

PAPER - II
(PART - B : ARITHMETICS)

The figures in the margin indicates full marks for the questions.

1. Choose the correct answer -
- (a) The multiplicative inverse of $\frac{1}{3}$ is - $\frac{1}{3} \times \frac{3}{3} = \frac{3}{9} = \frac{1}{3}$ (1x4=4)
 (i) 3 (ii) 1 (iii) $\frac{3}{1}$ (iv) $-\frac{1}{3}$ $\frac{5+9}{9 \times 5} = \frac{45+31}{45}$
- (b) The additive inverse of $\frac{5}{9}$ is - $\frac{5}{9} + \frac{4}{9} = 1$
 (i) $\frac{9}{5}$ (ii) 5 (iii) 9 (iv) $-\frac{5}{9}$ $\frac{1}{3} + \frac{2}{3} = \frac{3}{3} = 1$
- (c) The product of $x - 2 = 7$ is - $\frac{5+9}{9 \times 5} = \frac{25+31}{45}$
 (i) 3 (ii) 9 (iii) 10 (iv) 6 $\frac{106}{45}$
- (d) A loaded truck travels 14 km in 25 minutes. If the speed remains the same, how far is it travel in 5 hours.
 (i) 178 km (ii) 198 km (iii) 168 km (iv) 187 km

2. In a computer lab there are 3 computers for every 6 students. How many computers will be needed for 42 students? 21 71 (3)

3. Three consecutive integers added up to 51. What are three integers? 16, 17, 18 (3)

4. In an election candidates A get 75% of the total valid votes. If 15% of the total votes were elector invalid and the total number of votes is 560000. Find the number of valid vote polled in favour of candidate. 75200 (3)

5. A man sold two plots for Rs. 8 lakhs each. One on the evens a profit of 16% and the other losses 16%. How much does he loss or gain in the whole transaction? no loss (3)

6. A man buys a cycle for Rs. 1400 and sell it at a loss of 15%. What is the selling price of the cycle? 1190 (3)

7. A milkman bought 70 litres of milk for Rs. 630 and added 5 litres of water. If he sells it at Rs. 9.00 per litre. What is his profit percentage? 7.13 (3)

8. Convert the following into -
 (a) $\frac{12}{5}$ as a percent. 240 (b) 30% into decimal 0.30 (c) 16.66 as a fraction $\frac{1666}{100}$ (1x3=3)

9. I purchased a hair - dryer for Rs. 5400 including 8% VAT. Find the price before VAT was added. 4964 (4)

10. Find the following -
 (a) A speed of 6 m/sec into km/hr. $6 \times \frac{18}{5}$
 (b) A speed of 35 km/hr into m/sec. $\frac{35}{5} = 7$ (3x2=6)

5
18x7
126

45
31
126

42
128
45
155

5/17
25/5
162/130

18x6 4
108
5 | 105
21 6
17
13
19
54

16 17
17 17
12 17
51 21
10 10
10

$\frac{5}{9} + \frac{9}{5} = \frac{25+81}{45}$

contd.....5/-

11. Pipe A can fill an empty tank in 10 hours and Pipe B can empty the full tank in 12 hours. If both pipes are opened together in an empty tank. Find the time taken to fill the empty tank. 60 (3)
12. Solve : $3x^2 + 10x - 8 = 0$ 7 (4)
13. Mawia and Enga working together take 15 days to complete a piece of work. If Mawia alone can do this work in 20 days, how long would Enga take to complete the same work? 60 (4)
14. Find the amount which Ram will get on Rs. 4096, if he gave it for 18 months at $12\frac{1}{2}\%$ per annum, interest being compounded half yearly. (3)

$$\frac{12 \times 3}{2} \quad 6.25 \quad 2 \overline{) 10,12}$$
$$\frac{21}{2} \quad 2 \overline{) 5,6}$$