

	SUCCESS KEY TEST SERIES X - Semi -English (Unit Test-2 Math-1 (Ch-3,4)) Mathematics Part - I	DATE: _____						
		TIME: 2 hrs						
		MARKS: 30						
		SEAT NO: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr></table>						

Q.1 (A) Choose the correct alternative.

(5)

- 1) A shopkeeper bought a TV from a distributor at a discount of 25% of the listed price of Rs. 32000. The shopkeeper sells the TV to a consumer at the listed price. If the sales are intra- State and the rate of GST is 18%. the selling price of the TV including tax (under GST) by the distributor is
a. Rs. 32000 b. Rs. 24000 c. Rs. 28320 d. Rs. 26160
- 2) Find the first term and the common difference for the following AP.
4, 1, -2, -5 ...
a. $a = 4, d = 3$ b. $a = 4, d = -2$ c. $a = 4, d = -3$ d. $a = 4, d = 2$
- 3) A retailer purchases a fan for Rs. 1500 from a wholesaler and sells it to a consumer at 10% profit. If the sales are intra-state and the rate of GST is 12%
The tax (under GST) received by the Central Government is
a. Rs.18 b. Rs. 198 c. Rs. 90 d. Rs. 99
- 4) D.M. Motors sold 2 motor cycles and taxable value of each motor cycles is Rs. 1,08,000. If rate of G.S.T. is 28%. Find the amount of C.G.S.T. and S.G.S.T. charged in the tax invoice.
a. Rs. 15,120 and Rs. 15,120 b. Rs. 30,240 and Rs. 30,240 c. Rs. 7,560 and Rs. 7,560
d. Rs. 3,780 and Rs. 3,780
- 5) To find the cost of one share at the time of buying the amount of Brokerage and GST is to be the MV of share.
a. added to b. subtracted from c. Multiplied with d. divided by

B) Solve the following questions. (Any Two)

(4)

- 1) Which of the following sequences are A.P.? If they are A.P. find the common difference.
0, - 4, - 8, - 12,
- 2) Which of the following sequences are A.P.? If they are A.P. find the common difference.
127, 132, 137,
- 3) Find the term t_{10} of an A.P. 4, 9, 14,

Q.2 A) Complete the following Activities. (Any Two)

(4)

- 1) Fill up the boxes and find out the number of terms in the A. P. 1, 3, 5,, 149.

Here $a = 1, d = \underline{\hspace{2cm}}$,
 $t_n = a + (n - 1) d$

$t_n = 149$

$$\begin{aligned}\therefore 149 &= \underline{\hspace{2cm}} \\ 149 &= 1 + 2n - 2 \\ \therefore 149 &= 2n - \underline{\hspace{2cm}} \\ \therefore 2n &= 150 \\ \therefore n &= \underline{\hspace{2cm}}\end{aligned}$$

- 2) The first term and the common difference of an A.P. is 10 and 5 respectively. Complete the following activity to find the sum of first 30 terms of the A. P.

$$\begin{aligned}\therefore S_n &= \frac{n}{2} [\boxed{} + (n-1)d] \\ S_{30} &= \frac{30}{2} [20 + (30-1) \times \boxed{}] \\ &= 15 [20 + \boxed{}] \\ &= 15 \times 165 \\ &= \boxed{}\end{aligned}$$

- 3) Write the correct number in the given boxes from the following A.P.

3, 6, 9, 12,

Here $t_1 = \underline{\hspace{2cm}}$, $t_2 = \underline{\hspace{2cm}}$, $t_3 = \underline{\hspace{2cm}}$, $t_4 = \underline{\hspace{2cm}}$

$t_2 - t_1 = \underline{\hspace{2cm}}$, $t_3 - t_2 = \underline{\hspace{2cm}}$

$\therefore d = \underline{\hspace{2cm}}$

B) Solve the following questions. (Any Two)

(4)

- Which of the following sequences are A.P.? If they are A.P. find the common difference.
3, $3 + \sqrt{2}$, $3 + 2\sqrt{2}$, $3 + 3\sqrt{2}$
- Find the amount received when 300 shares of FV Rs. 100, were sold at a discount of Rs. 30.
- Which of the following sequences are A.P ? If it is an A.P, find next two terms. 2, - 2, - 6, - 10, ...

Q.3 Solve the following questions. (Any Two)

(6)

- Pankajrao invested Rs. 1,25,295 in shares of FV Rs. 10 when MV is Rs.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 and (3) GST paid for the trading.
- For sequence t_n if $S_n = \frac{n}{n+1}$ then find the first three terms of t_n
- There is an auditorium with 35 rows of seats. There are 20 seats in the first row, 22 seats in the second row, 24 seats in the third row and so on. Find the numbers of seats in the twenty-second row.

Q.4 Solve the following questions. (Any one)

(4)

- If m times the m^{th} term of an A.P. is equal to n times n^{th} term then show that the $(m + n)$ term of the A.P. is zero.
- Ajay sharma repays the borrowed amount of Rs. 3,25,000 by paying Rs. 30500 in the first month and then decreases the payment by Rs. 1500 every month. How long will it take to clear his amount?

Q.5 Solve the following questions. (Any one)

(3)

- 1) Prepare Business to Business (B2B) Tax Invoice as per the details given below. name of the supplier, address, Date etc. as per your choice.
Supplier - Name, Address, State, GSTIN, Invoice No.,
Date Recipient - Name, Address, State, GSTIN,
Items : (1) Pencil boxes 100, HSN - 3924, Rate - Rs. 20, GST 12%
(2) Jigsaw Puzzles 50, HSN 9503, Rate - Rs. 100 GST 12%.
- 2) On 1st Jan 2016, Sanika decides to save Rs. 10, Rs. 11 on second day, Rs. 12 on third day. If she decides to save like this, then on 31st Dec 2016 what would be her total saving?