2024

(April)

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

Answer any *four* questions : 4×4=16

1. A peacekeeping force of 24000 consists of Americans and Russians. The average height of an American is 6 feet 2 inches and that of a Russian is 5 feet 11 inches and that of the whole peacekeeping force is 6 feet. Find the number of Russians in the peacekeeping force.

2. An employee contributes 25% of his salary to GPF, ₹ 3,500 to LIC and deducts 12% of the rest as house rent. If his take home salary is ₹ 88,000 p.m., find his monthly gross salary.

3. Find the amount and the interest on ₹ 25,000 at 10% per annum for 5 years compounded *(a)* semiannually and *(b)* quarterly in a year.

4. What do you mean by ex-dividend and cum-dividend price of a share?

5. What are the advantages and disadvantages of mean?

6. Discuss the limitations of statistics.

Answer any *four* questions : 10×4=40

7. Find the missing frequencies of the following series, if the arithmetic average is 39·5 and the total number of items is 100 :

Marks :	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F :	5	10	?	4	20	3	?

8. Compute the standard deviation by the shortest method for the data given below :

Wages (in ₹) :	750	760	770	780	790	800	810	820
No. of workers :	4	5	13	8	3	6	9	7

9. A bill for ₹ 7,500 was drawn on 25th March, 2019 payable 4 month after date. It was discounted immediately at 5% p.a. Find :

(a) Banker's discount

(b) Discounted value of the bill

(c) True discount

(d) Banker's gain

10. Define stock. Give its features. Differentiate between stock and shares.

11. A person travelled 1/3rd of his journey at a speed of 10 kmph, the next 1/3rd at a speed of 9 kmph, and the rest at a speed of 8 kmph. If he had travelled half of his journey at a speed of 10 kmph and the other half at a speed of 8 kmph, he should have been half a minute longer on the way. What distance did he actually travel?

12. *(a)* Find the present value of a sum that amounts to ₹ 2,500 in 7½ years at 4% p.a. compound. 6

(b) Distinguish between mutually exclusive events and independent events. 4

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