

**1/MDC-110 Syllabus-2023**

**2 0 2 5**

( Nov-Dec )

**FYUP : 1st Semester Examination**

**MULTIDISCIPLINARY COURSE**

**( Commercial Arithmetic and  
Elementary Statistics )**

**MDC-110**

*Marks : 56*

*Time : 2½ hours*

*The figures in the margin indicate full marks  
for the questions*

**SECTION—A**

( Short answer-type questions )

Answer any *four* of the following questions :  $4 \times 4 = 16$

1. The entry fees to a book-fair is ₹ 25. When this was reduced by 20%, the sale proceeds were increased by 25%. Find the percentage of increase in the visitors.

( 2 )

2. What sum will amount to ₹ 4,50,000 in 10 years at 5% p.a. simple interest?
3. How much can be purchased by investing ₹ 18,000 in 10% stock at ₹ 89 with 1% brokerage?
4. There are 4 red and 5 green balls in a bag. If two balls are drawn one after another at random without replacement, what is the probability that the first one was a red, and the second one was a green ball?
5. Explain briefly the limitations of Statistics.
6. What do you understand by diagrammatic presentation of data? What are its objectives?

SECTION—B

( Long answer-type questions )

Answer any *four* of the following questions :

10×4=40

7. (a) In a college, the students in Arts and Science departments were in the ratio of 4:5 respectively. When 65 more students joined Science department, the ratio becomes 8:11 respectively. How many students are there in Arts department?

5

( 3 )

- (b) 13 chairs and 5 tables were bought for ₹ 8,280. If the average cost of a table be ₹ 1,227, then what is the average cost of a chair? 5
8. (a) A scooterist travels a distance of 45 km from the place X to Y at a speed of 15 km/hr and returns to X from Y at a speed of 20 km/hr. Calculate the average speed of the scooter for the entire journey. 5
- (b) A book was sold for ₹ 27.50 with a profit of 10%. If it were sold for ₹ 25.75, then what would have been the percentage of profit or loss? 5
9. (a) Find the present value of ₹ 5,750 due 3 years hence at 5% p.a. Also find the true discount. 4+1=5
- (b) Find the sale proceed from ₹ 50,000 stock at a premium of ₹ 10 brokerage being  $\frac{1}{10}$ . 5
10. (a) A box contains 4 red, 5 green and 6 white balls. A ball is drawn at random from the box. What is the probability that the ball drawn is either red or green? 4

(b) Write notes on the following : 2×3=6

(i) Annuity

(ii) Measure of central tendency

(iii) Mutually exclusive event

11. Daily sales of a retail shop are given below :

Daily sales (in ₹)	No. of days
120	3
106	9
110	25
114	35
118	17
122	10
126	1

From the above data, calculate the mean and the standard deviation. 10

12. Represent the following data through percentage bar diagrams : 10

Items of expenditure	Expenditure (in ₹)	
	Family—A	Family—B
Food	2,000	3,000
Clothing	480	750
Education	320	400
House rent	400	750
Miscellaneous	800	1,100

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