

Std: X _____

Date : 22/10/2018

Q1 A) Solve any four of the following:

(4)

1. Add the given polynomials: $x^3 - 2x^2 - 9, 5x^3 + 2x + 9$
2. Solve the equation: $2p = p + \frac{4}{3}$
3. $(2, -1, 0, 5, 6)$ is the co-efficient form of the polynomial represent it in index form.
4. Solve the following simultaneous equation: $x + y = 4, 2x - 5y = 1$
5. If $A = \{1, 3, 9, 11, 13\}$ and $B = \{1, 9, 11\}$ then find $A \cup B$ and $A \cap B$
6. Simplify: $7\sqrt{3} - 29\sqrt{3}$

B. Solve any two of the following:

(4)

1. The sum of the numerator and the denominator of a fraction is 15. The denominator is 3 more than twice the numerator. Find the fraction.
2. Divide $(2x^2 + 2)$ by $(x + 2)$ and write the answer in the form of Dividend = Divisor x Quotient + Remainder
3. Subtract: $5ab + 4bc - 6ac$ from $3ab - 2bc + 5ac$

2. A) Choose the correct alternative from the given option and complete the sentences:

- 1) Rate of GST on brokerage is _____
a) 5% b) 12% c) 18% d) 28%
- 2) The tenth term of A.P 2, 7, 12, is _____
a) 44 b) 45 c) 46 d) 47
- 3) For $\sqrt{2}x^2 - 5x + \sqrt{2} = 0$, the value of discriminate is _____
a) -5 b) 17 c) $\sqrt{2}$ d) $2\sqrt{2} - 5$
- 4) To draw graph of $4x + 5y = 19$, $y =$ _____ when $x = 1$
a) 4 b) 3 c) 2 d) -3

B. Solve any two of the following.

(4)

1. Check whether $x = \frac{3}{2}$ is the solution of the equation $2x^2 - 7x + 6 = 0$
2. Which term of the following A.P is 560?
2, 11, 20, 29,
3. If $x = 5, y = -3$ for certain simultaneous equations and determinant $D = -5$, then find the value of determinants D_x and D_y

pg no. 1

Q3.A) Solve any two of the following

(4)

Mr. Shyam is a retailer. He paid GST of ₹ 6500 at the time of purchase. He collected GST of ₹ 8000 at the time of sale. Complete the following information and calculate his input tax and output tax. What is his input tax credit and his payable GST.

- a. Input tax = ₹ 6500
 Output tax = ₹ 8000
 ∴ ITC =
- b. GST payable = -
 = -
 =

2. Complete following table according to the general form of quadratic equation

Quadratic equation	General form	a	b	c
$x^2 - 4 = 0$				
$y^2 = 2y - 7$				

3. Complete the following table to draw the graph of the equation $x + y = 3$

x	3	<input type="text"/>	<input type="text"/>	-1
y	<input type="text"/>	5	3	<input type="text"/>

B. Solve any two of the following

(4)

- How many two digit number are divisible by 4 ?
- Find the value of m for which the given simultaneous equations have unique solution: $mx + 5y - 11 = 0$, $14x = 15 - 7y$
- Mr. Gupta purchased 100 shares of MV ₹. 40 Brokerage paid at the rate of 0.5% and rate of GST on brokerage is 18%. Find the total amount he paid for the share purchase.

P.T.O.

Pg No- 2

Q4 Solve any three of the following

(9)

1. Solve the following simultaneous equation using Cramer's rule
 $3x - 2y = 3, 2x + y = 16$
2. Solve the quadratic equation $m^2 - 2m - 1 = 0$ by the method of completing square
3. Find four consecutive terms in an A.P such that the sum of the middle two terms is 18 and the product of the two end terms is 45
4. Mr. Rao invested ₹ 1,25,295 in shares of FV ₹ 10 when MV is ₹ 125 rate of brokerage is 0.2% and GST is 18% then find
 1. How many shares were purchased
 2. The amount of brokerage paid
 3. GST paid for the trading.

Q5 solve any one of the following:

(4)

1. A man repays a loan of ₹ 3250 by paying ₹ 305 in the first month and then decreases the payment by ₹ 15 every month. How long will it take to clear his loan?
2. A car covers a distance of 270km with some speed. If the speed is decreased by 10km/hr. it will take 54 minutes more to cover the same distance. Find the original speed of the car and original time to reach the required distance.

Q6. Solve any one the following:

(3)

1. The difference between the roots of the equation $x^2 - 13x + k = 0$ is 7, find k
2. Usha is a proprietor of a firm, registered under GST. She has paid GST of ₹ 12,500 on purchase and collected ₹ 14,750 on sale. What is the amount of ITC to be claimed? What is the amount of GST payable?

— × — × —

pg No 3