1201 – C52 – IIISC – R – N – 15

THIRD SEMESTER B.Com. (Revised) DEGREE EXAMINATION, NOVEMBER 2015

COMMERCIAL ARITHMETIC

Time : 3 Hours] [Max. Marks : 80

Mathematical tables will be supplied on request.
Simple Calculator is allowed.

Section – A (Marks: 10 × 2 = 20)

Answer any **ten** *of the following.*

1. If log 2 = 0.3010 and log 5 = 0.6990, find the value of log 10 without using log tables.
2. Find 8% of 25% of 50,000.
3. Explain profit with an example.
4. An agent sold goods worth Rs. 25,000. If the agent charges 2% commission, find the amount received by the merchant.
5. Marked price of an article is Rs. 2000. Find the net price if Trade Discount is 5%.
6. Define depreciation.
7. Explain direct proportion.
8. Find the value of x, if 2 : 3 = 10 : x.
9. What is instalment buying?
10. Explain Effective Rate of compound interest.
11. At what rate of S.I. a sum of money doubles in 10 years?
12. Define immediate annuity.

Section – B (Marks: 3 × 5 = 15)

Answer any **three** *of the following.*

13. A person borrows 2 equal sums of money at the same time. One at 5% and the other at 7% p.a. S.I. At the end of 5 years the difference between the interest on the 2 sums is Rs. 500. Find the total amount borrowed by him.

14. A gets salary 20% more than that of B but 25% less than that of C. If C's salary is Rs. 54,000, find B's salary.

15. An article was sold for Rs. 360 to gain 20%. For what price should it be sold to gain 25%?

16. A person invests Rs. 1000 at the end of each year at 5% p.a. C.I. How much would he get back at the end of 10 years?

17. 20 men can do a piece of work in 90 days. How many more men would be required to do it in 50 days?

18. An agent buys an article for Rs. 10,000 and marks it 20% above cost. Find the percentage profit or loss if he sells it allowing 10% trade discount and 5% cash discount.

[P.T.O

Section – C (Marks: 3 × 15 = 45)

Answer any **three** *of the following.*

19. a) Mahendra purchased a machine costing Rs. 1,50,000. It depreciates at 10% p.a. by DBM. What will be its value after 5 years? 8

b) The cash price of an article is Rs. 12,000. But Vaishnavi purchases the same on the following conditions.

i) Rs. 4000 cash down at the time of purchase.

ii) 9 monthly instalments of Rs. 1000 each.

Find the rate of S.I. paid by the customer. 7

20. a) A certain sum of money amounts to Rs. 1210 in 2 years and to Rs. 1464.10 in 4 years at compound interest. Find the sum and rate of interest. 8

b) A borrowed Rs. 7,500 from B for 10 years at C.I. Rate of interest is 3% for the first three years, 4% for the next 3 years and 5% for the last 4 years. Find the amount he will be required to repay to settle the account with B. 7

21. a) An article worth Rs. 15,000 is purchased on instalment plan under which 5 equal annual instalments including C.I. at 10% p.a. are payable. Find the amount of annual payment. 8

b) Using log table find the value of

$$\sqrt{\frac{2025\times650}{565\times225}}.$$ 7

22. a) An article was sold at a loss of 20%. If it was bought for Rs. 40 more and sold for Rs. 80 more there would have been neither loss nor gain. Find the C.P. of the article. 8

b) The price of petrol is increased by 25%. So a person reduced his consumption by 25%. What percentage is the rise or fall in the expenditure incurred by him on petrol? 7

23. a) The value of a land is divided among A and B in the ratio 4:5, B and C in the ratio 9:16. If the value of the land is Rs. 96,600, find the share of each. 8

b) A merchant earns 6% profit by selling an article costing Rs. 30,000. If he has allowed trade discount of 20% and cash discount of 5%, how much above cost he has marked the article? 7

24. a) An agent charges 9% commission on cash sales and 5% commission on credit sales. If his average return is 7.5% on the total sales, find the ratio of cash sales to credit sales. 8

b) In a 1000 metre race A beats B by 200 m, C beats B by 100 m and D beats C by 200 m. By how many metres will D beat A in the same race? 7