Program: B.Com Semester: I SET: A
Program (Specific): B. Com Course Type: CC
Class: F.Y.B.Com Max. Marks: 70
Name of the Course : Business Mathematics & Statistics No. of Pages : 2
Course Code: 22-COB-114 Time: 3 Hours
Paper: I

Instructions to the candidate:

1) *There are 4 sections in the question paper. Write each section on separate page.*
2) *All Sections are compulsory.*
3) *Figures to the right indicate full marks.*
4) *Use of calculator is allowed.*

Section A

Q1 **Short Answer Questions (any 5 out of 7)** **Marks 10**

(a) Explain the terms Face Value and Market Value of a share.
(b) Define Population in Statistics
(c) Arithmetic Mean of 10 observations is 25. If each observation is increased by 5 what will be the revised mean?
(d) Simple interest of a certain sum of money for 4 years is Rs. 440. What will be the simple interest for 6 years?
(e) Define the term Attributes with one example.
(f) Explain exclusive method of classification with suitable example.
(g) Calculate mode for the following data… 23, 24, 17, 30, 14, 20, 24.

Section B

Q2 **Solve any 4 out of 6** **Marks 20**

(a) What will be the simple interest on Rs. 12,000 at 10% p.a. for 2 years?
(b) Find EMI for a loan of Rs. 50,000 is to be repaid in equal monthly installment. Interest is charged at 12% p.a. on the loan outstanding at the beginning of each month and the time span is 10 years. $(1.01)^{120}$ = 3.3004
(c) Which investment is more profitable? 20% at 180 or 25% at 230. (Face value = Rs. 100)
(d) Explain the term Census. What are the advantages of Sampling?
(e) Calculate median for the following data regarding temperature in ℃ in Pune during a week… 35, 38, 40, 39, 35, 36, 37.
(f) Find the difference between compound interest and simple interest on Rs. 500 for 2 years at 10% p.a.

Section C

Q3   Solve any 4 out of 6   **Marks 20**

(a) Find compound interest on Rs. 5,000 at 4% p.a. for 5 years.

(b) A man invested Rs. 13,568 in 7% shares at Rs. 106 and Rs. 12,648 in 11% shares at Rs. 124. How much income would he get in all? (Face value = Rs. 100)

(c) With reference to the following table answer the questions given below the table.

Daily Income (Rs.)	Less than 100	100-200	200-300	300-400	400-500
No. of Workers	8	10	13	25	9

    (i)   Upper limit of the second class
    (ii)   Lower boundary of the fourth class
    (iii) Class-mark of the third class
    (iv) Write the open-end class
    (v)   State the type of classification

(d) A distribution consists of two components with frequencies 300 and 200 having their means 16 and 8 respectively. Find the mean of the combined distribution.

(e) Explain Stratified Sampling with suitable example.

(f) Calculate the amount of Rs. 20,000 for 3 years at 12% p.a. simple interest.

Section D

Q4   Solve any 2 out of 3   **Marks 20**

(a) Following table gives distribution of persons according to age. Calculate Mean and Median for the data.

Age in years	20-30	30-40	40-50	50-60	60-70
No. of persons	16	35	58	28	13

(b) Following table gives distribution of persons according to age. Calculate Median and Mode for the data.

Marks	0-20	20-40	40-60	60-80	80-100
No. of Students	3	5	10	8	4

(a) Following table gives distribution of persons according to age. Calculate Mean and Mode for the data.

Sales (Rs. In lakhs)	0-10	10-20	20-30	30-40	40-50
No. of shops	5	8	13	8	6

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