

(Academic Sessions 2006 – 2008 & 2007 – 2009)

BUSINESS MATHEMATICS 208-(INTER PART -I) ROLL NO:(In Figures) _____

(Objective Type) GROUP – II (In Words) : _____

Write Serial No. of your answer book _____

Time Allowed : 15 Minutes

Maximum Marks : 10

Signature of Deputy Supdt. _____

Note : Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

1. Some possible answers to each statement are given below. Tick (✓) mark the correct answer : 10

(i) The simple interest on Rs.15000 for 3 years at 2% is :

(Rs.1000 , Rs.900 , Rs.1100 , Rs.1500)

(ii) The formula for finding rate is :

($\frac{I \times 100}{p \times r}$, $\frac{I \times 100}{p \times t}$, $\frac{p \times 100}{I \times t}$, $\frac{t \times 100}{p \times I}$)

(iii) The ratio between 80 and 640 is : (1:4 , 2:4 , 1:8 , 4:16)

(iv) Sum of annuity is always :

(Future value. Present value. Current value. None of these.)

(v) Range is a set of all :

(Output values. Input values. Both output and input. None of these.)

(vi) In quadratic equation the variable had degree :

(1 , 2 , More than 2 , Less than 2)

(vii) Conversion of 37 into binary number is :

((10011)₂ , (11110)₂ , (10010)₂ , (11000)₂)

(viii) The transpose of Row Matrix is a :

(Row Matrix. Column Matrix. Unit Matrix. None of these.)

(ix) 25% of Rs.500 is : (Rs.125 , Rs.150 , Rs.200 , Rs.250)

(x) 5 in binary system is : ((10)₂ , (101)₂ , (11) , None of these)

54-208-II-(Objective Type)-23500

Roll No _____ (To be filled in by the candidate)

(Academic Sessions 2006 – 2008 and 2007 – 2009)

BUSINESS MATHEMATICS 208-(INTER PART – I)
(Essay Type) GROUP – II

Time Allowed : 1.45 hours
Maximum Marks : 40

Note : All questions are to be attempted on the answer book.

SECTION – I

2. Write any TWELVE short answers of the following questions :

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(i) Write the name of different types of proportion.

(ii) Define profit and loss.

(iii) What is 3% of 20?

(iv) What is principal?

(v) What is amount or maturity value?

(vi) What is an even function?

(vii) Find x-intercept of the function $2x + 3y = 5$

(viii) If $z = x^2 - y^2$, find z when $x = 1$, $y = 5$

(ix) If $\frac{1}{4}$ of an amount is Rs.60, what is the amount?

(x) Solve for 'x' $2x + 20 - 5x = x - 6 + 9x$

(xi) What is a symmetric matrix?

(xii) If $A = \begin{bmatrix} 4 & 5 \\ 2 & 3 \end{bmatrix}$, find A^2

(Turn Over)

(2)

2. (xiii) Convert $(1110)_2$ into decimal number system.
(xiv) Find the sum of $(101)_2$ and $(11)_2$
(xv) Divide Rs.60,000 in the ratio 5 : 7
(xvi) If $f(x) = -2x + 4$ then find $f(-2)$ and $f(2)$
(xvii) Express 14% as a fraction.
(xviii) Find x from the proportion $8 : 2 :: x : 40$

SECTION - II

Note : Attempt any TWO questions.

3. (a) If the price of 50 readymade shirts is Rs.3652, then what will be the price of 85 such shirts? 4
(b) Find compound interest due in case of Rs.1000 loaned for 5 years at 6% P.a. 4
4. (a) Solve the simultaneous equations 4
$$2x - 3y = 24$$
$$\frac{5x}{3} - \frac{y}{2} = 12$$

(b) Solve the quadratic equation by using completing the square method 4
$$9x^2 - 6x + \frac{5}{9} = 0$$
5. (a) Use matrices to solve 4
$$3x - 4y = 16$$
$$9x - 18y = 120$$

(b) Convert $(101101.01)_2$ into a decimal number. 4