

CHAPTER : PERCENTAGE

Topics to be covered with examples:

- Percentage concept.
- Conversion of percentage to Integers, Fractions, Decimals.
- Conversion of Integers, Decimals, Fractions into percentage.
- Word problems interpretation and solving.
- Percentage increase and percentage decrease concept.

Q.1. What fraction is $12\frac{1}{2}$ percent?

- A. $\frac{1}{8}$ B. $\frac{1}{6}$ C. $\frac{1}{4}$ D. $\frac{1}{5}$ E.
None of these

Q.2. What percentage is equivalent to $\frac{3}{8}$?

- A. 38% B. $37\frac{1}{2}\%$ C. $36\frac{1}{2}\%$ D. $35\frac{1}{2}\%$ E. $34\frac{1}{2}\%$

Q.3. If 2 litres of water are evaporated on boiling from 8 litres of sugar solution containing 5% sugar, find the percentage of sugar in the remaining solution?

- A. $6\frac{2}{3}\%$ B. $4\frac{1}{2}\%$ C. $5\frac{3}{4}\%$ D. $3\frac{1}{5}\%$ E. None of these

Q.4. Due to fall in manpower, the production in a factory decreases by 25%. By what percent should the working hour be increase to restore the original production?

- A. $35 \frac{1}{3}\%$ B. $33 \frac{1}{3}\%$ C. $36 \frac{1}{3}\%$ D. $37 \frac{1}{2}\%$ E. None of these

Q.5. Two numbers are respectively 20% and 50% more than a third. What percentage is the first of the second?

- A. 90% B. 80% C. 60% D. 50% E. None of these

Q.6. A positive no. is by mistake multiplied by 5 instead of being divided by 5. By what percent more or less than the correct answer is the result obtained?

- A. 2400% B. 2500% C. 2700% D. 2000% E. None of these

Q.7. 3.5% of income is taken as tax and 12.5% of the remaining is saved. This leaves Rs 4053 to spend. What is the income?

- A. Rs 5000 B. Rs 5200 C. Rs 4800 D. Rs 4500 E. None of these

Q.8. If the original population of a town is P , and the annual increase is $r\%$, what will be the population in n years?

- A. $P(1-r/100)^n$ B. $P(1-2r/100)^n$
C. $2P(1-r/100)^{2n}$ D. $3P(1-r/100)^n$
E. None of these

Q.9. The population of a town is 10000. It increases by 10% during the first year. During the second year, it decreases by 20% and increases by 30% during the third year. What is the population after 3 years?

- A. 10500 B. 11000 C. 11440 D. 11500 E. None of these

Q.10. If the price of sugar falls down by 10%, by how much percent must a householder increase its consumption, so as not to decrease expenditure in this item?

- A. $11\frac{1}{9}\%$ B. 12% C. $10\frac{1}{3}\%$ D. 15% E. None of these

Q.11. The population of a town is decreased by 10% and 20% in two successive years. What percent population is decreased after two years?

- A. 30% B. 25% C. 28% D. 35% E. None of these

Q.12. The land holding of a person is decreased by 10 %. Due to late monsoon, the production decreased by 8%. Then what is the effect on revenue?

- A. 18% B. 20% C. 25% D. 17.2% E. None of these

Q.13. 40 liters of a mixture of milk and water contain 10% of water. How much water must be added to make the water 20% in the new mixture?

- A. 5 liters B. 7 liters C. 10 liters D. 6 liters E. None of these

Q.14. What quantity of water should be added to reduce 9 liters of 50% acidic liquid to 30% acidic liquid?

- A. 5 liters B. 6 liters C. 8 liters D. 4 liters E. None of these

Q.15. In 1 kg mixture of sand and iron, 20% is iron. How much sand should be added so that the proportion of iron becomes 10%?

- A. 2 kg B. 1 kg C. 3 kg D. 1.5 kg E. None of these

Q.16. Weights of two friends Ram and Shyam are in the ratio of 4:5
Ram's weight increased by 10% and the total weight of Ram and
Shyam together becomes 82.8 kg, with an increase of 15%. By what
percent did the weight of Shyam increase?

- A. 20 B. 19 C. 25 D. 22 E. None of these

Q17. Veena bought a watch costing Rs. 1404 including sales tax at
8%. She asked the shopkeeper to reduce the price of the watch so
that she can save the amount equal to the tax. The reduction of the
price of the watch is?

- A. Rs.108 B. Rs.104 C. Rs.112 D. Rs.120 E. None of these

Q18. Ankita is 25 years old. If Rahul's age is 25% greater than that of
Ankita then how much percent Ankita's age is less than Rahul's age?

- A. 40% B. 35% C. 10% D. 20% E. None of these

Q19. Mr.Ravi's salary was reduced by 25% for three months. But
after the three months, his salary was increased to the original
salary. What is the percentage increase in salary of Mr.Ravi?

- A. 33.33% B. 42.85% C. 28.56% D. 16.66%

Q20. Last year there were 610 boys in a school. The number decreased by 20 percent this year. How many girls are there in the school if the number of girls is 175 percent of the total number of boys in the school this year ?

- A. 854 B. 848 C. 798 D. 782

Q21. A reduction of 20% percent in the price of rice enables a housewife to buy 5 kg more for rupees 1200. The reduced price per kg of rice

- a) 36 b) 45 c) 48 d) 60 e) None of these

Q22. A number is first decreased by 25%. The decreased number is then increased by 20%. The resulting number is less than the original number by 40. Then the original number is –

- a) 100 b) 200 c) 300 d) 400 e) None of these

Q23. A man spends 60% of his income. His income is increased by 20% and his expenditure also increases by 10%. Find the percentage decrease in his saving?

- a) 10% b) 15% c) 20% d) 25%

Q24. The number of seats in a cinema hall is decreased by 12 percent and the price of tickets also decreased by 4 percent. Find the change in the collection of revenue.

- a) decrease 15.52%
- b) decrease 16.52%
- c) decrease 17.52%
- d) decrease 14.325
- e) None of these

Q25. A student has to get 40 percent marks to pass an examination. He got 60 marks but fails by 20 marks. Find the maximum marks of the examination.

- a) 150
- b) 200
- c) 300
- d) 400
- e) None of these

Q26. A student has to obtain 35% of the total marks to pass. He got 165 marks and failed by 45 marks. The maximum marks are?

- a) 300
- b) 500
- c) 600
- d) 800
- e) none

Q27. Milk contain 6% water. What quantity of pure milk should be added to 15 liters of milk to reduce this to 4%?

- a) 6 liter b) 6.5 liter c) 7 liter
d) 7.5 liter e) none

Q28. To a sugar solution of 4 liters containing 30% sugar, one liter of water is added. The percentage of sugar in the new solution is?

- a) 24% b) 13% c) 15%
d) 30% e) none

Q29. 40kg solution of salt and water contains 5% salt, what quantity of salt must be added to the solution to increase this to 8%?

- a) $\frac{8}{3}$ kg b) 1.80kg c) 1.30kg
d) 2.5 kg e) none

Q30. If A is 5 times as large as B. then percent by which B is less than A is

- a) $83\frac{1}{3}\%$ b) $16\frac{2}{3}\%$ c) 90%
d) 80% e) none

Q31. Ram sells his goods 25% cheaper than Shyam and 25% dearer than Bram. How much percentage is Bram's goods cheaper than Shyam's?

- a) 33.33% b) 50% c) 66.66%
d) 40% e) none

Q32. In an examination, Mohit obtained 20% more than Sushant but 10% less than Rajesh. If the marks obtained by Sushant is 1080, find the percentage marks obtained by Rajesh If the full marks is 2000?

- a) 86.66% b) 72% c) 78.33%
d) 77.77% e) none

Q33. A's salary is first increased by 25% and then decreased by 20%. The result is the same as B's salary increased by 20% and then reduced by 25%. Find the ratio of B's salary to that of A's

- a) 4:3 b) 11:10 c) 10:9
d) 12:11 e) none

Q34. The length of a rectangular plot is increased by 10% to keep its area unchanged the width of the plot should be?

- a) keep unchanged b) increased by 10%
c) increased by $9\frac{1}{11}\%$ d) reduce by $9\frac{1}{11}\%$ e) none

Q35. Mr John is worried about the balance of his monthly budget. The price of petrol has increased by 40%. By what percent should he reduce the consumption of petrol so that he is able to balance his budget?

- a) 33.33 b) 28.56 c) 25
d) 14.28 e) none

Q36. The length of a rectangular is increased by 30% and breadth is decreased by 15%. Calculate the percentage change in the area?

- [illegible]

Q37. The price of a certain article was raised by 10% in India. The consumption of the same article was increased from 200 tons to 225tons. By how much percent will the expenditure on the article rise in the Indian economy?

- a)24.25% b)22.5% c)23.75 %
d)26.75% e) none

Q38. Mr John is worried about the balance of his monthly budget. The price of petrol has increased by 40%.if he wanted to limit the increase in his expenditure to 5% on his basic expenditure on petrol then what should be the corresponding decrease in consumption so that expenditure exceeds only by 5%

- a)33.33 b)28.56 c) 25
d)20 e) none
- Quality Beyond Imagination

Q39. A reduction of 23% in the price of Rice enables a person to buy 11.5 kg more for Rs100 what is the reduced price per kg?

- a) Rs1/kg b) Rs2/kg c) Rs3/kg
d) Rs4/kg e) none

Q40. Due to reduction of $3\frac{1}{8}\%$ in the price of sugar, a man can is able to buy 1kg more for Rs 208, Find the reduced rate of sugar?

- a)Rs5.5/kg b) Rs6.5/kg c) Rs7.5/kg
d) Rs4.5/kg e) none

Ans:-

Q41. Bill Ambani, a very cleaver businessman, started off a business with very little capital. In the first year, he earned a profit of 50% and donated 50% of the total capital (initial+ profit) to a charitable organisation. The same course was followed in the 2nd and 3rd years also. If at the end of three years, he is left with Rs.16,875 then find the amount donated by him al the end of the 2nd year.

- a)45000 b)12500 c)22500
d) 20000 e)none

Q42. In a hotel, 70% had vegetarian lunch while 20% had non vegetarian lunch and 10% had both type of lunch. If 120 people were present, how many did not eat either type of lunch?

- a)20 b)24 c)26 d) 28
e)none

Q43. In an examination, 75% of the students passed in science, 70% in Mathematics and 65% in both science and mathematics. If 60 students failed in both the subject, find the total number of students?

- a)100 b)200 c)300 d) 400 e)none

Q44. In an examination, 48% students failed in Hindi and 32% students in History, 20% students Failed in both the subject. If the number of Students who passed the examination was 880, how many students appeared in the examination if the examination consisted only of these two subject?

- a)1800 b)2200 c)2500
d) 2000 e)none

Q45. According to a recent survey report issued by the commerce ministry, Government of India, 30% of the total FDI goes to Gujarat and 20% of this goes to rural area. If the FDI in Gujarat which goes to urban area, Is 72m then find the size of FDI in rural Andhra Pradesh, Which attracts 50% of the FDI that comes to Andhra Pradesh, Which accounts for 20% of The total FDI?

- a)30m b)9m c)60m d) 40m
e)none

Q46. The population of a Village is 6400. If the number of Male Increased By 40% and that of female increased by 30%. The population become 8380. Find the population of female in the town?

- a)6400 b)5800 c)7000
d) 6000 e)none

Q47. During one year the population of town increased by 5% and during the next year, the population decreased by 5%. If the total population is 10374 at the end of the second year, then what was the population size in the beginning of the first year?

- a) 8000 b) 10000 c) 10400
d) 10100 e) none