2017 (S) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

BUSINESS MATHEMATICS & STATISTICS (SESSION 2015-2017) (NEW SCHEME)

PAPER-I (COMMERCE GROUP) TIME ALLOWED: 1.45 Hours

SUBJECTIVE MAXIMUM MARKS: 40

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. Attempt any six parts. $6 \times 2 = 12$

(i) Define Invoice Price.

(ii) Define Discount.

(iii) Define Percentage.

(iv) Express $\frac{4}{8}$ as a percent.

(v) Find simple interest on Rs.5000 for 10 years at 8% annually.

(vi) Define Compound Interest.

(vii) What is meant by Annuity?

(viii) Define Dependent Variable.

(ix) Define Function.

3. Attempt any six parts. $6 \times 2 = 12$

(i) What is Linear Equation?

(ii) Define a Quadratic Equation.

(iii) Solve $3x^2 - 9x + 5 = 0$ by quadratic formula.

(iv) Solve $x + y = 12$ and $x - y = 8$

(v) Define Identity Matrix.

(vi) Find A' if $A = \begin{bmatrix} 2 & 4 \\ 5 & 9 \end{bmatrix}$

(vii) If $A = \begin{bmatrix} 1 & 3 \\ 0 & -1 \end{bmatrix}$ find A^{-1}

(viii) What is Decimal System?

(ix) Convert 19 into Binary System.

SECTION-II

NOTE: - Attempt any two questions.

4.(a) A man spends 78% of his income and save Rs.44. What is his income? 4

(b) Find the present value of Rs.3500 due in 4 years at 6% interest per year. 4

5.(a) If $f(x) = 3x^2 + 4x$, find $f(-1)$, $f(1)$, $f(2)$ and $f(-2)$ 4

(b) Solve $\frac{7x^2 + 8}{3x + 1} = \frac{5}{3}$ 4

6.(a) Find the value of X if $\begin{vmatrix} 1 & 2 & 1 \\ 2 & x & 2 \\ 3 & 6 & x \end{vmatrix} = 0$ 4

(b) Simplify: $[(100111)_2 + (10101)_2] - (10111)_2$ 4

Paper Code Number: 2641

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

BUSINESS MATHEMATICS & STATISTICS (SESSION 2015-2017) (NEW SCHEME)

PAPER-I (COMMERCE GROUP) TIME ALLOWED: 15 Minutes

OBJECTIVE MAXIMUM MARKS: 10

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two 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. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.(1)

(1) 5 to 25 is same as:-

(A) $5:\frac{1}{25}$ (B) $\frac{1}{5}:25$ (C) $5:25$ (D) $\frac{1}{25}:5$

(2) _____ percent of Rs.30 is of 300.

(A) 30% (B) 20% (C) 10% (D) 15%

(3) Interest is classified in:-

(A) Five classes (B) Four classes (C) Three classes (D) Two classes

(4) The simple interest on Rs.500/= borrowed for 1 year @ 11% per annum is:-

(A) Rs.720/- (B) Rs.55/- (C) Rs.44/- (D) Rs.440/-

(5) If $y = f(x) = 5x - 45$, for $x = 10$, then y is:-

(A) 1 (B) 2 (C) 5 (D) 3

(6) Sum of roots of $ax^2 + bx + c = 0, a \neq o$ is:-

(A) $\frac{a}{b}$ (B) $\frac{b}{a}$ (C) $\frac{-b}{a}$ (D) $\frac{c}{a}$

(7) Solution set of the equation $x^2 + 5x - 6 = 0$ is:-

(A) $\{-1, -5\}$ (B) $\{-1, 5\}$ (C) $\{-1, 6\}$ (D) $\{-6, 1\}$

(8) Inverse of a square matrix A is only possible when:-

(A) $|A| = 0$ (B) $|A| \neq 0$ (C) $|A| = |A'|$ (D) $A = A'$

(9) Determinant of identity matrix is:-

(A) 0 (B) 2 (C) 3 (D) 1

(10) The base of binary system is:-

(A) 10 (B) 8 (C) 4 (D) 2

2017 (S) Roll No: _____

INTERMEDIATE PART-I (11th CLASS)

BUSINESS MATHEMATICS & STATISTICS (SESSION 2012-2014) (OLD SCHEME)

PAPER-I (COMMERCE GROUP) TIME ALLOWED: 2.10 Hours

SUBJECTIVE MAXIMUM MARKS: 60

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. **Attempt any six parts.** $6 \times 2 = 12$

(i) Define Proportion.

(ii) Define Invoice Price.

(iii) Evaluate $2\frac{1}{2}\%$ of 500.

(iv) Find x if $3 : x = x : 27$.

(v) Find the purchase price if the selling price is Rs 3300 and profit rate is 10%.

(vi) Define Compound Interest.

(vii) Find the simple interest on Rs 10000 invested for 5 years at 7% per annum.

(viii) What is the difference between Ordinary Annuity and Annuity Due?

(ix) At what rate Rs 5000 double it in 5 years? Using simple interest.

3. **Attempt any six parts.** $6 \times 2 = 12$

(i) Define Even and Odd functions.

(ii) Find the range of the relations $\{(0,0), (1,2)\ (1,3)\ (2,4)\}$

(iii) If $f(x) = 3x^2 + 4x$ find $f(-1)$ and $f(-2)$

(iv) Find x if $\frac{2x}{7} + 1 = 0$

(v) Solve the Equation $\frac{x+4}{3} = \frac{x-8}{5}$

(vi) Solve $x^2 - x - 42 = 0$ by Factorization.

(vii) Find the discriminant of the equation $x^2 + 10x + 21 = 0$

(viii) Write down the sum of roots of equation $5x^2 - 6x - 7 = 0$

(ix) Solve the Simultaneous equation $x + 2y = 2$, $4y - x = 10$

4. **Attempt any six parts.** $6 \times 2 = 12$

(i) Define Unit Matrix.

(ii) Find order of A' if $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 3 \end{bmatrix}$

(iii) Find $|A|$ and $AdjA$ if $A = \begin{bmatrix} 2 & 1 \\ -1 & 2 \end{bmatrix}$

(iv) Find x if $\begin{bmatrix} 3x & 1 \\ 2 & 2 \end{bmatrix}$ is a singular matrix.

(v) If $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 1 \end{bmatrix}$, $B = \begin{bmatrix} -1 & 2 & 3 \\ 1 & 2 & 1 \end{bmatrix}$, Find $A + B$ and $B - A$

(vi) Define Binary Number System.

(vii) Convert 35 into Binary System.

(viii) Simplify $(1001)_2 + (11)_2$

(ix) Change $(1111)_2$ into Decimal Number System.

P.T.O.

SECTION-II

NOTE: - Attempt any three questions.

5.(a) If a pole of height 20 feet casts a shadow 24 feet, how long a shadow be for a pole of height 35 feet. 4

(b) If a person borrows Rs 4,50,000 for 3 years. Simple interest is charged at the rate of 17.5% per year. What amount will be repaid at the end of 3 years? 4

6.(a) Rs.700 is invested at 4% per annum. How long will it take for the amount to become Rs.784? 4

(b) Find slope and y intercept of the line $2y - 3x = 4$ 4

7.(a) Solve $\frac{3x-4}{3} + \frac{x-3}{2} = \frac{7}{6}$ 4

(b) Solve $3x^2 - 2x - 12 = 0$ using quadratic formula. 4

8.(a) Solve the system of equations by using matrices

$$x + y = 11$$
$$x - y = 9$$ 4

(b) Evaluate the determinant $\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix}$ 4

9.(a) Convert $(1011011)_2$ to its equivalent number in base 10. 4

(b) Simplify $(11011)_2 \times (1101)_2$. 4

Paper Code
Number: 6641

2017 (S) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

BUSINESS MATHEMATICS & STATISTICS (SESSION 2012-2014) (OLD SCHEME)
PAPER-I (COMMERCE GROUP)

TIME ALLOWED: 20 Minutes
MAXIMUM MARKS: 15

OBJECTIVE

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two 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. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) The value of 'x' in proportion $2 : 7 :: x : 49$ is:-

(A) 8 (B) 14 (C) 12 (D) 28

(2) The ratio between 80 to 640 is:-

(A) 1 : 4 (B) 1 : 5 (C) 1 : 8 (D) 3 : 4

(3) Decimal form of 5.3% is:-

(A) 53 (B) 0.53 (C) 0.0053 (D) 0.053

(4) Sum of annuity is called:-

(A) Future value (B) Present value (C) Current value (D) None of these

(5) The simple interest on Rs.2000 for 45 days at 10% per annum is:-

(A) Rs 25 (B) Rs 50 (C) Rs 75 (D) 100

(6) The abscissa of the point (1, 4) is:-

(A) $\frac{1}{4}$ (B) 6 (C) 4 (D) 1

(7) If $f(x) = 4x^2 - x$ then $f(-2)$ is:-

(A) 10 (B) 20 (C) 2 (D) 4

(8) Given that $x + (x+8) = 20$ the value of 'x' is:-

(A) $x = 4$ (B) $x = 16$ (C) $x = 8$ (D) $x = 6$

(9) The roots of $x^2 - 3x + 2 = 0$ are:-

(A) 0,1 (B) 1,1 (C) 1,2 (D) 2,2

(10) The solution of $x + y = 6$ and $x - y = 2$ is:-

(A) (4, 2) (B) (2, 4) (C) (−4, 2) (D) (4, − 2)

(11) The order of the matrix $\begin{bmatrix} 2 & 4 \\ 3 & 1 \end{bmatrix}$ is:-

(A) 2×1 (B) 1×2 (C) 2×2 (D) 3×4

(12) If A is 'a' square matrix with real entries then $\overline{A}$ is equal to:-

(A) A (B) $-A$ (C) A^{-1} (D) 0

(13) If $\begin{vmatrix} 2 & x \\ 3 & 3 \end{vmatrix} = 0$ then the value of 'x' is:-

(A) − 2 (B) 2 (C) 3 (D) − 3

(14) Decimal number system is based on the digits:-

(A) 0 to 9 (B) 0 to 8 (C) 0 to 1 (D) 0 to 5

(15) 21 in binary number system is:-

(A) $(1011)_2$ (B) $(10101)_2$ (C) $(10111)_2$ (D) $(11011)_2$

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN

OBJECTIVE KEY FOR INTER (PART-I / II) Annual Examination, 2017.

Name of Subject B. Math Session _____

Group: 1st

Q. Nos.	Paper Code	Paper Code	Paper Code	Paper Code
	2641			
1.	C			
2.	C			
3.	D			
4.	B			
5.	C			
6.	C			
7.	D			
8.	B			
9.	D			
10.	D			
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Group: 2nd

Q. Nos.	Paper Code	Paper Code	Paper Code	Paper Code
	6641			
1.	B			
2.	C			
3.	D			
4.	A			
5.	A			
6.	D			
7.	B			
8.	D			
9.	C			
10.	A			
11.	C			
12.	A			
13.	B			
14.	A			
15.	B			
16.				
17.				
18.				
19.				
20.				

سرٹیفکیٹ بابت تصحیح سوالیہ پرچہ/ مارکنگ Key

ہم نے مضمون Mathematics پرچہ 1 گروپ کامرس سیکشن اولڈ/نیو انٹرسالانہ/ضمنی امتحان 2017 کا سوالیہ پرچہ ہذا بغور معروضی (Subjective & Objevtive) کو بنظر عمیق چیک کرلیا ہے یہ پرچہ سلیبس کے عین مطابق Set کیا گیا ہے۔اس سوالیہ پرچہ میں کسی قسم کی کوئی غلطی نہ ہے۔ہم نے سوالیہ پرچہ کا اردو اور انگریزی Version بھی چیک کرلیا ہے یہ Version آپس میں مطابقت رکھتے ہیں اور سلیبس (Syllabus) کے مطابق بھی ہیں۔نیز اس پرچہ کی Key کی بابت بھی تصدیق کی جاتی ہے کہ یہ بھی درست بنائی گئی ہے۔اس میں بھی کسی قسم کی کوئی غلطی نہ ہے۔

مزید یہ کہ ہم نے Key بنانے سے متعلق دفتر کی جانب سے تیار کردہ ہدایات وصول کر کے ان کا بغور مطالعہ کرلیا ہے اور ان کی روشنی میں Key بنائی ہے۔

PREPARED & CHECKED BY

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