K16U 1190

Reg. No.: ....

Name: ....

II Semester B.Com. Degree (CCSS – Reg./Supple./Improv.)
Examination, May 2016
Complementary Course in Commerce
2C02 COM : QUANTITATIVE TECHNIQUES FOR BUSINESS DECISIONS
(2014 Admn. Onwards)

Time : 3 Hours   Max. Marks : 40

PART – A

Answer **all** questions. **Each** carries ½ marks.

1. _____ is the value of that item of a series which occurs most frequently in the series.

2. _____ is used to explain the behaviour of the discrete random variables where the probability of occurrence of the event is very small.

3. The basic tendency of a series to grow or decline over a period of time is
   a) Seasonal variation   b) Cyclic variation
   c) Secular trend   d) Exponential trend

4. Seasonal index is obtained by the formula

   a) $\left(\dfrac{\text{average of each season}}{\text{average of averages}}\right) \times 100$

   b) $\left(\dfrac{\text{average of each season}}{100}\right) \times \text{average of averages}$

   c) $\left(\dfrac{\text{average of averages}}{\text{average of each season}}\right) \times 100$

   d) $\left(\dfrac{100}{\text{average of each season}}\right) \times \text{average of averages}$

   $(4 \times \frac{1}{2} = 2)$

PART – B

Answer **any four** questions. **Each** carries **one** mark.

5. What is Scatter Diagram ?

6. What is Chi-square distribution ?

7. What is Median ?

8. Write two uses of Geometric Mean.

9. What is standard deviation ?

10. What is Variance ?   (4×1 = 4)

PART – C

Answer **any six** questions. (**Not** exceeding **one** page). **Each** carries **three** marks.

11. How would you test the significance of the correlation coefficient ?

12. Write short notes on :

    a) Geometric Progression

    b) Skewness

    c) Ogive.

13. Distinguish between Karl Pearson's and Bowley's Coefficient of Skewness.

14. Explain Bernoulli's Theorem.

15. What is price elasticity of demand ?

16. Draw the two Ogives for the following data and estimate the median value.

Marks	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
No. of students	5	10	18	12	5

17. What is the main difference between the correlation and regression analysis ?

18. If 3% of electric bulb manufactured by a company is defective, find the probability that in a sample of 100 bulbs, exactly 5 bulbs are defective.   (6×3 = 18)

PART – D

Answer **any two** questions. **Each** carries **eight** marks.

19. In a certain book the frequency distribution of the number of words per page may be taken as approximately normal with mean 400 and standard deviation 25. If a page is chosen at random, what is the probability that the number of words lies between 415 and 450 ?

20. Draw a Histogram and a frequency polygon from the following data.

Marks	No. of students
0 – 20	8
20 – 40	12
40 – 60	15
60 – 80	12
80 – 100	3

21. Compare and contrast Mean, Median and Mode.   (2×8 = 16)

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