SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN (AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.
B.Com.(A&F) END SEMESTER EXAMINATIONS APRIL-2022
SEMESTER - I
20UAFAT1001 - Business Statistics

Total Duration : 3 Hrs. **Total Marks : 60**

Section A

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. List out the Advantages of Diagrammatic Representation of Data.

2. Compute Geometric Mean for the following data:

x	5	15	25	35
f	5	8	3	4

3. An Agricultural research organization tested a particular chemical fertilizer to try to find out whether an increase in the amount of fertilizer used would lead to a corresponding increase in the food supply.

Fertilizer	2	1	3	2	4	5	3
Bushels of Beans	4	3	4	3	6	5	5

4. Obtain trend using 4 yearly moving average method for the following data:

Year	1998	1999	2000	2001	2002	2003	2004	2005
Sales	20	22	25	28	26	29	30	32

5. A tyre manufacturing company kept a record of the distance covered before a tyre needed to be replaced. The table shows the results of 1000 cases.

Distance in Km	Less than 4000	4000- 9000	9001-14000	More than 14000
Frequency	20	210	325	445

   If a tyre is bought from this company, what is the probability that :
   (i) it has to be substituted before 4000 km is covered?
   (ii) it will last more than 9000 km?
   (iii) it has to be replaced after 4000 km and 14000 km is covered by it?

6. Explain the Principle of sampling in detail.

7. A herd of 1,500 steer was fed a special high-protein grain for a month. A random sample of 29 were weighed and had gained an average of 6.7 pounds. If the standard deviation of weight gain for the entire herd is 7.1, test the hypothesis that the average weight gain per steer for the month was more than 5 pounds.

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8. Random samples drawn from 2 places gave the following table.

	Place I	**Place II**
Mean height (inches)	68.50	68.58
S.D. of height	2.5	3.0
Sample Space	1200	1500

Interpret the mean height as the same for an adult in 2 places.

Section B

Answer any **THREE** questions $(3 \times 10 = 30$ Marks)

9. Compute Mean Median and Mode for the following data:

CI	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	12	22	48	56	32	18	6

10. Find Mean Deviation about mean for the given data:

CI	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	2	3	8	14	8	3	2

11. State and Prove Multiplication theorem of Probability.

12. Apply chi square test to find out if the following figures provide evidence of the effectiveness of inoculations.

	Attacked	**Not attacked**	**Total**
Inoculated	20	300	320
Not Inoculated	80	600	680
Total	100	900	1000

13. From the following Data, apply one-way ANOVA.

Brand A	**Brand B**	**Brand C**	**Brand D**
0	4	8	15
5	8	13	16
18	19	11	13

Is there any significant difference in brand preference? Answer at 5% level of significance using One way ANOVA.