

MODEL PAPER "BUSINESS MATHEMATICS"

Intermediate Part-I Examination

OBJECTIVE

Time: 15Minutes

Marks: 10

Q.No.1.Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type question as A, B, C, and D. The choice which you think is correct; fill the circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling to or more circles will result in zero mark in that question. Attempt as many questions as given in objective-type question paper and leave others blank.

- (i) The ratio between 2.5 kg and 4.5 kg is
 (a) 2:5 (b) 5:9 (c) 9:5 (d) None of these
- (ii) The regular, periodic and fixed sequence of savings/ payments/installments is called.
 (a) Annuity (b) simple interest
 (c) compound interest (d) none of these
- (iii) If each payment is made at the end of each payment period and continue for a definite period then the type of annuity used is
 (a) per-petuity (b) annuity due
 (c) ordinary annuity (d) none of these
- (iv) $y=3x+4$ is an:
 (a) explicit function (b) implicit function
 (c) constant function (d) quadratic function
- (v) The equation $3^{2x}+9=10.3^x$ is called:
 (a) quadratic equation (b) homogeneous equation
 (c) irrational equation (d)exponential equation
- (vi) A liner equation has always
 (a) three roots (b) two roots (c) one root (d) none of these
- (vii) If A is a matrix of order $m \times n$ then to get AB, the order of matrix B must be
 (a) $m \times m$ (b) $p \times n$ (c) $n \times p$ (d) none of these
- (viii) The matrix $\begin{bmatrix} 2 & 2 \\ 3 & 3 \end{bmatrix}$ is
 (a) singular (b) non singular (c) diagonal (d) none of these
- (ix) The no system with base 2 is known as
 (a) binary system (b) decimal system
 (c) sexagesimal system (d) none of these
- (x) 5 in binary system is
 (a) 10 (b) 101 (c) 11 (d) none of these

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Intermediate Part-I Examination

SUBJECTIVE

Time: 1:45Hours

Marks: 40

**Note: Out of Questions Nos.2,3 and 4 write any 12 (Twelve) short answers.
While writing answer write question No. carefully.**

(12x2)=24

Q.No.2. Write short answers.

- (i) Write the names of different types of proportion.
- (ii) 35 is what percent of 175
- (iii) If $A:B = 2:5$ & $B:C = 10:15$ find $A : B : C$
- (iv) Write the formula for compound interest.
- (v) Define annuity due.
- (vi) Define term of the annuity.

Q.No.3. Write short answers.

- (i) Differentiate between even and odd function.
- (ii) Find x & y intercepts of the equation $y = 5x + 9$
- (iii) If $y = 21 - 9x$, then find y if $x = 9.1$
- (iv) Define degree of an equation.
- (v) 12 times a no is 240, what is the no?
- (vi) Write two consecutive integers where sum is 41

Q.No.4. Write short answers.

- (i) Define a matrix
- (ii) What is a zero matrix?
- (iii) Find the value of x if $\begin{bmatrix} 2 & 1 \\ 3 & x \end{bmatrix}$ is singular.
- (iv) Convert $(10001)_2$ to base 10
- (v) Convert $(73)_{10}$ to binary system.
- (vi) Simplify $(101)_2 \times (1101)_2$

SECTION -II

Note: - Attempt any TWO questions.

2x8= 16

- Q.No5.** (a) 14 cows consume 630 kgs of hay in 18 days. How many cows will eat 770 kgs of hay in 28 days at the same rate.
(b) At what rate Rs. 5000 double that in 5 years at compound interest?

- Q.No6.** (a) Draw the graph of $y = 3x - 5$
(b) Solve the equation $x^{2/3} - 2x^{1/3} = 8$

- Q.No7.** (a) If $A = \begin{bmatrix} 4 & 9 \\ 7 & 8 \end{bmatrix}$ then find A^{-1} and prove that $A^{-1} A = I_2$
(b) Evaluate $(1111)_2 \times (1111)_2$