

Fsd

Roll No. : _____

Objective
Paper Code

Intermediate Part First
Business Mathematics (Objective)

6641

Time: 15 Minutes

Marks: 10

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

FSD-211

S.#	Questions	A	B	C	D
1	The simplest form of ratio $\frac{4}{9}$ to $\frac{1}{3}$:	4 to 1	1 to 3	3 to 1	4 to 3
2	In $10 : x :: 8 : 4$, x is equal to:	5	6	4	2
3	The simple interest on Rs. 4800 for 2 years at 6% per annum is:	476	576	676	657
4	If $G(x) = x^2 + 4$ then $G(\sqrt{3})$ is:	1	-1	7	-7
5	If $\frac{3x}{8} + 5 = 17$ then $x = ?$	$x = 32$	$x = 23$	$x = 34$	$x = 43$
6	$x^2 - 8x + 15 = 0$ can be factorize as:	$(x + 5)(x - 3)$	$(x - 5)(x + 3)$	$(x - 5)(x - 3)$	$(x + 5)(x + 3)$
7	8 in binary system is:	$(10)_2$	$(100)_2$	$(1011)_2$	$(1000)_2$
8	$(1101)_2 + (110)_2 = \underline{\hspace{2cm}}$.	$(11001)_2$	$(10011)_2$	$(10101)_2$	$(10001)_2$
9	A square matrix A is said to be singular if:	$ A = 0$	$ A \neq 0$	$ A = 1$	$ A < 1$
10	If $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 3 \\ 4 & 5 \end{bmatrix}$ then $A + B$ is equal to:	$\begin{bmatrix} -1 & -1 \\ -1 & -1 \end{bmatrix}$	$\begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$	$\begin{bmatrix} 3 & 5 \\ 7 & 9 \end{bmatrix}$	$\begin{bmatrix} 2 & 8 \\ 6 & 3 \end{bmatrix}$

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Fsd.

Roll No. _____

Intermediate Part First
Business Mathematics (Subjective)

Time: 01:45 Hours

Marks: 40

FSD 24

SECTION – I

2. Write short answers to any SIX parts.

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- (i) If a pole of height 20 feet cast a shadow 24 feet, how long a shadow would be for a pole of height 30 feet?
- (ii) Express in reduced form $24 : 48$
- (iii) Zahid has Rs. 500000 at the end of a year, what is the amount of Zakat?
- (iv) How long will it take for Rs. 5000 to earn simple interest as Rs. 1000 invested at 10% per annum?
- (v) The price of shoes was Rs. 350, which is 30% less of the actual price. Find the original price.
- (vi) Find the two consecutive integers whose sum is 99.
- (vii) Find x if: $100 - 7 [3x - 3 (4 - 3)] = x$
- (viii) Reduce $x^4 - 10x^2 + 9 = 0$ into quadratic form.
- (ix) Solve $y^2 - 10y + 9 = 0$ by factorization.

3. Write short answers to any SIX parts.

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- (i) If $f(x) = x^2 - \frac{1}{x^2} + 3$; then find $f(\sqrt{2})$
- (ii) Draw the graph of the function $f(x) = x$
- (iii) Convert $(99)_{10}$ to binary system.
- (iv) Convert $(10100)_2$ into decimal system.
- (v) Simplify $(10000)_2 - (1011)_2$
- (vi) Find value of λ if $A = \begin{bmatrix} \lambda & 4 \\ -2 & 2 \end{bmatrix}$ is singular.
- (vii) Find A^{-1} , if $A = \begin{bmatrix} 5 & 3 \\ 4 & 2 \end{bmatrix}$
- (viii) If $A = \begin{bmatrix} 1 & -2 \\ 3 & -4 \end{bmatrix}$; then compute A^2
- (ix) Define non-singular matrix.

SECTION – II Attempt any TWO questions. Each question carries 08 marks.

4. (a) A train travels 144 km distance in 2 hours. What will be travel in 50 minutes with same? 04
(b) Calculate the compound interest earned for Rs. 5000 invested for 6 years at 7% per annum. 04
 5. (a) If $f(t) = 6t + 4$. Find $f\left(-\frac{1}{2}\right)$, $f\left(\frac{1}{2}\right)$, $f\left(\frac{3}{2}\right)$, $f(-4)$ 04
(b) Find solution set of $3x^2 + 4x - 5 = 0$ by quadratic formula. 04
 6. (a) Solve the system of linear equations $2x - y = -2$, $x + 2y = 3$ by inversion matrix method. 04
(b) Simplify: $[(100111)_2 + (10101)_2] - (10111)_2$ by changing into decimal system. 04
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