

B.B.A. SEM – I (2015 CBCS Course) : SUMMER - 2019

SUBJECT: BUSINESS MATHEMATICS

Day: Monday
Date: 22/04/2019

S-2019-1946

Time: 02.00 PM TO 05.00 PM
Max. Marks: 100

N.B.:

- 1) Answer ANY FOUR questions from Section I. Each question carries 15 Marks.
- 2) Answer ANY TWO questions from Section II. Each question carries 20 Marks.
- 3) Answers to Both the sections to be written in **SAME** answer books.
- 4) Draw a labeled diagram WHEREVER necessary.

SECTION - I

Q.1) Answer the following: (15 Marks X 1 = 15 Marks)

A Certain amount is divided among three persons A, B and C in the ratio 7:5:4. Find the amount and the share of each if Rs.4000 added to the largest share equals the sum of share of other two.

Q.2) Answer the following: (15 Marks X 1 = 15 Marks)

The Cost of 20 Mangoes and 15 Papayas is Rs.275 when the number of mangos and papayas are interchanges the cost reduces by Rs.25. Find the cost of 35 Mangos and 25 papayas

Q.3) Answer the following: (15 Marks X 1 = 15 Marks)

A manufacturer sells his article at 20% profit to the wholesaler. The wholesalers sell it to the retailer at 25% profit and retailer sells it to the customer at 40% profit for Rs. 175. Find the cost price to the manufacturer.

Q.4) Answer the following: (15 Marks X 1 = 15 Marks)

A man brought bullock and a cart for Rs.10000. He sold the bullock at a gain of 20% and Cart at a loss of 10%. Thus gaining 5% profit on the whole. For how much was the bullock brought?

Q.5) Answer the following: Attempt ANY ONE (15 Marks X 1 = 15 Marks)

- a) Three numbers are in A.P. If the sum of these numbers be 27 and the product 648, Find the numbers.
- b) Find $AB+BA=?$ $A = \begin{bmatrix} 4 & 3 & 4 \\ 2 & 5 & 3 \\ 1 & 2 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 2 & -2 & 3 \\ 2 & 3 & -4 \\ 2 & 2 & 0 \end{bmatrix}$

Q.6) Write short notes on the following: Attempt ANY THREE (5 Marks X 3 = 15 Marks)

- a) Real time Applications of 'Ratio'
- b) Commission with suitable example.
- c) Simple Annuity
- d) Various Matrix Operations

SECTION - II

Q.7) Answer the following: (20 Marks X 1 = 20 Marks)

Anita and Babita enter into partnership with unequal sums of money, it being agreed that each is to receive 5% p.a. on his capital and any profit remaining after that shall be divided equally. At the end of the year Anita receives Rs.3300 and Babita receives Rs.3700. It is found that Babita gets Rs.300 less than She would have received If all the profit had been shared in the ratio of their capital find the capital of each.

Q.8) Answer the following: (20 Marks X 1 = 20 Marks)

Sand and Cement are mixed in the ratio 4:1 to make up 1000kg. How much Cement must be added so as to make the ratio 5:2?

Q.9) Answer the following: (20 Marks X 1 = 20 Marks)

Solve the following:
 $x + y + z = 1$
 $2x + 2y + 3z = 3$
 $3x + y + 5z = 1$
