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Answer Sheet No.

Sig. of Candidate.

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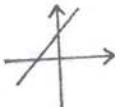



## BUSINESS MATHEMATICS HSSC-I

### SECTION – A (Marks 10)

**Time allowed: 15 Minutes**

**NOTE:-** Section-A is compulsory. All parts of this section are to be answered on the question paper itself. It should be completed in the first 15 minutes and handed over to the Centre Superintendent. Deleting/overwriting is not allowed. Do not use lead pencil.

**Q. 1** Circle the correct option i.e. A / B / C / D. Each part carries one mark.

- (i) What per cent of 1350 is 27?  
A. 1% B. 2% C. 3% D. 4%
- (ii) A company reduces the price of its Rs. 20000 computer by 7% - What is the new price?  
A. Rs.18500 B. Rs.18600 C. Rs.18700 D. Rs.18800
- (iii) In a certain college there are 240 girls and 360 boys. What is the ratio of the number of girls to the number of pupils?  
A. 2:3 B. 2:5 C. 3:4 D. 1:4
- (iv) If the ratio of teachers to students in a college is 1 to 18 and there are 360 students, how many teachers are there?  
A. 10 B. 15 C. 20 D. 25
- (v) At what rate would a sum of money double itself in 20 years?  
A. 3% B. 4% C. 5% D. 9%
- (vi) Payments are made at the end of each payment interval for \_\_\_\_\_.  
A. Ordinary annuity B. Annuity due  
C. Simple interest D. All of these
- (vii)  $f(t)=1/15$  is \_\_\_\_\_.  
A. Constant function B. Linear function  
C. Quadratic function D. Cubic function
- (viii) Which of the following is the graph of function  $mx+c$ ?  
A.  B.  C.  D. 
- (ix) Six times the number equals 49 minus the number. The number is \_\_\_\_\_.  
A. 10 B. 9 C. 8 D. 7
- (x) The number system used in computer is \_\_\_\_\_.  
A. Decimal Number System B. Binary Number System  
C. Octal Number System D. Hexadecimal Number System

**For Examiner's use only:**

Total Marks:

10

Marks Obtained:

2017



# BUSINESS MATHEMATICS HSSC-I

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Time allowed: 2:15 Hours

Total Marks Sections B and C: 40

NOTE:- Answer any eight parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Use supplementary answer sheet i.e. Sheet-B if required. Write your answers neatly and legibly.

## SECTION – B (Marks 24)

Q. 2 Attempt any EIGHT parts. All parts carry equal marks. (8 x 3 = 24)

- In a hotel 10 men stay for 16 days costs Rs.8000. How many days, 15 men can stay with the amount Rs. 9750.
- In a partnership, A invested Rs.8000, B Rs. 6000 and C Rs. 5000. If their profits total Rs. 12000, how much did each receive if the profits were divided in the ratio of their investments?
- If 45% of number is 3000, what is the number?
- Mr X wishes to save money to take a trip. If he deposits Rs.150 at the end of each month for 24 months in an investment that pays 12% compounded monthly, how much will he have on deposit.
- Graph the linear function  $3x+2y=0$
- Find the value of x by solving the following equation  $\frac{2x+7}{9}-4 = \frac{x-7}{12}$
- Solve the equation by Quadratic formula  $2x^2 - 7x - 15 = 0$
- Solve for x and y  $\begin{matrix} 3x + 2y = 44 \\ 2x + 4y = 56 \end{matrix}$
- Find  $(1101)_2 + (110)_2$  and subtract then  $(1111)_2$
- Find the transpose of the matrix :  
 $A = \begin{pmatrix} 3 & 2 \\ 4 & 6 \\ 7 & 2 \end{pmatrix}$
- If  $\begin{pmatrix} 2 & 3 \\ 4 & 5 \end{pmatrix} \begin{pmatrix} a & 2 \\ 7 & b \end{pmatrix} = \begin{pmatrix} 31 & 1 \\ 55 & 3 \end{pmatrix}$  then find a and b

## SECTION – C (Marks 16)

Note:- Attempt any TWO questions. All questions carry equal marks. (2 x 8 = 16)

- The profit sharing ratio between A and B is 2:3. The ratio between B and C is 4:7. The firm earned a profit of Rs. 41000. What is the amount of each partner?
  - What is the cost of coloured SONY TV set which is sold for Rs.9800, if the per cent mark up is 40% on cost.
- Mr. Y wants to accumulate Rs. 60000 in 8 years. He makes equal deposits at the end of each 6 months in an account. The rate of interest is 8% compounded semiannually. Find the value of each deposit.
  - The sum of three consecutive integers is 13 greater than twice the smallest of the three integers. Find the integers.
- A calculator has the total cost function  $C(x)=17x+3400$  and the revenue function  $R(x)=34x$ .
    - What is the equation of the profit function for the calculator?
    - What is the profit on 300 units?
  - If  $A = \begin{pmatrix} 3 & 1 \\ 2 & 2 \end{pmatrix}$ ,  $B = \begin{pmatrix} 2 & 1 \\ 6 & 2 \end{pmatrix}$ ,  $C = \begin{pmatrix} 3 & 3 \\ 2 & 1 \end{pmatrix}$  then show that  $A(B+C) = AB+AC$