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Q.1 (A & B) of 6 papers for practice

Paper 1

Q.1 (A) : Choose the correct alternatives and write its alphabet with subquestion number:

1. Which one is the Quadratic equation ?

   Ⓐ $\frac{5}{x} - 3 = x^2$ Ⓑ $x(x + 5) = 2$ Ⓒ $n - 1 = 2n$ Ⓓ $\frac{1}{x^2}(x + 2) = x$

2. First four term of an A.P are ,…, whose first term is -2 and the common difference is -2.

   Ⓐ $-2, 0, 2, 4$ Ⓑ $-2, 4, -8, 16$

   Ⓒ $-2, -4, -6, -8$ Ⓓ $-2, -4, -8, -16$

3. For simultaneous equations in variables x & y, $D_x = 49, D_y = -63$, $D = 7$, then what is the value of y ?

   Ⓐ 9   Ⓑ 7   Ⓒ -7 Ⓓ -9

4. Which number can not represent a probability ?

   Ⓐ 1.5   Ⓑ $\frac{2}{3}$ Ⓒ 15%   Ⓓ 0.7

Q.1(B) : Solve the following subquestions:

1. To draw a graph of $4x + 5y = 19$, find y when $x = 1$.

2. Determine whether 2 is root of quadratic equation $2m^2 - 5m = 0$ or not .

3. Write the second and the third terms of an A.P, whose first term is 6 and the common difference is -3.

4. Two coins are tossed simultaneously . Write the sample space S.

Paper 2

Q.1 (A) : Choose the correct alternatives and write its alphabet with subquestion number:

1. To draw the graph of $3x + 7y = 27$, find x when $y = 3$.

   (A) 2   (B) $\dfrac{20}{3}$ (C) 9   (D) $\dfrac{13}{3}$

2. If the number $x - 1$, $x + 3$, $3x + 1$,….. are in A.P then find the value of d.

   (A) -2 (B) 4   (C) 2   (D) -4

3. There are 40 Cards in a bag. Each bears a number from 1 to 40. One card drawn at random. What is the probability that the card bears a number which is multiple of 5 ?

   (A) $\dfrac{1}{5}$ (B) $\dfrac{3}{5}$ (C) $\dfrac{4}{5}$ (D) $\dfrac{1}{3}$

4. Which of the following quadratic equation has the sum of the roots -5 ?

   (A) $3x^2 - 15x + 3 = 0$ (B) $x^2 - 5x + 3 = 0$

   (C) $x^2 + 3x - 5 = 0$ (D) $3x^2 + 15x + 3 = 0$

Q.1 (B) : Solve the following subquestions :

1. Shweta purchase 5 shares of FV $100Rs$ and MV $150Rs$. The company declared 10% dividend. What dividend will she get ?

2. Write the equation $4y = 12 - 3x$ in the general form.

3. Form a quadratic equation whose roots are -3 and -5.

4. A die is rolled. Write the event A of getting an odd number.

Paper 3

Q.1 (A) : Choose the correct alternatives and write its alphabet with subquestion number:

1. To solve $x + y = 3$; $3x - 2y - 4 = 0$ by determinant method, find D.
   - (A) 5
   - (B) 1
   - (C) -5
   - (D) -1

2. If the roots of $x^2 + kx + k$ are real and equal , what is the value of k ?
   - (A) 0
   - (B) 4
   - (C) $0 \ or \ 4$
   - (D) 2

3. What is the sum of the first five multiples of 3 ?
   - (A) 45
   - (B) 55
   - (C) 15
   - (D) 75

4. A die is rolled. What is the probability that the number appearing on the upper face is less than 3 ?
   - (A) $\frac{1}{6}$
   - (B) $\frac{1}{3}$
   - (C) $\frac{1}{2}$
   - (D) 0

Q.1 (B) : Solve the following subquestions :

1. Find the value of x , if $4x + 3y = 23$ and $y = 5$.

2. Write the value of $\alpha + \beta$ for the quadratic equation $3x^2 - 6x - 5 = 0$.

3. What is the MV of a share of FV $50Rs$, if it is at a discount of 10%.

4. A die is rolled. Write the probability of the event A getting a number multiple of

Paper 4

Q.1 (A) : Choose the correct alternatives and write its alphabet with subquestion number:

1. Find the value of $\begin{vmatrix} 5 & 3 \\ -7 & -4 \end{vmatrix}$

   (A) -1 (B) -41 (C) 41 (D) 1

2. If $n(A) = 2, \ P(A) = \frac{1}{5}$, then $n(S) = ?$

   (A) 10 (B) $\frac{5}{2}$ (C) $\frac{2}{5}$ (D) $\frac{1}{4}$

3. $\sqrt{5}m^2 - \sqrt{5}m + \sqrt{5} = 0$, which of the following statements is true for this given equation.

   (A) The roots are real & unequal   (B) The roots are real & equal.

   (C) The roots are not real.   (C) Three roots.

4. If for an A.P., $d = 5$, then $t_{18} - t_{13} = $ _____

   (A) 5 (B) 20 (C) 25 (D) 30

Q.1 (B) : Solve the following subquestions :

1. A coin & a die are thrown simultaneously. What is the number of sample points ?
2. Find the value of $(x - y)$, if $3x + 4y = 20$ and $4x + 3y = 17$.
3. Find the value of the discriminant for the quadratic equation $x^2 + 7x + 1 = 0$.
4. What is the brokerage at 0.5% on a share of $FV \ 100Rs$ & $MV \ 120Rs$.

Paper 5

Q.1 (A) : Choose the correct alternatives and write its alphabet with subquestion number:

1. For simultaneous equations in variables x and y, if $D_x = 49, D_y = -63$ and $D = 7$, then what is the value of x ?

(A) 7   (B) -7 (C) $\frac{1}{7}$ (D) $\frac{-1}{7}$

2. How many alphanumerals are there in the format of GSTIN ?

(A) 15   (B) 10   (C) 16   (D) 9

3. For an A.P, the first two term are -3 , 4. What is the 21st term ?

(A) -143 (B) 143   (C) 137   (D) 17

4. Which of the following is not a Quadratic equation ?

(A) $x^2 = 4x$ (B) $x^2 + 4x = 11 + x^2$

(C) $5x^2 = 90$ (D) $2x - x^2 = x^2 + 5$

Q.1 (B) : Solve the following subquestions :

1. What are the roots of the Quadratic equation $2x^2 = 32$?
2. If $P(A) = \frac{3}{4}$, $n(A) = 36$, find $n(S)$.
3. Write the equation $\frac{x}{4} + \frac{y}{3} = 4$ in the standard form.
4. How much GST is to be paid at 18% on ice cream pack of $200 Rs$.

Paper 6

Q.1 (A) : Choose the correct alternatives and write its alphabet with subquestion number:

1. Cumulative frequencies in a group frequency table are useful to find,………

   Ⓐ mean　　　　　Ⓑ median　　　Ⓒ mode　　　　　Ⓓ all of these

2. Find the value of $\begin{vmatrix} -1 & 7 \\ 2 & 4 \end{vmatrix}$

   Ⓐ 18　　　　　Ⓑ 26　　　　　Ⓒ -18　　　　　Ⓓ -26

3. What is the rate of GST on essential commodities ?

   Ⓐ 18%　　　　Ⓑ -12%　　Ⓒ 5%　　　　　Ⓓ 0%

4. Which of the following is the value of the discriminant for $\sqrt{2}x^2 - 5x + \sqrt{2} = 0$.

   Ⓐ -5　　Ⓑ 17　　Ⓒ $\sqrt{2}$　　　　　Ⓓ $2\sqrt{2} - 5$

Q.1 (B) : Solve the following subquestions :

1. The FV of a share is $10 Rs$. What is its MV, if it is at 10% premium ?
2. Find the values of a, b & c for the quadratic equation $5x^2 - 6x - 7 = 0$.
3. A bag contain a red, a blue, a yellow, and a white ball all of the same size. What is the probability that a ball drawn at random is yellow ?
4. For a drawing the graph of $3x - 2y = 3$; if $y = 3$, what is the value of x ?

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