

MODEL PAPER “BUSINESS STATISTICS”

Intermediate Part-II Examination

OBJECTIVE

Time Allowed: 15 Minutes

Marks: 10

Q.1: Note: Write answers to the questions on the objective answer sheet provided. You have four choices for each objective type questions as. A, B, C, and D. The choice which you think is correct; fill the circle in front of that questions 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 question as given in objective-type question paper and leave others blank.

(i)	A measure computed from sample data is called: (A) Parameter (B) Statistic (C) Statistics (D) Data
(ii)	A statistical table has at least: (A) One part (B) Two parts (C) Three parts (D) Four parts
(iii)	The graph of cumulative frequency distribution is: (A) Histogram (B) Pie chart (C) simple bar chart (D) Ogive
(iv)	The sum of squares deviation from mean is: (A) Zero (B) Minimum (C) Maximum (D) Negative
(v)	Arithmetic mean is based on: (A) All the values (B) Few value (C) Selected values (D) None of these
(vi)	Price relative is percentage ratio of current year price and: (A) Base year price (B) Base year quantity (C) Preceding year price (D) None of these
(vii)	Index numbers are called the barometers of: (A) Statistics (B) Economics (C) Mathematics (D) Computer
(viii)	The probability of an event always lie between: (A) -1 and 0 (B) 0 and 1 (C) -1 and +1 (D) More than 1
(ix)	nC_r is equal to: (A) $\frac{n!}{r!}$ (B) $\frac{n!}{(n-r)!}$ (C) $\frac{n!}{(n+r)!}$ (D) $\frac{n!}{(n-r)!r!}$
(x)	The possible arrangement of word “STATISTICS” are: (A) 5040 (B) 504000 (C) 50040 (D) 50400

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Time Allowed: 1:45 Hrs.

Marks: 40

SECTION-I

Q.2: write short answers to any Six (6) questions.

(2 x 6 = 12)

- (i) What is inferential statistics?
- (ii) Define qualitative variable with examples.
- (iii) Explain the difference between population and sample.
- (iv) Define primary data.
- (v) What is frequency distribution?
- (vi) What is meant by class boundaries?
- (vii) Name the types of graph.
- (viii) Define median.
- (ix) Describe any four merits of arithmetic mean.

Q.3: write short answers to any Six (6) questions.

(2 x 6 = 12)

- (i) Write any two properties of an arithmetic mean.
- (ii) Given: $l = 249.5$, $h = 150$, $f = 40$, $n/2 = 50$ and $c = 40$, find the value of median.
- (iii) What is an index number?
- (iv) Define link relatives:
- (v) Give $\sum P_n q_n = 1356$ and $\sum P_0 q_n = 1600$ then find current year weighted index number.
- (vi) How many committees of 5 persons can be formed 15 persons?
- (vii) Make a “Sample Space” when a cubical die is rolled.
- (viii) Define random experiment.
- (ix) What do you understand by the term “Combination”?

SECTION-II

Note: Attempt any Two (2) questions.

(2 x 8=16)

Q.4: (a) The marks of 60 students are given below. Make a frequency distribution taking a class interval of 10.

(04)

40, 14, 17, 6, 9, 38, 36, 5, 28, 60, 16, 31, 10, 36, 36, 24, 12, 22, 57, 45, 28, 15, 11, 54, 33, 22, 58, 25, 44, 30, 15, 13, 29, 37, 20, 29, 32, 43, 40, 19, 5, 23, 22, 47, 6, 23, 3, 47, 10, 16, 18, 24, 25, 52, 8, 10, 7, 50, 29, 19.

(b) Calculate an arithmetic mean from the following distribution.

(04)

Marks	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79	80 – 89	90 – 99
No. of Students	1	3	11	21	43	32	9

• **Q.5: (a)** Find mode for continuous distribution. **(04)**

X	6.2	5.7	5.2	4.7	4.2	3.7	3.2	2.7	2.2
F	2	8	20	24	18	12	8	5	3

(b) Construct price Index Number for 2001 on the basis of 2000 from the following data and applying: **(04)**

- (i)** Laspeyre's Method
- (ii)** Paasche's Method
- (iii)** Fisher's Method

Items	2000		2001	
	Price	Quantity	Price	Quantity
Wheat	15.3	15	23.3	12
Rice	20.2	15	27.4	14
Grams	14	10	17	18

Q.6: (a) From a deck of playing cards, a card is drawn at random, find the probability that drawn card is: **(04)**

- (i)** A red king card
- (ii)** A heart card.

(b) A bag contains 2 red, 3 green, 5 blue and 2 yellow balls. Find probability that balls of all the colours are represented in a sample if four balls are selected at random. **(04)**