

INTERMEDIATE PART-II (12th CLASS)**BUSINESS MATHEMATICS & STATISTICS (NEW SCHEME) (SESSION 2015-2017)
PAPER-II (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 × 2 = 12**

- Write down two uses of Statistics.
- Define Discrete Variable with example.
- What is meant by Secondary Data?
- Differentiate between Statistic and Parameter.
- Define the term "Class Boundry".
- What is measure of Central Tendency?
- How a multiple bar chart is constructed?
- Define Mode.
- Write down the merits of Median.

3. Attempt any six parts.**6 × 2 = 12**

- If $\bar{x} = 5$; $n = 10$, then find $\sum x = ?$
- Describe any four merits of Mode.
- Find the Median of 3, 5, 2, 7, 6, 1, 4.
- What is Price Index Number?
- Define Chain Relatives.
- Given $\sum p_n q_n = 1356$; $\sum p_o q_n = 1975$, then find current year weighted index number.
- Define Dependent Events.
- Define Exhaustive Events.
- Make a "Sample Space" when two coins are tossed.

SECTION-II**NOTE: - Attempt any two questions.**

4.(a) Make a frequency distribution, taking class interval of 5 as 50 – 54, 55 – 59, etc.

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68, 76, 71, 60, 82, 96, 83, 76, 78, 73
 93, 59, 75, 71, 65, 78, 81, 78, 73, 95
 74, 71, 88, 82, 62, 75, 76, 63, 88, 61
 94, 53, 90, 73, 65, 72, 97, 74, 68, 75
 66, 75, 85, 88, 60, 69, 85, 57, 67, 77

(b) Calculate the Median from the following data:-

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Weight (Pounds)	118 – 126	127 – 135	136 – 144	145 – 153	154 – 162	163 – 171	172 – 180
Frequency	3	5	9	12	5	4	2

5.(a) Given that $U = \frac{X - 136.5}{2}$

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U	-4	-3	-2	-1	0	1	2	3
f	2	5	8	18	22	13	8	4

Calculate Arithmetic mean by Step Deviation Method.

(b) Given annual prices of commodities. Construct price index numbers by taking 1930 as base year.

4

Year	Wheat	Rice	Cotton	Ghee
1930	2	5	20	40
1931	3	6	22	45
1932	5	10	25	50
1933	6	8	30	60

6.(a) Two dice are rolled, find the following probabilities:-

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- Sum on the two faces is 8
- Sum on the two faces is greater than 10

(b) One integer is chosen at random from the numbers 51, 52, 53, -----, 100.

What is the probability that the number chosen is divisible by (i) 10 (ii) 6 ?

4

**BUSINESS MATHEMATICS & STATISTICS (NEW SCHEME) (SESSION 2015-2017)
PAPER-II (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 data obtained by conducting a survey is called:-
(A) Primary data (B) Secondary data (C) Continuous data (D) Qualitative data
- (2) If there are no gaps between consecutive classes, the limits are called:-
(A) Class limits (B) Class intervals (C) Class boundaries (D) Class marks
- (3) The budgets of two families can be compared by:-
(A) Subdivided rectangles (B) Subdivided rectangles and pie diagram
(C) Pie diagram (D) Histogram
- (4) The sum of deviations is zero when deviations are taken from:-
(A) Mean (B) Median (C) Mode (D) All of these
- (5) Extreme scores on an examination have the following effect on the mode:-
(A) They tend to raise it (B) They tend to lower it
(C) They have no effect on it (D) Difficult to tell
- (6) We must arrange the data before calculating:-
(A) Mode (B) Mean (C) Weighted Mean (D) Median
- (7) Index for base period is always taken as:-
(A) 100 (B) One (C) 200 (D) Zero
- (8) Base year quantities as weights are used in:-
(A) Laspere's Method (B) Paasche's Method (C) Fisher's Ideal Method (D) All of these
- (9) The probability of all possible outcomes of a random experiment is always equal to:-
(A) Zero (B) One (C) Infinity (D) All of these
- (10) If n coins are tossed, then possible outcomes are:-
(A) n (B) 2 (C) 2^n (D) All of these

INTERMEDIATE PART-II (12th CLASS)

BUSINESS MATHEMATICS & STATISTICS (OLD SCHEME) (SESSION 2012-2014)
PAPER-II (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 × 2 = 12**
- Define Qualitative Data.
 - What is Secondary Data?
 - What is Questionnaire Method?
 - Name two methods of Calculating Mean.
 - Compute Mean from data 2, 4, 6, 8 and 10.
 - What is Modal Class?
 - Write down the formula to compute mode for grouped data.
 - In a Symmetrical Distribution Arithmetic Mean is 10. Find value of Median and Mode.
 - Define Empirical relation between Mean, Median and Mode.
- 3. Attempt any six parts. 6 × 2 = 12**
- Define Class Interval.
 - Differentiate between Ungrouped and Grouped Data.
 - Define the four bases of Classification of Data.
 - Define Frequency Polygon.
 - If $\sum p_n q_o = 280.84$, $\sum p_o q_n = 258.18$, find Laspeyres Index Number.
 - What is Consumer Price Index?
 - What is Family Budget Method?
 - How many commodities are used in C.P.I?
 - If Paasche's Index Number is 106.47 and Fisher Index Number is 105.62, then find Laspeyre's Index Number.
- 4. Attempt any six parts. 6 × 2 = 12**
- What is Price Index Number?
 - Differentiate between Class – limits and Class – boundaries.
 - Define a Multiple Bar Diagram.
 - What is meant by Relative Frequency?
 - What is an Outcome?
 - Define the Null(impossible) Event.
 - What are Mutually Exclusive Events?
 - If A and B are two independent events and $P(A) = 0.40$, $P(B) = 0.35$, then find $P(A \cap B)$
 - If one card is drawn from 52 playing cards, find the probability that it is a king of Heart Card?

P.T.O.

SECTION-II**NOTE: - Attempt any three questions.**

- 5.(a) Make a frequency distribution taking "10" as class interval and "45" as lowest limit. 4
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|-----|----|----|-----|-----|-----|
| 65 | 91 | 59 | 56 | 88 | 109 |
| 85 | 82 | 97 | 64 | 52 | 74 |
| 105 | 96 | 96 | 110 | 118 | 49 |
| 116 | 52 | 72 | 101 | 90 | 103 |

- (b) Draw Ogive for the frequency distribution formed in part "a". 4

- 6.(a) Calculate A.M for the following data by Step Deviation Method. 4

Class Interval	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
f	10	20	30	45	25	12	8

- (b) Find the Average price of the item sold using Weighted Mean. 4

Items	A	B	C	D	E	F
Price Rs.	1.29	2.15	5.25	3.49	8.00	10.50
No. of sold	10	7	12	13	10	8

- 7.(a) Find out Median and Mode for the following data:- 4

18, 33, 28, 36, 19, 23, 36, 15, 20

- (b) Compute Median for the following data:- 4

Groups	10 – 19	20 – 29	30 – 39	40 – 49	50 – 59	60 – 69
f	15	17	24	31	21	12

- 8.(a) Compute Index Numbers of prices taking 2005 as base and using Mean as an average. 4

Years	Commodities (in Rs.)			
	A	B	C	D
2005	50	70	80	90
2006	69	82	98	112
2007	102	115	120	128
2008	140	148	150	144

- (b) (i) If Laspeyre's Index Number is 107.22 and Paasche's Index is 105.72. Find Fisher's Index Number. 2

- (ii) If Fisher's Index Number is 120 and Laspeyre's Index Number is 108. Find Paasche's Index Number. 2

- 9.(a) Given that 4

$S = \{ 1, 2, 3, 4, 5, 6, 7, 8, 9 \}$ $A = \{ 1, 2, 3, 4 \}$, $B = \{ 2, 4, 6, 8 \}$, $C = \{ 3, 4, 5, 6 \}$
show that $A \cap \bar{A} = \phi$, $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$

- (b) Five balls are selected from a bag which contains 3 red, 5 white and 7 green balls. Find the probability that (i) all are green balls (ii) 2 red and 3 white balls 4

INTERMEDIATE PART-II (12th CLASS)

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

PAPER-II (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) A numerical quantity computed from sample data is called:-
(A) Parameter (B) Constant (C) Statistic (D) Statistics
- (2) Questionnaire method is used in collection of:-
(A) Secondary data (B) Primary data (C) Grouped data (D) None of these
- (3) Data classified by attributes is called:-
(A) Quantitative data (B) Geographical data (C) Temporal data (D) Qualitative data
- (4) The process of arranging data into rows and columns is called:-
(A) Classification (B) Tabulation (C) Frequency distribution (D) Array
- (5) Histogram is a graph of:- (A) Time series (B) Cumulative frequency distribution
(C) Relative frequency distribution (D) Frequency distribution
- (6) The size of class is also called:-
(A) Class interval (B) Class frequency (C) Class mark (D) Class boundary
- (7) Average of a constant is:-
(A) Zero (B) Same constant (C) Positive (D) Negative
- (8) The most frequent value in a data if it exist is called:-
(A) Mean (B) Median (C) Mode (D) Weighted Mean
- (9) In symmetrical distribution mean, median and mode are always:-
(A) Zero (B) Negative (C) Different (D) Equal
- (10) Index numbers are called the barometers of:-
(A) Statistics (B) Economics (C) Mathematics (D) None of these
- (11) In Chain Base Method, the base period is:-
(A) Fixed (B) Constant (C) Not fixed (D) Zero
- (12) Laspeyre's Index Number is also called:-
(A) Base Year Weighted Index Numbers (B) Current Year Weighted Index Numbers
(C) Volume Index Numbers (D) Simple Index Numbers
- (13) The term sample space is used for:-
(A) All possible out comes (B) Probability (C) All possible coins (D) Sample
- (14) The probability of an event always lie between:-
(A) -1 and 0 (B) 0 and 1 (C) -1 and +1 (D) More than 1
- (15) Probability of a sure event is:-
(A) Zero (B) 1/2 (C) 1 (D) 3/4

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,

MULTAN ✓

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

Name of Subject B.M.S (old)

Session _____

Group: 1st

Group: 2nd (New)

Q. Nos.	Paper Code	Paper Code	Paper Code	Paper Code
	8641			
1.	C			
2.	B			
3.	D			
4.	B			
5.	D			
6.	A			
7.	B			
8.	C			
9.	D			
10.	B			
11.	C			
12.	A			
13.	A			
14.	B			
15.	C			
16.				
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20.				

Q. Nos.	Paper Code	Paper Code	Paper Code	Paper Code
	4641			
1.	A			
2.	C			
3.	B			
4.	A			
5.	C			
6.	D			
7.	A			
8.	A			
9.	B			
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