*** Choose The Right Answer From The Given Options.[1 Marks Each]** **[5]**

1. Reciprocal of $\left(3 \div \frac{1}{2}\right)$ is-

   (A) $\frac{2}{3}$ (B) $\frac{3}{2}$ (C) $\frac{2}{9}$ (D) $\frac{9}{2}$

   Ans. : (C) $\frac{2}{9}$

2. Value of $\frac{1}{3}$ of $\frac{1}{3}$ of $\frac{1}{3}$ is-

   (A) $\frac{1}{3}$ (B) $\frac{1}{27}$ (C) $\frac{1}{18}$ (D) 27

   Ans. : (B) $\frac{1}{27}$

3. Manish takes 26 hours to complete the whole work. If he works $3\frac{1}{4}$ hours daily, in how many days he will finish 4 the work?

   (A) 9 days (B) 6 days (C) 7 days (D) 8 days

   Ans. : (D) 8 days

4. If $\frac{5}{7}$ of a number is 15, the number is-

   (A) 12 (B) 15 (C) 21 (D) 25

   Ans. : (C) 21

5. If 0 < a < b < c < d and a, b, c, d are integers, then which of the following is the smallest?

   (A) $\frac{c+d}{a+b}$ (B) $\frac{b+d}{a+c}$

   (C) $\frac{a+d}{b+c}$

   (D) $\frac{a+b}{c+d}$

   Ans. : (D) $\frac{a+b}{c+d}$

*** Fill In The Blanks With Correct Alternative.[1 Marks Each]** **[5]**

6. The reciprocal of $\frac{13}{19}$ is _____.

   Ans. : $\frac{19}{13}$

7. $\frac{2}{7}$ of $\frac{3}{4}$ is _____.

   Ans. : $\frac{3}{14}$

8. $\frac{5}{7} \div 5$ equal to _____.

   Ans. : $\frac{1}{7}$

9. The product of two proper fractions is _____ than each of the fractions that are multiplied.

Ans. : less

10. $(1-\frac{1}{5}) \times (1-\frac{1}{6}) \times (1-\frac{1}{7}) \times \ldots\ldots\ldots \times (1-\frac{1}{15}) =$ _____.

Ans. : $\frac{4}{15}$

*** Answer The Following Questions In One Sentence.[1 Marks Each]** **[5]**

11. The product of two fractions is $\frac{9}{11}$ If one of them is $\frac{15}{44}$ then find the other fraction.

Ans. : $\frac{12}{5}$

12. Multiply $\frac{3}{7}$ by $\frac{2}{5}$. Write your answer in simplest form.

Ans. : $\frac{6}{35}$

13. Divide $\frac{9}{10}$ by $\frac{3}{4}$ Express your answer as a fraction in simplest form.

Ans. : $\frac{6}{5}$

14. A recipe calls for $\frac{2}{3}$ of a CLIP of flour. If you make half the recipe. how much flour will you use?

Ans. : $\frac{1}{3}$ cup

15. Find the reciprocal of $\frac{4}{9}$, and explain how it helps in division.

Ans. : $\frac{9}{4}$

*** Questions With Calculation.[2 Marks Each]** **[14]**

16. Multiply.

(a) $\frac{5}{19} \times \frac{18}{7}$

(b) $\frac{15}{16} \times \frac{12}{7} \times \frac{119}{75}$

Ans. : (a) $\frac{5}{19} \times \frac{18}{7} = \frac{5 \times 18}{19 \times 7}$
$= \frac{90}{133}$

(b)

$$\frac{\cancel{15}^{1}}{\cancel{16}_{4}} \times \frac{\cancel{12}^{3}}{\cancel{7}_{1}} \times \frac{\cancel{119}^{17}}{\cancel{75}_{5}}$$

$$\frac{3 \times 17}{4 \times 5} = \frac{51}{20} = 2\frac{11}{20}$$

17. Each side of a square iron sheet is $1\frac{3}{8}m$. Find its area.

Ans. : Area of a square sheet $=$ side $\times$ side $= 1\frac{3}{8} \times 1\frac{3}{8} = \frac{11}{8} \times \frac{11}{8} = \frac{121}{64}$
$= 1$ sq. m

Hence, the area of the square iron sheet is 1 latex $\frac{57}{64}$ sq. m.

18. The cost of 1 kg of flour is ₹ $21\frac{1}{2}$. Find the cost of $6\frac{1}{2}kg$ of flour.

Ans. : Cost of 1 kg of flour = ₹ $21\frac{1}{2} = ₹\frac{43}{2}$

So, cost of $6\frac{1}{2}kg$ of flour $= ₹\frac{43}{2} \times 6\frac{1}{2}$

$= ₹\frac{43}{2} \times \frac{13}{2}$

$= \frac{13}{2}$

$= ₹139\frac{3}{4}$

Therefore, the cost of $6\frac{1}{2}kg$ flour is ₹ $139\frac{3}{4}$.

19. Divide the sum of $\frac{4}{7}$ and $\frac{1}{7}$ by $\frac{9}{7}$.

Ans. : $\left(\frac{4}{7} + \frac{1}{7}\right) \div \frac{9}{7} = \frac{5}{7} \div \frac{9}{7}$

$= \frac{5}{7} \times \frac{7}{9} = \frac{5}{9}$

$= \frac{1}{2}$

20. Reduce the following fractions into their simplest form.

(a) $\frac{132}{148}$

(b) $\frac{145}{200}$

Ans. : (a)

$$\frac{132}{148} = \frac{\cancel{2} \times \cancel{2} \times 3 \times 11}{\cancel{2} \times \cancel{2} \times 37} = \frac{33}{37}$$

[∵ 2 × 2 is the common factor of 132 and 148]

Thus, $\frac{33}{37}$ is the simplest form of $\frac{132}{148}$.

(b)

$$\frac{145}{200} = \frac{\cancel{5} \times 29}{2 \times 2 \times 2 \times \cancel{5} \times 5} = \frac{29}{40}$$

[∵ 5 is the common factor of 145 and 200]

Thus, $\frac{29}{40}$ is the simplest form of .

21. Insert a number in ___ so that $\frac{3}{4} \times \frac{2}{7} =$ ___. Out of all three fractions, which one is greatest?

Ans. :

$$\frac{3}{4} \times \frac{2}{7} = \frac{^{3}\cancel{6}}{\cancel{28}_{14}} = \frac{3}{14}$$

Out of the three fractions, $\frac{3}{4}$ is the greatest.

22. A machine can print $\frac{13}{4}$ pages in one minute. How many minutes will it take to print $\frac{104}{4}$ pages?

Ans. : Number of minutes required to print $\frac{104}{4}$ pages

$= \frac{\frac{104}{4}}{\frac{13}{4}}$

$= \frac{104}{4} \times \frac{4}{13}$

$= 8$

*** Questions With Calculation.[3 Marks Each]** **[3]**

23. Divide

(a) $4\frac{5}{6} \div 29$

(b) $3\frac{5}{7} \div \frac{14}{15}$

(c) $20 + \frac{8}{11}$

Ans. : (a) $4\frac{5}{6} \div 29$

$= \frac{29}{6} \div \frac{29}{1}$

$= \frac{29}{6} \times \frac{1}{29}$

$= \frac{1}{6}$

(b)

$$3\frac{5}{7} \div \frac{14}{15} = \frac{26}{7} \div \frac{14}{15} = \frac{\cancel{26}^{13}}{7} \times \frac{15}{\cancel{14}_{7}}$$
$$= \frac{13 \times 15}{7 \times 7} = \frac{195}{49} \text{ or } 3\frac{48}{49}$$

(c)

$$20 \div \frac{8}{11} = \cancel{20}^{5} \times \frac{11}{\cancel{8}_{2}} = \frac{5 \times 11}{2}$$
$$= \frac{55}{2} \text{ or } 27\frac{1}{2}$$

*** case - based/data -based questions** **[4]**

Earth and Moon. The moon is earth's only natural satellite. The mass of the moon is $\frac{1}{100}$ and its radius $\frac{1}{4}$ times that of earth. As a result, the gravitational attraction on the moon is about $\frac{1}{6}$ when compared to earth.

Based on the above information, answer the following questions:

24. The earth's mass is approximately 6,000,000,000, 000,000,000,000,000 kg. What is the approximate mass of the moon?
25. The radius of earth is 6371 km. What is the radius of the moon?
26. If an object weighs $5\frac{3}{5}$ kg on earth, how much would it weigh on the moon?

Ans. : (1) $60,00,00,00,00,00,00,00,00,00,000kg$

(2) $1592\frac{3}{4}km$

(3) $\frac{14}{15}kg$

* **Match the following.** **[4]**

27.

Column A	Column B
(a) $11 \div \frac{3}{4}$	(i) $8 + \frac{1}{4}$
(b) $11 \times \frac{3}{4}$	(ii) $\frac{3}{44}$
(c) $\frac{1}{11} \div \frac{4}{3}$	(iii) $\frac{4}{33}$
(d) $\frac{1}{11} \times \frac{4}{3}$	(iv) $14\frac{2}{3}$
	(v) $\frac{121}{169}$

Ans. :

Column A	Column B
(a) $11 \div \frac{3}{4}$	(iv) $14\frac{2}{3}$
(b) $11 \times \frac{3}{4}$	(i) $8 + \frac{1}{4}$
(c) $\frac{1}{11} \div \frac{4}{3}$	(ii) $\frac{3}{44}$
(d) $\frac{1}{11} \times \frac{4}{3}$	(iii) $\frac{4}{33}$

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