2017 (A) 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 Homogeneous Quantities.

(ii) Find x if $15 : 60 - 900 : x$

(iii) Define Proportion.

(iv) Find 60 % of 5000.

(v) Define Principal.

(vi) Find simple interest on Rs.100,000 borrowed for 3 years at 5 %.

(vii) Define Annuity.

(viii) Define Function.

(ix) What is x-intercept of a function?

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

(i) Solve the equation $2(x+5)-(x-6)=10$

(ii) Define the quadratic equation.

(iii) Solve the equation by factorization $x^2 + x - 6 = 0$

(iv) Find discriminant of the equation $4x^2 - 13x + 3 = 0$

(v) If $A = \begin{bmatrix} 4 & 3 \\ 2 & -5 \end{bmatrix}$ then find A^2

(vi) Prove that $\begin{bmatrix} 2 & -3 \\ 2 & -3 \end{bmatrix}$ is Singular Matrix.

(vii) Prove that $A = \begin{bmatrix} 0 & -a \\ a & 0 \end{bmatrix}$ is Skew-symmetric Matrix.

(viii) Find the sum $(1011)_2 + (111)_2$

(ix) Convert $(1001)_2$ into decimal number.

SECTION-II

NOTE: - Attempt any two questions.

4.(a) A TV costing Rs.6000/- was sold for Rs.6500/-. Find profit/loss in percentage. 4

(b) Find compound interest on Rs.15000/- @ 5 % for 10 years. 4

5.(a) Define Even Function and check whether $f(x)$ is even or odd if $f(x) = \frac{x+1}{x-1}$. 4

(b) Solve the equation $4x^2 + 7x - 1 = 0$ by Completing Square Method. 4

6.(a) Solve the system of linear equations by Cramer's rule $2x_1 - 3x_2 = 1;\ x_1 + 4x_2 = 6$ 4

(b) Evaluate $(11011)_2 \times (10001)_2$ 4

Paper Code Number: 2641	2017 (A)	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) The base of Binary Number System is:-

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

(2) A Matrix having single row is called:-

(A) Row Matrix (B) Singular Matrix (C) Square Matrix (D) Scalar Matrix

(3) If $A = \begin{bmatrix} 12 & 8 \\ 2 & 4 \end{bmatrix}$ then $\begin{bmatrix} 6 & 4 \\ 1 & 2 \end{bmatrix}$ is equal to:-

(A) 12 (B) $\frac{1}{2}A$ (C) 8 (D) 32

(4) A Second Degree Equation is called:-

(A) Linear Equation (B) Quadratic Equation (C) Cubic Equation (D) Radical Equation

(5) Sum and product of two numbers is 25, 100 when:-

(A) 15, 10 (B) 20, 5 (C) 30, – 5 (D) 25, 4

(6) If $f(x) = \frac{1}{x-4}$ then $f(3)$ is:-

(A) – 1 (B) Undefined (C) Zero (D) 1

(7) The value of 'x' in $\frac{20}{7} = \frac{80}{x}$ is:-

(A) 2 (B) 24 (C) 26 (D) 28

(8) 150 is 25 % of _____ number.

(A) 600 (B) 60,000 (C) 60 (D) 6000

(9) If amount is double in 5 years, then rate is:-

(A) 10 % (B) 20 % (C) 15 % (D) 25 %

(10) Formula of simple interest I is:-

(A) Prt (B) SRi (C) $p(1+i)^n$ (D) $p(1-i)^n$

2017 (A) 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 Continued Ratio.

(ii) Define Discount.

(iii) Find out 60 % of 5000.

(iv) Find x if $x : \frac{1}{4} :: 12 : 3$

(v) Find the ratio between one hour 15 minutes and 30 minutes.

(vi) Define Annuity.

(vii) What is the difference between Simple Interest and Compound Interest?

(viii) Find simple interest on Rs.100,000 borrowed for 3 years at 5 %.

(ix) How long will it take for Rs.50,000 to earn simple interest as Rs.10,000 at 10 % per annum?

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

(i) Define Even Function.

(ii) Find the slope of a line which passes through $P(1, 2)$ and $Q(5, -2)$

(iii) In how many regions a plane is divided by coordinate axes? What we call these regions?

(iv) Solve $3x - 7 = 5x + 2$

(v) Solve $x^2 + x - 6 = 0$ by quadratic formula.

(vi) Solve $x - \frac{2}{x} = 1$

(vii) Solve $3x - 4y = 7$ for $y = 2$

(viii) Solve the system of linear equations $2x + 7y = 3$, $x - 4y = 4$

(ix) Show that $\{(30, 8)\}$ is the solution set of the system $3x + 2y = 106$; $2x + 4y = 92$

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

(i) Define Identity Matrix.

(ii) Find the value of 'X' if $\begin{bmatrix} 3 & 5 \\ -5 & 4 \end{bmatrix} + X = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

(iii) Show that $A = \begin{bmatrix} 2 & 1 \\ 1 & 2 \end{bmatrix}$ is Symmetric Matrix.

(iv) Find A if $2A + \begin{bmatrix} 1 & 2 \\ 4 & 6 \end{bmatrix} = 0$

(v) Find A^{-1} if $A = \begin{bmatrix} 7 & 8 \\ 4 & 5 \end{bmatrix}$

(vi) Define Binary Number System.

(vii) Evaluate $(11)_2 \times (11)_2$

(viii) Convert 23 into Binary Number.

(ix) Subtract $(111001)_2 - (1001)_2$

P.T.O.

SECTION-II

NOTE: - Attempt any three questions.

5.(a) If $A : B = 3 : 5$ and $B : C = 6 : 3$. Find $A : B : C$ 4

(b) Find simple interest on Rs.350 for Rs.5590 for 3 months at rate 6% p.a. 4

6.(a) In how many years a sum of Rs.3000 would amount Rs.4814.07 at 6% compounded semi-annualy. 4

(b) Find intercepts of the graph of function $y = x^2 - 2x - 8$ 4

7.(a) Solve $\frac{1}{x} + \frac{1}{x+1} = \frac{2}{x+3}$ 4

(b) Solve the equation $3^{2x} + 9 = 10.3^x$ 4

8.(a) If $A = \begin{bmatrix} 1 & 7 \\ 6 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 3 \\ 1 & 6 \end{bmatrix}$ then prove $AB \neq BA$. 4

(b) Solve the system of Linear Equations $2x + y = 3$, $4x - 5y = -1$ by Matrices Method. 4

9.(a) Simplify $(111000)_2 + (101010)_2 - (1011)_2$ 4

(b) Convert Decimal number 745 into Binary Number System. 4

Paper Code
Number: 6641

2017 (A) Roll No._____

INTERMEDIATE PART-I (11th CLASS)

BUSINESS MATHEMATICS & STATISTICS (SESSION 2012-2014) (OLD SCHEME)
PAPER-I (COMMERCE GROUP) TIME ALLOWED: 20 Minutes

OBJECTIVE MAXIMUM MARKS: 15

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 ratio between 1.9 kg and 9.5 kg is:-

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

(2) $a : 3 :: b : 9$ is same as:-

(A) $\frac{a}{3} = \frac{b}{3}$ (B) $\frac{a}{1} = \frac{b}{3}$ (C) $\frac{a}{9} = \frac{b}{27}$ (D) $\frac{a}{3} = \frac{b}{27}$

(3) 30 % of 900 is:-

(A) 150 (B) 250 (C) 270 (D) 370

(4) An amount will be doubled @ 20 % with simple interest in:-

(A) 5 years (B) 20 years (C) 40 years (D) 10 years

(5) A sequence of payment made at equal interval of time is called:-

(A) Perpetuity (B) Compound amount (C) Annuity (D) None of these

(6) The term function introduced by a German Mathematician was:-

(A) Newton (B) Leibniz (C) Cauchy (D) Lagrange

(7) Domain is the set of all possible values of:-

(A) Input (B) Output (C) Negative values (D) Positive values

(8) If $2x - 7 = 13$ then value of 'x' is:-

(A) 20 (B) 10 (C) 30 (D) 5

(9) The degree of quadratic equation is:-

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

(10) Solution of Simultaneous Equations $x - y = 4$ and $x + y = 8$ is:-

(A) $x = 1,\ y = 2$ (B) $x = 2,\ y = 3$ (C) $x = 6,\ y = 1$ (D) $x = 6,\ y = 2$

(11) If $\begin{vmatrix} 3 & 1 \\ 2 & x \end{vmatrix} = 0$; then $x = ?$

(A) $\frac{1}{3}$ (B) $\frac{1}{4}$ (C) $\frac{2}{3}$ (D) $\frac{3}{2}$

(12) Order of the matrix having m rows and n columns is:-

(A) $m - n$ (B) $m \times n$ (C) $n \times m$ (D) $\frac{m}{n}$

(13) The transpose of a row matrix is always a:-

(A) Column Matrix (B) Row Matrix (C) Square Matrix (D) Null Matrix

(14) To convert a decimal number into binary number we use the method of:-

(A) Addition (B) Division (C) Multiplication (D) Substraction

(15) $(8)_{10}$ in binary number system is:-

(A) $(100)_2$ (B) $(1100)_2$ (C) $(1000)_2$ (D) $(1010)_2$

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, MULTAN

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

Name of Subject B. Mathematics. Session 2012 - 2014

Group: 1st New

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

Group: 2nd

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

سرٹیفکیٹ بابت تصحیح سوالیہ پرچہ/مارکنگ Key

ہم نے مضمون ریاضی پرچہ ۱ گروپ کامرس سیکشن نیو، ادارہ انٹر سالانہ / ضمنی امتحان 2017 کا سوالیہ پرچہ اشائع کیا معروضی (Subjective & Objevtive) کو بنظر عمیق چیک کرلیا ہے یہ پرچہ سلیبس کے عین مطابق Sot 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 تیارہ 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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