

0202

B.B.A. IInd Semester EXAMINATION, 2018

BUSINESS STATISTICS-PART-2

Paper - II

Time: Three Hours

Maximum Marks: 80

PART – A (खण्ड – अ)

[Marks: 20]

Answer all questions (50 words each).

All questions carry equal marks.

सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर 50 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – B (खण्ड – ब)

[Marks: 40]

Answer five questions (250 words each).

Selecting one from each unit. All questions carry equal marks.

प्रत्येक इकाई से एक-एक प्रश्न चुनते हुए, कुल पाँच प्रश्न कीजिए।

प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – C (खण्ड – स)

[Marks: 20]

Answer any two questions (500 words each).

All questions carry equal marks.

कोई दो प्रश्न कीजिए। प्रत्येक प्रश्न का उत्तर 500 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART – A

1. Short Questions:

- I. What do you mean by Association of Attributes?
- II. What is concept of Lagrange's Methods?
- III. What do you mean by mixed model in analysis of 'Time Series'?
- IV. What do you mean by seasonal variations?
- V. What do you mean by Set?
- VI. Explain random experiments.
- VII. If Mean of a Poisson distribution is 0.81. Find out Standard deviation.
- VIII. Which type of distribution is shown as 'Bernoulli distribution'?
- IX. Write name of lines are consisting in control chart?
- X. Any two objectives of 'SQC'

PART – B

UNIT –I

2. The sales of XYZ Ltd. of Banswara city for 2013 to 2017 are given below. By using Binomial expansion method, extrapolate the sales for 2018.

Year	2013	2014	2015	2016	2017
Sales (₹. Crore)	7	9	36	14	16

OR

3. When does Binomial Expansion method of Interpolation and Extrapolation used?

UNIT –II

4. What is the concept of 'Analysis of Time Series'? Indicate fully the utility of such analysis in business.

OR

5. The straight line trend equation is given below:

(Origin: 2007, X Unit: One Year)

Shift the origin to (i) 2003 (ii) 2004 (iii) 2009 (iv) 1st Jan 2005

UNIT –III

6. Explain the concept of Probability and its importance in statistics.

OR

7. A University has to select an examiner from a list of 60 persons. 35 of them are men and 25 are women, 20 of them know Hindi and 40 don't. 30 of them are teachers and remaining 30 aren't. What is the probability of the University selecting a Hindi knowing women teachers?

UNIT –IV

8. What are the properties of Binomial distribution? How are these useful?

OR

9. What are the conditions necessary for a Normal Distribution to occur? With the help of a Diagram, Point out the properties of a Normal curve.

UNIT –V

10. Explain Control charts for variables and for attributes used in 'Statistical Quality Control'.

OR

11. The following data give the measurements of the axles of bicycle wheel. 12 samples were taken so that each sample contains the measurements of 4 axles. Obtain trial control limits for X and R charts and comment whether the process is under control or not.

(Given: For $n = 4$, $A_2 = 0.73$, $D_3 = 0$, $D_4 = 2.28$)

PART – C

12. Discuss the Utility of interpolation. What are the different methods known to you for interpolation? Explain.
13. Give below the figures of output of a factory, fit a linear trend by the method of least squares and show the trend – line on graph paper:

Year	2004	2005	2006	2007	2008	2009	2010
Production in (‘000 tons)	82	94	98	81	104	106	100

Also Estimate the production for 2012.

14. In a factory machine. A, B and C manufacture respectively 25%, 35% and 40% of total output. Out of their output 5%, 4% and 2% respectively are defective items. One item is drawn at random from the total output and is found to be defective. What are the Probabilities that it was manufactured by machines A, B and C?
15. Fit a Poisson distribution to following data.

X	0	1	2	3	4	5
F	42	33	14	6	4	1

16. What do you understand by “Statistical Quality Control”? Discuss its Aspects and Advantages.
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