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. CS - END SEMESTER EXAMINATIONS - NOV'2024 SEMESTER - II

23UBCAT2002 - Business Statistics

Total Duration: 2 Hrs.30 Mins. Total Marks: 60

Section B

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

1. 120 students of a college were asked to opt for different work experiences. The details of these options are as under:

| Areas of work | No. of | | | |
|-------------------|----------|--|--|--|
| experience | Students | | | |
| Photography | 6 | | | |
| Clay modelling | 30 | | | |
| Kitchen gardening | 48 | | | |
| Doll making | 12 | | | |
| Book binding | 24 | | | |

Represent the above data through a pie diagram.

2. Draw histogram for the following frequency distribution:

| Wages | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 |
|------------------|-------|-------|-------|-------|-------|
| (in Rs.) | | 00 03 | 1013 | 00 03 | 30 33 |
| No. of Employees | 8 | 10 | 16 | 14 | 10 |

- 3. Find the mean and median for the following figures: 30, 41, 47, 54, 23, 34, 37, 51, 53, 47.
- 4. Differentiate between mode and median with suitable examples.
- 5. Marks obtained by 12 students in the recently concluded examination is as follows: 52, 13, 35, 46, 89, 10, 29, 95, 66, 72, 48, 71. Calculate range and coefficient of range.
- 6. List out the absolute measures of dispersions and relative measures of dispersions.
- 7. Bring out the different types of correlation and give examples in each type.

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8. What are the components of time series? Enlist.

Section C

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

9. Prepare a statistical table from the following information of Daily Earnings (in Rs.) by Doctors:

| 88 | 23 | 27 | 28 | 86 | 96 | 94 | 93 | 86 | 99 |
|-----|----|----|----|----|-----|----|-----|----|----|
| 82 | 24 | 24 | 55 | 88 | 99 | 55 | 86 | 82 | 36 |
| 96 | 39 | 26 | 54 | 87 | 100 | 56 | 84 | 83 | 46 |
| 102 | 48 | 27 | 26 | 29 | 100 | 59 | 83 | 84 | 48 |
| 104 | 46 | 30 | 29 | 40 | 101 | 60 | 89 | 46 | 49 |
| 106 | 33 | 36 | 30 | 40 | 103 | 70 | 90 | 49 | 50 |
| 104 | 36 | 37 | 40 | 40 | 106 | 72 | 94 | 50 | 60 |
| 24 | 39 | 49 | 46 | 66 | 107 | 76 | 96 | 46 | 67 |
| 26 | 78 | 50 | 44 | 43 | 46 | 79 | 99 | 36 | 68 |
| 29 | 67 | 56 | 99 | 93 | 48 | 80 | 102 | 32 | 51 |

10. Use direct method to find the arithmetic mean for the following data:

| Income | No. of Persons |
|--------------|------------------|
| (in Rs.'000) | ivo. or recisons |
| 10-20 | 4 |
| 20-30 | 7 |
| 30-40 | 16 |
| 40-50 | 20 |
| 50-60 | 15 |
| 60-70 | 8 |

- 11. Calculate standard deviation from the following set of observations: 8, 9, 15, 23, 5, 11, 19, 8, 10, 12.
- 12. The ranks of students in Hindi and Economics are given:

| Hindi | 6 | 1 | 5 | 2 | 4 | 3 |
|-----------|---|---|---|---|---|---|
| Economics | 3 | 1 | 4 | 2 | 5 | 6 |

Calculate rank correlation.

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13. Sales figures (in Lakhs) of a business unit are as follows:

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------|----|---|----|---|----|----|---|----|
| Sales | 11 | 9 | 14 | 9 | 10 | 10 | 8 | 12 |

Compute 4 years moving average for all the years and identify the average sales for the sixth year of business.
