CHAPTER

12

PERCENTAGE AND ITS APPLICATIONS

Percentage

Percentage means per hundred or for every hundred.

Or

The value which is considered for every hundred is termed as percentage and the numerator of such fraction (having denominator 100) is called as the rate of percentage. Percentage is represented by % sign.

Basic Rules Related to Percentage

Per cent as a Fraction

To convert a per cent into a fraction, we divide it by 100 and remove the per cent sign %.

e.g. $5\% = \frac{5}{100} = \frac{1}{20}$

$0.3\,\% = \frac{0.3}{100} = \frac{3}{1000}$

$0.006\% = \frac{0.006}{100} = \frac{6}{100000} = \frac{3}{50000}$

Fraction as a Per cent

To convert a fraction into a per cent, we multiply it by 100 and apply the per cent sign %.

e.g. $\frac{3}{4} = \left[\frac{3}{4} \times 100\right]\% = 75\%$

$0.4 = [0.4 \times 100]\% = 40\%$

$0.08 = [0.08 \times 100]\% = 8\%$

Conversion of Per cent into Fraction

$1\% = \frac{1}{100}$	$20\% = \frac{1}{5}$
$2\% = \frac{1}{50}$	$25\% = \frac{1}{4}$
$4\% = \frac{1}{25}$	$50\% = \frac{1}{2}$
$5\% = \frac{1}{20}$	$100\% = \frac{1}{1}$
$10\% = \frac{1}{10}$	

Finding a Percentage of a Number

To find a per cent of a given number, we proceed as follows

- Obtain the number, say x.
- Obtain the required per cent, say $p\%$.
- Multiply x by p and divide by 100 to obtain the required $p\%$ of x. *i.e.* $p\,\%$ of $x = \frac{p}{100} \times x$

Important Formulae

- Rate percentage $= \frac{\text{Result}}{\text{Original number}} \times 100$
- Increased percentage $= \left(\frac{\text{Increment}}{\text{Original number}} \times 100\right)\%$
- Decreased percentage $= \left(\frac{\text{Decrement}}{\text{Original number}} \times 100\right)\%$

Example **1.** 25% is equal to

(1) 1/2 (2) 1/4 (3) 1/8 (4) 1/16

Sol. (2) $25\% = \frac{25}{100} = \frac{1}{4}$

Example **2.** Find the value of x, if 3% of x is 9.

(1) 300 (2) 400 (3) 310 (4) 305

Sol. (1) As, 3% of x is 9

$\Rightarrow \quad \frac{3 \times x}{100} = 9 \Rightarrow x = \frac{9 \times 100}{3} \Rightarrow x = 300$

Example **3.** Reena deposits 60 per month in her post office saving bank account. If this is 10% of her monthly income, find her monthly income.

(1) ₹ 600 (2) ₹ 650 (3) ₹ 630 (4) ₹ 720

Sol. (1) Let Reena's monthly salary = ₹ x

Now, 10% of x = ₹ 60

$\Rightarrow \quad \frac{10}{100} \times x = 60 \Rightarrow x = \frac{60 \times 100}{10} \Rightarrow x =$ ₹ 600

Example **4.** Kareena went to school for 216 days in a full year. If her attendance is 90%. Find the number of days on which the school opened.

(1) 220 (2) 200 (3) 240 (4) 260

Sol. (3) Let the number of days on which the school opened is x.

Now, 90% of $x = 216 \Rightarrow \frac{90}{100} \times x = 216$

$\Rightarrow \quad x = \frac{216 \times 100}{90}$

$\Rightarrow \quad x = 240$

Thus, the school opened for 240 days.

Example **5.** 40% of (100 – 20% of 300) is equal to

(1) 16 (2) 20 (3) 64 (4) 140

Sol. (1) $\left(100 - 300 \times \frac{20}{100}\right) \times \frac{40}{100} = (100 - 60) \times \frac{40}{100}$

$= \frac{40 \times 40}{100} = 16$

Entrance Corner

1. 150% is equal to **[JNV 2019]**

(1) 1.5 (2) 5.1 (3) 0.15 (4) 15.0

2. 84% is equal to **[JNV 2018]**

(1) $\frac{42}{100}$ (2) $\frac{42}{50}$ (3) $\frac{84}{225}$ (4) 8.4

3. A student scored 18 marks out of 25 marks in the first test of Math. In the second test he scored 22 marks in the second test exceeds his first test by **[JNV 2017]**

(1) 4% (2) 8%

(3) 16% (4) 80%

4. 90% of 300 + 30% of 90 is equal to **[JNV 2017]**

(1) 287 (2) 297 (3) 237 (4) 277

5. In an annual examination, Hardik got 500 marks out of 725. What is his approximate per cent in the examination? **[JNV 2017]**

(1) 88 (2) 79 (3) 54 (4) 70

6. There are 3450 employees in an organisation. Out of which 42% got promoted. How many such employees are there who got promoted? **[JNV 2017]**

(1) 1449 (2) 1518

(3) 1587 (4) 1656

7. 26.2% is equal to **[JNV 2016]**

(1) 2.62 (2) 0.262 (3) 0.0262 (4) 262.0

8. $\frac{17}{25}$ can be expressed in percentage is **[JNV 2015]**

(1) 34% (2) 68% (3) 17% (4) 25%

9. In a musical concert, 15% of the total is reserve for first class. If all the tickets were sold except 171 ticket of first class, then how many tickets were sold? **[JNV 2014]**

(1) 1710 (2) 1600 (3) 1140 (4) 180

10. Which of the following is equivalent to 1.01? **[JNV 2014]**

(1) 101% (2) 10.1% (3) 1.01% (4) 1010%

11. Weight of tomato comprises 90% of water. Weight of water in 25 kg of tomato is **[JNV 2014]**

(1) 24 kg (2) 22.5 kg (3) 21 kg (4) 19.5 kg

12. What is the percentage of 500 g of 4 kg? **[JNV 2013]**

(1) 12.5 (2) 25 (3) 50 (4) 125

13. A man bought a bicycle for ₹ 1200. He sold it for ₹ 1500. Find the profit per cent. **[JNV 2012]**

(1) 30 (2) 20 (3) 25 (4) 28

14. A boy gets ₹ 20 per month and spends 50% of it. How much does he save in 1 yr? **[JNV 2012]**
(1) ₹ 100 (2) ₹ 50
(3) ₹ 120 (4) ₹ 40

15. Rajesh purchased a watch for ₹ 300. He sold it for ₹ 330. Find the profit per cent. **[JNV 2012]**
(1) 5 (2) 13 (3) 14 (4) 10

16. The original price of a car is ₹ 500000. What is the new price if the original price is reduced by 10%? **[JNV 2012]**
(1) ₹ 540000 (2) ₹ 460000
(3) ₹ 450000 (4) ₹ 480000

17. Which one of the following is equivalent of 6/20? **[JNV 2011]**
(1) 6% (2) 20%
(3) 26% (4) 30%

18. Out of 600 students 240 are girls. What is the percentage of girls? **[JNV 2011]**
(1) 250 (2) 60 (3) 40 (4) 24

19. The population of a district is 20 lakh. It increases by 1.1% every year. What is the population after 1 yr? **[JNV 2010]**
(1) 21.1 lakh (2) 22 lakh
(3) 22.2 lakh (4) 20.22 lakh

20. 200 students appeared in an examination. If 75% of student passed the examination, find the number of students who passed the examination. **[JNV 2008]**
(1) 150 (2) 100 (3) 275 (4) 175

21. In per cent, what is 10.01 written as? **[JNV 2005]**
(1) 10.01% (2) 10%
(3) 1001% (4) 100100%

22. 80% of ₹ 240 is more than 35% of ₹ 400 by **[JNV 2004]**
(1) ₹ 52 (2) ₹ 42 (3) ₹ 192 (4) ₹ 140

23. 0.075 when expressed as per cent, is **[JNV 2002]**
(1) 75% (2) 7.5% (3) 0.75% (4) 0.075%

24. Out of a total of 250 marks, a student got 30% marks and failed by 25 marks. The marks necessary for passing is **[JNV 2001]**
(1) 50 (2) 75 (3) 100 (4) 125

25. 30% of ₹ 40 is equal to **[JNV 2000]**
(1) ₹ 10 (2) ₹ 11 (3) ₹ 12 (4) ₹ 13

26. $\frac{5}{8}$ may be expressed as **[JNV 2000]**
(1) $\frac{50}{80}$% (2) 62.5% (3) 55.5% (4) 70.5%

27. 20% of ₹ 70 is equal to **[JNV 2000]**
(1) ₹ 14 (2) ₹ 15 (3) ₹ 16 (4) ₹ 17

28. 25% of 10 m is **[JNV 2000]**
(1) 50 cm (2) 100 cm (3) 200 cm (4) 250 cm

29. A person spends 50% of his salary and saves ₹ 200 per month. His monthly salary is **[JNV 1999]**
(1) ₹ 300 (2) ₹ 400 (3) ₹ 500 (4) ₹ 600

30. 50% is equal to **[JNV 1998]**
(1) $\frac{1}{2}$ (2) $\frac{1}{3}$ (3) $\frac{1}{4}$ (4) $\frac{1}{5}$

31. The catalogue price of an article is ₹ 200. A reduction of 15% in made for each purchase. The cash price is **[JNV 1998]**
(1) ₹ 150 (2) ₹ 170 (3) ₹ 180 (4) ₹ 200

32. 20% of ₹ 10 is **[JNV 1997]**
(1) ₹ 2 (2) ₹ 1 (3) ₹ 3 (4) ₹ 4

33. Find the sum whose 20% is ₹ 240. **[JNV 1997]**
(1) ₹ 1200 (2) ₹ 1000 (3) ₹ 6000 (4) ₹ 2000

34. John had ₹ 300. He spent ₹ 100 on books. Find his per cent expenditure. **[JNV 1997]**
(1) 20 (2) 30 (3) $33\frac{1}{3}$ (4) $16\frac{2}{3}$

Answers

1. (1)	**2.** (2)	**3.** (3)	**4.** (2)	**5.** (4)	**6.** (1)	**7.** (2)	**8.** (2)	**9.** (3)	**10.** (1)
11. (2)	**12.** (1)	**13.** (3)	**14.** (3)	**15.** (4)	**16.** (3)	**17.** (4)	**18.** (3)	**19.** (4)	**20.** (1)
21. (3)	**22.** (1)	**23.** (2)	**24.** (3)	**25.** (3)	**26.** (2)	**27.** (1)	**28.** (4)	**29.** (2)	**30.** (1)
31. (2)	**32.** (1)	**33.** (1)	**34.** (3)						

Hints and Solutions

1. Given, 150%

150% is written as $\frac{150}{100} = \frac{15}{10} = 1.5$

2. $84\% = \frac{84}{100} = \frac{42}{50}$

3. More marks $= 22 - 18 = 4$

Required percentage $= \frac{4 \times 100}{25} = 16\%$

4. 90% of 300 + 30% of 90

$$= \frac{90 \times 300}{100} + \frac{30 \times 90}{100}$$

$$= 90 \times 3 + 3 \times 9 = 270 + 27 = 297$$

5. Required percentage $= \frac{500}{725} \times 100 = 68.9 \approx 70$

6. $3450 \times \frac{42}{100} = \frac{144900}{100} = 1449$ got promotion

7. $26.2\% = \frac{26.2}{100} = 0.262$

8. Percentage value of $\frac{17}{25} = \frac{17}{25} \times 100 = 68\%$

9. According to the question,

$15\% = 171$

$1\% = \frac{171}{15}$

$\therefore \quad 100\% = \frac{171 \times 100}{15} = 1140$

Hence, total number of ticket sold = 1140

10. $1.01 = \frac{101}{100} = 101\%$

11. Weight of water in 25 kg of tomato = 90% of 25 kg

$= 22.5$ kg

12. $\because$ 1 kg = 1000 g

$\therefore \quad 4$ kg $= 4 \times 1000$ g $= 4000$ g

Hence, required percentage $= \frac{500}{4000} \times 100$

$= 12.5\%$

13. Given, cost price of the bicycle = ₹ 1200

and selling price of the bicycle = ₹ 1500

Hence, required profit percentage

$= \frac{1500 - 1200}{1200} \times 100 = \frac{300}{1200} \times 100 = 25\%$

14. Monthly saving amount by the boy

$= 20 \times \frac{50}{100} =$ ₹ 10

$\therefore$ Annually saving amount $= 10 \times 12 =$ ₹ 120

15. Required profit per cent $= \frac{330 - 300}{300} \times 100$

$= \frac{30}{300} \times 100 = 10\%$

16. New price of the car $= 500000 \times \frac{(100 - 10)}{100}$

$= 500000 \times \frac{90}{100} =$ ₹ 450000

17. $\frac{6}{20}$ in percentage $= \frac{6}{20} \times \frac{100}{1} = 30\%$

18. Percentage of girls $= \frac{240}{600} \times 100 = 40\%$

19. District population after one year

$= 2000000 + 2000000 \times 1.1\%$

$= 2000000 + 2000000 \times \frac{1.1}{100}$

$= 2000000 + 22000$

$= 2022000$

20. Required number $= 200 \times \frac{75}{100} = 150$

21. $10.01 = \frac{1001}{100} = 1001\%$

22. 80% of ₹ 240 $= \frac{240 \times 80}{100} =$ ₹ 192

35% of ₹ 400 $= \frac{400 \times 35}{100} =$ ₹ 140

$\therefore \quad$ Difference $= (192 - 140) =$ ₹ 52

23. $0.075 = 0.075 \times 100 = 7.5\%$ (To express number into per cent it is multiplied by 100)

24. $\because$ Total marks = 250

Student got = 30%

i.e., $250 \times \frac{30}{100} = 75$ marks

Failed by = 25 marks

$\therefore$ Pass marks $= 75 + 25 = 100$

25. $\because$ Out of $100 = 30$

$\therefore \quad$ Out of $1 = \frac{30}{100}$

$\therefore$ Out of $40 = \frac{30}{100} \times 40 =$ ₹ 12

26. $\frac{5}{8} = \frac{5}{8} \times 100\% = \frac{500}{8}\% = 62.5\%$

27. 20% of ₹ 70 $= \frac{20}{100} \times 70 =$ ₹ 14

28. 25% of 10 m = 25% of 1000 cm

$= \frac{25}{100} \times 1000 = 250$ cm

29. Savings = 100% − 50% = 50% = ₹ 200

$\therefore$ Total salary = $\frac{100}{50} \times 200 = ₹\ 400$

30. $50\% = \frac{50}{100} = \frac{1}{2}$

31. Reduction at 15% on ₹ 200

$= \frac{15}{100} \times 200 = ₹\ 30$

$\therefore$ Cash price = Catalogue price − Reduction

$= 200 - 30 = ₹\ 170$

32. 20% of ₹ 10 = $\frac{20}{100} \times 10 = ₹\ 2$

33. Let the sum be ₹ x.

Then, 20% of x = ₹ 240

$\Rightarrow \quad x \times \frac{20}{100} = 240$

$\therefore \quad x = \frac{240 \times 100}{20} = ₹\ 1200$

34. $\because$ Out of ₹ 300 expenditure = ₹ 100

$\therefore$ Out of ₹ 1 expenditure = ₹ $\frac{100}{300}$

$\therefore$ ₹ 100 expenditure = $\frac{100}{300} \times 100 = 33\frac{1}{3}\%$

Practice Exercise

1. Which one of the following is equal to 6.25%?
(1) 0.00625 (2) 0.0625
(3) 0.625 (4) 6.25

2. 40% of 20% is equal to
(1) 16% (2) 20% (3) 8% (4) 80%

3. Express 45% in fraction.
(1) $\frac{9}{20}$ (2) $\frac{9}{10}$
(3) $\frac{3}{20}$ (4) $\frac{5}{20}$

4. Express $10\frac{1}{10}$ into percentage.
(1) 1010% (2) 10.10%
(3) 0.101% (4) 101%

5. 50 is what per cent of 75?
(1) $\frac{100}{3}\%$ (2) $\frac{50}{3}\%$
(3) $\frac{200}{3}\%$ (4) None of these

6. 25 g is what per cent of 1 kg?
(1) 25% (2) 2.5%
(3) 0.25% (4) 0.025%

7. 25% of 75 is equal to
(1) 16 (2) 16.35 (3) 17.45 (4) 18.75

8. How many per cent of 72 is 18?
(1) 25% (2) $33\frac{1}{3}\%$
(3) 42% (4) 50%

9. (100% of 5) + (5% of 100) is equal to
(1) 10 (2) 15
(3) 55 (4) 105

10. 12% of 12 + 12 is equal to
(1) 12.36 (2) 12.44 (3) 13.44 (4) 26.40

11. If 5% of X + 16% of 75 = 16. Find the value of X.
(1) 75 (2) 80 (3) 90 (4) 100

12. After spending 30% of her money, a lady has ₹ 70 left. How much had she first?
(1) ₹ 80 (2) ₹ 100
(3) ₹ 120 (4) ₹ 140

13. Ram's monthly salary was ₹ 3000. Find his salary now after an increase of 20%.
(1) ₹ 2400 (2) ₹ 3200
(3) ₹ 3400 (4) ₹ 3600

14. In a class of 50 students, 40% are girls. How many boys are there?
(1) 20 (2) 10 (3) 25 (4) 30

15. Out of 30 students 40% are boys and the remaining are girls. The number of girls in the class
(1) 12 (2) 15 (3) 18 (4) 20

16. A person earns ₹ 1800 per month and saves 10% of it. How much does he save?
(1) ₹ 180 (2) ₹ 1620
(3) ₹ 1790 (4) ₹ 1810

17. A person saves 25% of his income. If he saves ₹ 3000 per month, his monthly income is
(1) ₹ 15000 (2) ₹ 12000
(3) ₹ 9000 (4) ₹ 7500

18. In March, 1994 the price of a car was ₹ 67000. In April, 1994 its price was raised by 10%. The price of the car in April, 1994 was
(1) ₹ 60300 (2) ₹ 66330
(3) ₹ 67670 (4) ₹ 73700

19. If the population of a city recorded in year 2001 and 2011, 560400 and 700500 respectively, then the per cent increase in the population is
(1) 20 (2) 30 (3) 35 (4) 25

20. The total number of students in a school is 5600 out of which 60% are boys, what is the total number of girls in this school?
(1) 2240 (2) 3360
(3) 2860 (4) None of these

21. If a man after spending 85% of the income he saves ₹ 4560 per month, his monthly income is
(1) ₹ 32800 (2) ₹ 31600
(3) ₹ 30400 (4) None of these

22. It is known that 6% of the mangoes are rotten. If the number of rotten mangoes is 54, then the total number of mangoes is
(1) 900 (2) 950
(3) 1010 (4) 1040

23. A total of 20000 votes were polled in an election contested by two candidates. The winning candidate got 60% of the total votes polled. How many votes did the defeated candidate got?
(1) 800 (2) 1200
(3) 8000 (4) 12000

24. A boy gets 25 marks out of 80 and fails by 15 marks. Find the percentage of pass marks.
(1) 40 (2) 30 (3) 33 (4) 50

25. A student has to secure 40% marks to pass. If he gets 20 marks and fails by 20 marks, the maximum marks are
(1) 20 (2) 40
(3) 80 (4) 100

Answers

1. (2)	**2.** (3)	**3.** (1)	**4.** (1)	**5.** (3)	**6.** (2)	**7.** (4)	**8.** (1)	**9.** (1)	**10.** (3)
11. (2)	**12.** (2)	**13.** (4)	**14.** (4)	**15.** (3)	**16.** (1)	**17.** (2)	**18.** (4)	**19.** (4)	**20.** (1)
21. (3)	**22.** (1)	**23.** (3)	**24.** (4)	**25.** (4)					

Hints and Solutions

1. $6.25\% = \frac{6.25}{100} = \frac{625}{10000} = 0.0625$

2. $20\% = \frac{20}{100}$ and $40\% = \frac{40}{100}$

$\therefore$ 40% of 20% $= \frac{40}{100} \times \frac{20}{100} = \frac{8}{100}$ or 8%

3. $45\% = \frac{45}{100} = \frac{9}{20}$

4. $10\frac{1}{10} = \frac{101}{10} = \frac{101}{10} \times 100 = 1010\%$

5. Required percentage $= \frac{50}{75} \times 100 = \frac{200}{3}\%$

6. Required percentage $= \frac{25\text{ g}}{1\text{ kg}} \times 100$

$= \frac{25\text{ g}}{1000\text{ g}} \times 100 = 2.5\%$

7. 25% of $75 = \frac{25}{100} \times 75 = \frac{75}{4} = 18.75$

8. Required percentage $= \frac{18}{72} \times 100 = 25\%$

9. (100% of 5) + (5% of 100)

$= \left(\frac{100}{100} \times 5\right) + \left(\frac{5}{100} \times 100\right) = 5 + 5 = 10$

10. 12% of 12 + 12 $= \frac{12}{100} \times 12 + 12$

$= 1.44 + 12 = 13.44$

11. $\because$ 5% of X + 16% of 75 = 16

$\therefore$ 5% of $X + \frac{16}{100} \times 75 = 16$

$\Rightarrow$ 5% of $X + 12 = 16$

$\Rightarrow$ 5% of $X = 16 - 12 = 4$

$\Rightarrow \frac{5}{100} \times X = 4 \Rightarrow X = \frac{4 \times 100}{5} = 80$

12. Let the total amount be ₹ x.
Then, $x - 30\%$ of $x = ₹\ 70$
$\Rightarrow \quad x - \frac{30x}{100} = 70$
$\Rightarrow \quad \frac{100x - 30x}{100} = 70 \Rightarrow 70x = 70 \times 100$
$\therefore \quad x = \frac{70 \times 100}{70} = ₹100$

13. $\therefore$ Required salary $= 3000 + 20\%$ of 3000
$= 3000 + 3000 \times \frac{20}{100}$
$= 3000 + 600 = ₹\,3600$

14. Total students $= 50$
Percentage of girl $= 40\%$
Number of boys $= 50 \times 60\%$
$= \frac{50 \times 60}{100} = 30$

15. Total students $= 30$
$\because$ Percentage of boys $= 40\%$
$\therefore$ Percentage of girls $= 100 - 40 = 60\%$
$\therefore$ Number of girls $= \frac{60}{100} \times \frac{30}{1} = 18$

16. His saving $= \frac{1800 \times 10}{100} = ₹\,180$

17. Let the monthly income of man is ₹ x.
$\therefore \quad x \times \frac{25}{100} = 3000$
$\therefore \quad x = \frac{3000 \times 100}{25}$
$= ₹\,12000$

18. 10% of $67000 = \frac{10}{100} \times 67000 = ₹\,6700$
$\therefore$ Price of the car in April, 1994
$= (67000 + 6700)$
$= ₹\,73700$

19. Required per cent $= \left[\frac{700500 - 560400}{560400}\right] \times 100$
$= \left[\frac{140100}{560400} \times 100\right] = 25\%$

20. Number of boys $= 60\%$ of 5600
$= \frac{60}{100} \times 5600 = 3360$
Hence, number of girls $= 5600 - 3360 = 2240$

21. Savings of the man $= (100 - 85)\% = 15\%$
Let the monthly income $= ₹\ x$
Then, 15% of $x = 4560$
$\Rightarrow \quad \frac{15}{100} \times x = 4560$
$\therefore \quad x = \frac{4560 \times 100}{15} = ₹\,30400$
Hence, monthly income of man $= ₹\,30400$

22. Let the total number of mangoes $= x$
Then, 6% of $x = 54$
$\Rightarrow \quad \frac{6}{100} \times x = 54 \Rightarrow x = \frac{54}{6} \times 100 = 900$
Hence, total number of mangoes $= 900$

23. Total votes polled $= 20000$
The winning candidate got 60% of the total votes polled.
$\therefore \quad \frac{20000 \times 60}{100} = 12000$ votes
$\therefore$ The defeated candidate got
$= 20000 - 12000 = 8000$ votes

24. Pass marks $= 25 + 15 = 40$
Percentage of pass marks $= \frac{40}{80} \times 100 = 50\%$

25. Marks required to pass $= 40\% = 20 + 20$
$\therefore$ Maximum marks $= \frac{100 \times 40}{40} = 100$

Self Practice

1. Which one of the following is equivalent to $16\frac{2}{3}\%$?

(1) $\frac{50}{3}$ (2) $\frac{1}{6}$ (3) $\frac{16}{3}$ (4) $\frac{2}{3}$

2. Which one of the following equivalent to 28%?

(1) 2.8 (2) 0.28 (3) 28 (4) 280

3. Convert $1\frac{1}{4}$ into a percentage.

(1) 80% (2) 125% (3) 1.25% (4) 12.5%

4. What percentage is 40 paise of ₹ 2.50?

(1) 16% (2) 100% (3) 10% (4) 8%

5. If 36% of pupils in a school are girls and the number of boys in the school is 816, how many girls are there in the school?

(1) 459 (2) 357 (3) 457 (4) 359

6. A man get a 10% increase in his salary. His new salary is ₹ 10285, what was his original salary?

(1) ₹ 11313 (2) ₹ 9350 (3) ₹ 8350 (4) ₹ 10350

7. A football team won 40% of the total number of matches it played during a year. If it lost 6 matches in all and no match was drawn, find the total number of matches played by the team during the year.

(1) 20 (2) 8 (3) 12 (4) 10

8. Chalk contains 10% calcium, 3% carbon and 12% oxygen. The amount of each of these in 1 kg of chalk are

(1) 30 g, 20 g, 10 g (2) 30 g, 100 g, 120 g (3) 100 g, 30 g, 120 g (4) 120 g, 30 g, 100 g

9. 1/8 is equal to

(1) 25% (2) 16% (3) $12\frac{1}{2}\%$ (4) 0.12%

10. 600% can be expressed in decimal as

(1) 60.0 (2) 6.0 (3) 6000 (4) 3/5

11. Sachin got 60% marks in Maths and 3 marks less than Maths in Science. If the total marks are 150, how many marks he scored in Science?

(1) 90 (2) 95 (3) 87 (4) 63

12. 20% of 60 is equal to

(1) 12 (2) 1200 (3) 3 (4) 30

13. What per cent of 90 is 27?

(1) 30% (2) 10% (3) 9% (4) 3%

14. What rate per cent is 1 min 12 s to 1h?

(1) 2% (2) 3% (3) 4% (4) 5%

15. A person spends 75% of his salary and saves ₹ 150 per month. His monthly salary is

(1) ₹ 750 (2) ₹ 600 (3) ₹ 400 (4) ₹ 300

Answers

1. (2)	**2.** (2)	**3.** (2)	**4.** (1)	**5.** (1)	**6.** (2)	**7.** (4)	**8.** (3)	**9.** (3)	**10.** (2)
11. (3)	**12.** (1)	**13.** (1)	**14.** (1)	**15.** (2)					