

Please Note- This questions paper consists of two sections.

Section-A contains 8 MCQ's of 1 mark each.

Section -B contains 4 questions of 3 marks each. Show the entire working for this section.

SECTION-A

- The product of additive inverse and multiplicative inverse of $-\frac{1}{4}$ is :
(a) 1 (b) 0 (c) -1 (d) -4
- Every integer is a rational number. _____
 (a) True (b) False
- Which of the following is the product of : $\frac{-7}{8}$ and $\frac{4}{21}$?
(a) 12 (b) $\frac{-1}{6}$ (c) $\frac{-16}{63}$ (d) $\frac{-16}{147}$
- To get the product 1, we should multiply $\frac{8}{21}$?
(a) $\frac{8}{21}$ (b) $\frac{-8}{21}$ (c) $\frac{21}{8}$ (d) $\frac{-21}{8}$
- If 15 workers can build a wall in 48 hours. how many workers will be required to do the work in 30 hours?
(a) 15 (b) 14 (c) 24 (d) 30
- Which of the following quantities do not vary inversely with each other?
 (a) Time to cover distance with uniform speed.
(b) Number of Students and the amount of Food available in a Hostel Mess
(c) Speed of vehicles and time taken to cover a fixed distance
(d) The number of labourers engaged to dig a trench and time to complete the digging
- A Positive number and its reciprocal are said to be in :
 (a) Direct Proportion (b) Inverse Proportion
(c) Neither direct nor inverse (d) same number
- Assertion (A): If x and y are in direct proportion then we can say $x \propto y$.
Reason (R): If we increase the speed of the car, then the time taken to reach the destination decreases, so it is in direct proportion.

- a. Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
b. Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
c. Assertion (A) is true but Reason (R) is false.
d. Assertion (A) is false but Reason (R) is true.

SECTION - B

9. (i) 44 cows can graze a field in 9 days. How many less/ more cows will graze the same field in 12 days? (2)
(ii) Find the multiplicative inverse of $\frac{-2}{5} \times \frac{-5}{16}$. (1)
10. Solve using suitable property: (3)

$$\left(-\frac{2}{3}\right) \times \frac{3}{4} + \left(-\frac{2}{3}\right) \times \frac{-1}{2}$$

11. The students of Anju's class sold posters to raise money. Anju wanted to create a ratio for finding the amount of money her class would make for different numbers of posters sold. She knew they could raise Rs 250 for every 60 posters sold.
(a) How much money would Anju's class make for selling 102 posters?
(b) Could Anju's class raise exactly Rs 2,000? If so, how many posters would they need to sell? If not, why? (3)

12. (i) Evaluate: (2)

$$\frac{4}{7} + \left(\frac{-8}{9}\right) + \left(\frac{-5}{21}\right) + \frac{3}{9}$$

- (ii) If x varies inversely as y and $x = 4$ when $y = 6$, then when $x = 3$ the value of y is? (1)