

PDUAM Tulungia
Sessional Examination-2023
Subject: Mathematics
Paper: SEC: Quantitative Aptitude and Reasoning
B.Sc. 1st semester

Time: 1 Hour

Marks: 20

1. Answer the following questions

1x5=5

- a) If 'MADRAS' is coded as 517916, and TENANT is coded as 432124, then how would you encode 'RMATSN'?
- b) If + means \div , - means \times , \times means +, \div means -, then give the value for $45 + 9 - 3 \times 15 \div 2$.
- c) If January 1 is a Friday, then what is the first day of the month of March in a leap year?
- d) What do you mean by ratio and proportion?
- e) A man buys an article for ₹ 300 and sells it for ₹ 900. Find profit/loss percent.

2. Answer the following questions. (Any 3)

3x5=15

- a) The average of marks obtained by 120 candidates in a certain examination is 35. If the average marks of passed candidates are 39 and that of the failed candidates is 15, what is the number of candidates who passed the examination?
- b) The age of the father 3 years ago was 7 times the age of his son. At present, the father's age is five times that of his son. What are the present ages of the father and the son?
- c) If $(3x - 2y) : (2x + 3y) = 5 : 6$, then find the value of $(\sqrt[3]{x} + \sqrt[3]{y}) : (\sqrt[3]{x} - \sqrt[3]{y})$.
- d) By selling an umbrella for ₹ 30, a shopkeeper gains 20%. During a clearance sale, the shopkeeper allows a discount of 10% of the marked price. Find the percentage of gain.
- e) Sapna borrowed some money on compound interest and returned it in 3 years in equal annual instalments. If rate of interest is 15% per annum and annual instalment is ₹4680, then find the sum borrowed.
