. None of these

Correct Option - 2

#### Que. 53 Given that

- i) Some apples are blackberries.
- ii) Some doughnuts are apples.
- iii) No coconut is a doughnut.
- iv) All blackberries are coconuts.

Which of the following statements is false?

- 1. Some blackberries are doughnuts
- 2. Some coconuts are apples
- 3. All coconuts are not apples
- 4. All doughnuts are not coconuts

Correct Option - 1

#### Que. 54 Directions: Questions are based on the following:

- 1. In a family of 6 persons, there are two couples.
- 2. The lawyer is the head of the family and has two sons Mukesh and Rakesh both teachers.
- 3. Mrs. Reena and her mother-in-law both are lawyers.
- 4. Mukesh's wife is a doctor and they have a son Ajay.

Which of the following is definitely a couple?

- 1. Lawyer Teacher
- 2. Doctor Lawyer
- 3. Teacher Teacher
- 4. None of these

Correct Option - 1

#### Que. 55 What is the profession of Rakesh's wife?

- 1. Teacher
- 2. Doctor
- 3. Lawyer
- 4. Cannot be determined

Correct Option - 3

#### **Que. 56** What is/was Ajay's grandfather's occupation?

- 1. Teacher
- 2. Lawyer
- 3. Doctor
- 4. Cannot be determined

Correct Option - 4

#### **Que. 57** Find the missing element in the series

A, CD, GHI, \_\_\_\_, UVWXY

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- 1. LMNO
- 2. MNOP
- 3. NOPQ
- 4. OPOR

Correct Option - 2

Que. 58 In a code language, FRIEND is coded as GTLISJ. Which of the following is coded as HWDVI in that language?

- 1. HAPPY
- 2. GUARD
- 3. BEADS
- 4. SPEED

Correct Option - 2

Que. 59 There are four brothers Alan, Bob, Carl and Dave. Dave is two years older than Bob. Bob is one year younger than Carl. Alan, who is 34, is two years younger than Carl. Who is the oldest?

- 1. Alan
- 2. Bob
- 3. Carl
- 4. Dave

Correct Option - 4

**Que. 60 Direction:** Questions are based on the following:

An employee has been assigned the task of allotting offices to six of the staff members. The offices are numbered 1 - 6. The offices are arranged in a row and they are separated from each other by six foot high dividers. Hence voices, sounds and cigarette smoke flow easily from one office to another.

Miss Robert needs to use the telephone quite often throughout the day. Mr. Mike and Mr. Brown need adjacent offices as they need to consult each other often while working. Miss. Hardy, is a senior employee and has to be allotted the office number 5, having the biggest window. Mr. Donald requires silence in the offices next to his and Mr. Tim prefers to be as away as possible form Miss Robert. Mr. Mike and Mr. Donald are all smokers. Miss Hardy finds tobacco smoke allergic and consecutively the offices next to hers to be occupied by non-smokers. Unless specifically stated all the employees maintain an atmosphere of silence during office hours.

The ideal candidate to occupy the office farthest from Mr. Brown would be

- 1. Miss Hardy
- 2. Mr. Mike
- 3. Mr. Tim
- 4. Mr. Donald

Correct Option - 3

**Que. 61** The three employees who are smokers should be seated in the offices.

- 1. 1, 2 and 4
- 2. 2, 3 and 6
- 3. 1, 2 and 6
- 4. 1 and 3



#### Que. 62 The ideal office for Mr. Mike would be

- 1.
- 2. 6
- 3. 1
- 4. 3

Correct Option - 4

Que. 63 A doctor said to his compounder "I go to see the patients at their residence after every 3 hours 30 minutes. I have already gone to the patient 1 hour 20 minutes ago and next time I shall go at 1:40 P.

M." At what time this information was given to the compounder by the doctor?

- 1. 11:30 A. M.
- 2. 11:20 A. M.
- 3. 10:10 A. M.
- 4. None of these

Correct Option - 1

Que. 64 Which pair of numbers comes next in the following series?

42, 40, 38, 35, 33, 31, 28, ?, ?

- 1. 25, 22
- 2. 26, 23
- 3. 26, 24
- 4. 25, 23

Correct Option - 3

#### **Que. 65 Direction:** Questions are based on the following:

- i) All G's are H's
- ii) All G's are J's or K's
- iii) All L's are K's
- iv) All N's are M's
- v) No M's are G's
- vi) All H's are J's or K's

If no P's are K's, which of the following must be true?

- 1. All P's are J's
- 2. If any P is a G, it is a J
- 3. No P is an H
- 4. If any P is an H, it is a G

Correct Option - 3

#### **Que. 66** Which of the following is inconsistent with one or more of the conditions?

- 1. Some H's are G's
- 2. All H's that are not G's are M's
- 3. Some H's are M's
- 4. No N's are G's



Que. 67 Shyam is taller than Pradeep and Pradeep is as tall as Anurag. But Anand is shorter than Suresh, who is as tall as Anurag. If Pradeep is taller than Praveen, who is the tallest of all?

- 1. Pradeep
- 2. Praveen
- 3. Suresh
- 4. Shyam

Correct Option - 4

Que. 68 When Rajeev was born his father was 32 years older than his brother and his mother was 25 years older than his sister. If Rajeev's brother is 6 years older than Rajeev and his mother is 3 years younger than his father, how old was Rajeev's sister when he was born?

- 1. 15 years
- 2. 14 years
- 3. 7 years
- 4. 10 years

Correct Option - 4

Que. 69 Dhoni starts from his office at 8 A. M. on a Sunday morning, travels 10 km towards West and then turns to his left and walks 8 km. Then he again turns to his left and walks 4 km and then stops.

What is the shortest distance to his office from the point where he stopped?

- 1. 18 km
- 2. 8 km
- 3. 10 km
- 4. None of these

Correct Option - 3

Que. 70 A treasure chest has less than 100 gold coins. The number of coin is

- i) One more than a multiple of 3
- ii) Two more than a multiple of 4
- iii) Three more than a multiple of 5 and
- iv) Four more than a multiple of 6

How many coins are there in the chest?

- 1. 58
- 2. 88
- 3. 98
- 4. 38

Correct Option - 1

Que. 71 Read the statements and decide which of the conclusions logically follow.

Statements:

- i) All mangoes are golden in colour.
- ii) No golden coloured things are cheap.

Conclusions:



- i) All mangoes are cheap.
- ii) Golden coloured mangoes are not cheap.
  - 1. Only conclusion i) follows
  - 2. Only conclusion ii) follows
  - 3. Either i) or ii) follows
  - 4. neither i) nor ii) follows

#### Que. 72 Direction: Questions are based on the following:

- 1. A blacksmith has five iron articles A, B, C, D and E, each having a different weight.
- 2. A weighs twice as much as B
- 3. B weighs four and half times as much as C
- 4. C weighs half as much as D
- 5. D weighs half as much as E
- 6. E weighs less than A but more than C

Which of the following article is heaviest in weight?

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

Correct Option - 1

#### Que. 73 Which of the following represents the descending order of weighs of the articles?

- 1. A, B, E, D, C
- 2. B, D, E, A, C
- 3. A, B, C, D, E
- 4. C, D, E, B, A

Correct Option - 1

#### Que. 74 Direction: Questions are based on the following:

There are three switches A, B and C which can be in ON/OFF position. Their settings change as per the following rules:

- i) If A is the only switch as ON, change B to ON.
- ii) If A and B are only switches as ON, change C to ON.
- iii) If all three switches are ON, change C to OFF.
- iv) For all other situations, all switches in ON are changed to OFF and all switches in OFF are changed to ON

If switches A and B are ON and C is OFF, their changed settings will be:

- 1. A ON, B OFF, C OFF
- 2. A ON, B ON, C ON
- 3. A ON, B OFF, C ON
- 4. A OFF, B ON, C OFF



**Que. 75** If only B is ON, the changed setting will be:

- 1. A ON, B ON, C ON
- 2. A ON, B ON, C OFF
- 3. A ON, B OFF, C ON
- 4. A OFF, B OFF, C ON

Correct Option - 3

Que. 76 If only B is ON in the changed setting, which of the following could have been the original setting?

- 1. A ON, B ON, C ON
- 2. A ON, B OFF, C ON
- 3. A OFF, B ON, C OFF
- 4. A OFF, B OFF, C ON

Correct Option - 2

Que. 77 If the third day of a month falls on Friday, what day will be on the fourth day after twenty first of the month?

- 1. Monday
- 2. Tuesday
- 3. Saturday
- 4. Thursday

Correct Option - 3

Que. 78 Ana is a girl and has the same number of brothers as sisters. Andrew is a boy and has twice as many sisters as brothers. Ana and Andrew are the children of Emma. How many children does

Emma have?

- 1. 2
- 2. 3
- 3. 5
- 4. 7

Correct Option - 4

**Que. 79 Direction:** Questions are based on the following:

1. Anu is taller than Cini

- 2. Eenu is shorter than Binu
- 3. Anu is shorter than Dany
- 4. Eenu is taller than Anu
- 5. Binu is shorter than only one person.

The best answer to "Who is the tallest?" is

- 1. Dany
- 2. Binu
- 3. Dany or Binu
- 4. Both Dany and Binu

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Que. 80 Who is the shortest?

- 1. Cini
- 2. Anu or Cini
- 3. Eenu
- 4. Insufficient data to conclude

Correct Option - 1

Que. 81 Which of the following statements would help to logically order the persons according to their heights?

- 1. Binu is 7 feet tall
- 2. Dany and Binu do not have equal height
- 3. Eenu is the tallest in the group
- 4. Dany is the tallest in the group

Correct Option - 4

Que. 82 Karan and Arjun run a 100 metres race, where Karan beats Arjun by 10 metres. To do a favour to Arjun, Karan starts 10 metres behind the starting line in a second 100 metre race. They both run at their earlier speeds. Which of the following is true in connection with the second race?

- 1. Karan and Arjun reach the finishing line simultaneously
- 2. Arjun beats Karan by 1 metre
- 3. Arjun beats Karan by 11 metres
- 4. Karan beats Arjun by 1 metre

Correct Option - 4

Que. 83 In a cricket season, India defeated Australia twice. West Indies defeated India twice. Australia defeated West Indies twice. India defeated New Zealand twice and West Indies defeated New Zealand twice. Which country has lost most number of times?

- 1. India
- 2. Australia
- 3. New Zealand
- West Indies

Correct Option - 3

Que. 84 Pointing to a woman, Nirmal said "She is the sister of daughter of my wife's grandfather's only child". How is the woman related to Nirmal?

- 1. Wife
- 2. Sister-in-law
- 3. Sister
- 4. None of these

Correct Option - 2

**Que. 85** | **Direction:** Questions are based on the following:

There are five persons A, B, C, D, E standing on six steps numbered 1, 2, 3, 4, 5 and 6 from the bottom. At most one person is standing on each step. The step number, on which A is standing, is two less than that of C. Step number on which B is standing is one more than that of D.





If A is standing on Step 1 and B is not standing at Step 6, which of the following is true?

- 1. B is standing on step 2
- 2. C is standing on step 4
- 3. E is standing on step 3
- 4. D is standing one step higher than C

Correct Option - 4

**Que. 86** If D is standing on step 1, on which step A could be standing?

- 1. 2 or 4 only
- 2. 3 or 5 only
- 3. 3 or 4 only
- 4. 4 or 5 only

Correct Option - 3

Que. 87 If there are two steps in between the steps on which A and D are standing and C is standing on Step 6, A must be standing on which of the following steps?

- 1. 3
- 2. 4
- 3. 5
- 4. *(*

Correct Option - 2

**Que. 88** From the information given below:

A \* B means A and B are of the same age.

A - B means B is younger than A.

A + B means A is younger than B.

What does Sachin \* Mohan - Ravi mean?

- 1. Sachin is youngest
- 2. Ravi is youngest
- 3. Sachin is oldest
- 4. Mohan is oldest

Correct Option - 2

Que. 89 Jimmy saw the time while going to the tennis court. He saw the hour hand is 20° away from 4. After he returned from tennis court, he noticed that the hour hand is 20° away from 4. If he took ten minutes to go to tennis court and he walked at the same speed while going to the tennis court and while returning, how much time did he spend at the tennis court?

- 1. 60 minutes
- 2. 80 minutes
- 3. 70 minutes
- 4. 50 minutes

Correct Option - 1

Que. 90 There are 8 balls looking alike, seven of which have equal weight and one is slightly heavier. The weighing balance is of unlimited capacity. Using this balance, the minimum number of weightings



required to identify the heavier ball is:

- 1. 1
- 2. 2
- 3. 3
- 4. 4

Correct Option - 3

#### Que. 91 All digital circuits can be realized by using only

- 1. Exclusive OR gates
- 2. NOR gate
- 3. Multiplexers
- 4. OR gate

Correct Option - 2

#### **Que. 92** The Boolean function $a + (\overline{a} b)$ is equivalent to

- 1. a.b
- a + b
- 3.  $a.\overline{b}$
- 4.  $\overline{a} + b$

Correct Option - 2

#### Que. 93 Which of the following circuit is used as a memory device in computers?

- 1. Flip-Flop
- 2. Rectifier
- 3. Comparator
- 4. All of these

Correct Option - 1

#### Que. 94 Convert the Hexadecimal number 4DF to its octal equivalent

- 1. 2333
- 2. 2337
- 3. 2773
- 4. 2373

Correct Option - 2

#### Que. 95 A tautology is a Boolean formula that is always true. Which of the following is a tautology?

- 1. x
- 2.  $(x + \overline{x})y$
- 3.  $x + \overline{y} + \overline{x}$
- 4.  $(xy) + \overline{x}$

Correct Option - 3

#### **Que. 96** Acronym of EEPROM is

1. Extended Erasable Programmable Memory

- 2. Electrically Erasable Read Only Memory
- 3. Electrically Erasable Programmable Read Only Memory
- 4. Extended Erasable Page-Oriented Memory

Que. 97 For reproducing sound, a CD audio player uses a

- 1. Quartz crystal
- 2. Titanium needle
- 3. Barium ceramic
- 4. Laser beam

Correct Option - 4

Que. 98 When we open an internet site, we see www. What does www stand for?

- 1. World Wide Word
- 2. World Wide Web
- 3. World Wide Webinar
- 4. Word Winding Works

Correct Option - 2

**Que. 99** The answer of the operation  $(10111)_2 \times (1110)_2$  in hex equivalent is

- 1. 150
- 2. 14C
- 3. 142
- 4. 13E

Correct Option - 3

Que. 100 The minimum number of bits to represent a character from ASCII code set is

- 1. 2
- 2. 8
- 3. 5
- 4. 7

Correct Option - 4

Que. 101 Directions: Out of the alternatives, choose the appropriate phrase to make the sentence meaningful.

If you had joint accounts with \_\_\_\_\_ who died, then you will be responsible for the bills.

- 1. everybody
- 2. anyone
- 3. everyone
- 4. someone

Correct Option - 4

Que. 102 Directions: Choose the analogy that is closest in meaning to the pair -

Diamond: Necklace

# ntestbook.com

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1. Cars: Roads

2. Flowers: Bouquet

3. Gold : Bangle4. Books : Shop

Correct Option - 2

Que. 103	Directions:	Choose the	suitable p	roposition	for the	blank to	make a	meaningful	sentence.
----------	-------------	------------	------------	------------	---------	----------	--------	------------	-----------

Suresh is angry \_\_\_\_\_ his servant.

- 1. about
- 2. on
- 3. by
- 4. with

Correct Option - 4

#### **Que. 104** Directions: Choose the correct alternative for the sentence below:

The earth is always revolving round the sun.

- 1. The earth revolves around the sun
- 2. The earth is revolving round the sun
- 3. The earth revolving around the sun
- 4. None of these

Correct Option - 1

#### Que. 105 Directions: Choose the word that best expresses the meaning of the given idiom:

"A close shave"

- 1. A clean shave
- 2. A narrow escape
- 3. A guarded secret
- 4. A sudden fall

Correct Option - 2

#### Que. 106 Directions: Pick the part of the sentence that has an error:

My elder brother is a MA whereas I am only a BA.

- 1. My elder brother
- 2. is a MA
- 3. whereas I am
- 4. only a BA

Correct Option - 2

#### Que. 107 Directions: Choose the suitable phrasal verb for the blank in the sentence below.

I my hopes when untimely rain threatened my crops.

- 1. gave in
- 2. gave out
- 3. gave up
- 4. gave off



Que.	108	Directions: Out of the given alternatives, choose the word that is opposite in meaning to the word
AFF	LUE	
1.	Rel	uctant
2.	Poo	or
3.	Cle	ar
4.		husiastic
Corr	ect O	ption - 2
Que.	109	Directions: Fill in the blank with the appropriate form of the noun:
		Don't blame yourself, it's not your
1.	mis	understanding
2.	erro	
3.	Slip	
4.	fau	
Corr	ect O	ption - 4
Que.	110	Directions: Fill in the blank:
		The instructor, along with the class, angry about the room change.
1.	are	
2.	hav	e
3.	has	
4.	is	
Corr	ect O	ption - 4
Que.	111	Directions: Choose the suitable word for the blank to make it a meaningful statement.
		What you say is my comprehension.
1.	Bef	
2.	bes	
3.	beh	
4.	•	ond
Corr	eci O	ption - 4
Que.	112	Direction: This question has a sentence with a missing preposition. Select the correct preposition from the options and mark your answer accordingly.
If yo	ou wa	nt to avoid traffic, you need to leave 7.30 A. M.
1.	unt	1
2.	by	
3.	dur	ing
4.	at	
Corr	ect O	ption - 2
Que.	113	Directions: Choose the word that best expresses the meaning of the given idiom:



"Smell a rat"

- 1. To suspect something bad
- 2. To misunderstand
- 3. To detect bad smell
- 4. To forsake

Correct Option - 1

# Que. 114 Directions: Out of the given alternatives, choose the word that best expresses the meaning of the word.

#### **ABRIDGE**

- 1. Judge
- 2. Release
- 3. Shorten
- 4. Dissolve

Correct Option - 3

#### Que. 115 Directions: 'A dog's breakfast' means

- 1. Breakfast cooked for a dog
- 2. Breakfast cooked by a dog
- 3. Something that has been done very badly
- 4. None of these

Correct Option - 3

#### Que. 116 Directions: Change the speech: She says, "I like going to the seaside".

- 1. She says she likes going to the seaside.
- 2. She says I like going to the seaside.
- 3. She says that she liked going to the seaside.
- 4. She says she like going to the seaside

Correct Option - 1

#### Que. 117 Directions: Arrange the following to form a correct sentence

P: will normally be granted

Q: candidates should note

R: that no request for

S: change of centre

- 1. SRQP
- 2. PROS
- 3. QSPR
- 4. QRSP

Correct Option - 4

#### Que. 118 Directions: Rewrite the sentence after correcting the error:

She was one of the average student of the class.

- 1. She was one of the average students of the class
- 2. She is one of the average student of the class



- 3. She was one among the average student of the class
- 4. She is an average students of the class

#### Que. 119 Directions: Choose appropriate words to form a grammatically correct sentence:

The decoration of the new house, including the furniture and curtains, \_\_\_\_\_.

- 1. is more pleasing
- 2. are more pleasing
- 3. is the most pleasing
- 4. are pleasing

Correct Option - 3

#### **Que. 120** Directions: Fill in the blank:

The President of the United States, accompanied by his advisors, en route to Europe.

- 1. were
- 2. are
- 3. was
- 4. both (1) and (3)