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Class 08 - Mathematics

1. A table marked at Rs 15,000 is available for Rs 14,400. Find the discount percent. **[1]**
a) 3% b) 5%
c) 6% d) 4%
2. A bag contains Rs 600 in the form of 1- rupee, 50 paise and 25 paise coins in the ratio 3 : 4 : 12, the number of 25 paise coins is: **[1]**
a) 600 b) 900
c) 1200 d) 1376
3. In a mixture of 120 litres, the ratio of milk and water is 2 : 1. If the ratio of milk and water is 1 : 2, then the amount of water (in litres) is required to be added is: **[1]**
a) 20 b) 40
c) 80 d) 120
4. If 8% VAT is included in the prices, find the original price of a shampoo bottle bought for Rs 180. **[1]**
a) Rs 170 b) Rs 166.67
c) Rs 175 d) Rs 185
5. A shop gives 20% discount. What would the sale price of a dress marked at Rs 120? **[1]**
a) Rs 20 b) Rs 76
c) Rs 36 d) Rs 96
6. 40% of [100 - 20% of 300] is equal to **[1]**
a) 16 b) 64
c) 140 d) 20
7. The compound interest on ₹10 at the rate of 10% per annum for two years will be _____ **[1]**
a) ₹2 b) ₹2.30
c) ₹2.20 d) ₹2.10
8. The sides of a triangle are in the ratio $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$ and its perimeter is 104 cm. The length of the longest side is **[1]**
a) 52 cm b) 26 cm
c) 32cm d) 48 cm
9. If Amit had Rs 750 left after spending 70% of his money, how much did he have in the beginning? **[1]**

- c) ₹4050 d) ₹4280
19. A sum of money placed at compound interest doubles itself in 4 years. In how many years will it amount to eight times itself? [1]
 a) 16 yrs b) 12 yrs
 c) 14 yrs d) 18 yrs
20. Find C.I. on Rs 13,500 for 2 years at 10% per annum compounded annually. [1]
 a) Rs 2,900 b) Rs 2,835
 c) Rs 2,500 d) Rs 3,000
21. The original price of a washing machine which was bought for ₹13500 including 8% VAT, is [1]
 a) ₹12500 b) ₹14580
 c) ₹12600 d) ₹13492
22. If 12.5% of 192 = 50% of x, then x = [1]
 a) 92 b) 25
 c) 48 d) 45
23. A table marked at Rs 15,000 is available for Rs 14,400. Find a discount percent. [1]
 a) 4% b) 2%
 c) 5% d) 8%
24. The list price of a frock is Rs 220. A discount of 20% is announced on sales. What is the amount of discount on it? [1]
 a) Rs 44 b) Rs 33
 c) Rs 22 d) Rs 11
25. Some one rupee, 50 paise and 25 paise coins make up ₹ 93.75 and their number are in proportion 3 : 4 : 5. The number of each type of coins, are [1]
 a) 42, 56, 70 b) 40, 70, 75
 c) 45, 60, 75 d) 46, 58, 75
26. The population of a village increases @ 5% p.a.. If present population is 8000, after how many years the population will be 9261? [1]
 a) 3 years b) $3\frac{1}{2}$ years
 c) 4 years d) 2 years
27. A sum of money doubles itself in 3 years at CI, when the interest is compounded annually. In how many years will it amount to 16 times of itself? [1]
 a) 6 years b) 12 years
 c) 16 years d) 8 years
28. The third proportional between $(a^2 - b^2)$ and $(a + b)^2$ is [1]
 a) $\frac{(a+b)^3}{a-b}$ b) $\frac{a-b}{a+b}$

- c) A is true but R is false. d) A is false but R is true.
36. Suppose for the principal P, rate R% and time T, the simple interest is S and compound interest is C. Consider the possibilities. [1]
- i. $C > S$
 ii. $C = S$
 iii. $C < S$
- Then,
- a) only (i) is correct. b) either (ii) or (iii) is correct.
 c) either (i) or (ii) is correct. d) only (iii) is correct.
37. If 60% of people in a city like cricket, 30% like football and the remaining like other games, then what per cent of the people like other games? If the total number of people are 50 lakh, find the exact number who like other games. [1]
- a) 10%, 5 Lakh b) 10%, 3 lakh
 c) 10%, 4 lakh d) 10%, 7 Lakh
38. If 60% of people in a city like cricket, 30% like football and the remaining like other games, then what percent of the people like other games? If the total number of people are 50 lakh, find the exact number who like football game. [1]
- a) 10%, 20 Lakh b) 10%, 15 lakh
 c) 10%, 17 Lakh d) 10%, 19 Lakh
39. Fabina borrows Rs 12,500 at 12% per annum for 3 years at simple interest and Radha borrows the same amount for the same time period at 10% per annum, compounded annually. Who pays more interest and by how much? [1]
- a) Fabina pays Rs 362.50 more b) Fabina pays Rs 462.50 more
 c) Fabina pays Rs 562.50 more d) Fabina pays Rs 262.50 more
40. If 60% of people in a city like cricket, 30% like football and the remaining like other games, then what per cent of the people like other games? If the total number of people are 50 lakh, find the exact number who like cricket game. [1]
- a) 10%, 30 Lakh b) 10%, 50 Lakh
 c) 10%, 40 Lakh d) 10%, 20 Lakh

Section B

41. Find the Selling Price(SP), if Marked Price(MP) = ₹5450 and discount = 5%. [2]
42. A new computer costs ₹100000. The depreciation of computers is very high as new models with better technological advantages are coming into the market. The depreciation is as high as 50% every year. How much will the cost of the computer be after two years? [2]
43. Find discount percent when the marked price (MP) of an article is ₹625 and selling price(SP) is ₹562.50. [2]
44. A watch is marked at ₹480. To clear the stock, the shopkeeper offers a discount of 20%. What is the selling price of the watch? [2]

45. **State whether the given statement is True or False:** [2]
 (a) 75% of 88 is 66. [1]
 (b) Ankit has to pay 6% sales tax for the groceries he bought for ₹ 900. The tax amount he has to pay is ₹ 55. [1]
46. **Fill in the blanks:** [2]
 (a) The cost of a tape recorder is ₹10800 inclusive of sales tax charged at 8%. The price of the tape recorder before the sales tax was charged, is ₹ _____. [1]
 (b) Discount = Marked Price - _____. [1]
47. A machinery worth Rs. 10500 depreciated by 5%. Find its value after one year. [2]
 48. If 8% VAT is included in the prices, find the original price of a shampoo bottle bought for Rs. 180. [2]
 49. How much more per cent seats were won by X as compared to Y in assembly election in the state based on the data given below? [2]

Party	Won (out of 294)
X	158
Y	105
Z	18
W	13

50. In Delhi University, in the year 2009-10, 49000 seats were available for admission to various courses at graduation level. Out of these 28200 seats were for the students of General Category while 7400 seats were reserved for SC and 3700 seats for ST. Find the percentage of seats available for [2]
 a. students of General Category.
 b. students of SC Category and ST Category taken together.
51. Find discount percent when marked price of an article = ₹900 and selling price(SP) = ₹873. [2]
 52. Find the Selling Price(SP) of an article, if Marked Price (MP) = ₹1300 and discount = 1.5% [2]
 53. Maria invested ₹ 8,000 in a business. She would be paid interest at rate of 5% per annum compounded annually. Find the amount credited against her name at the end of the second year. [2]
 54. Salim bought an article for ₹784 which included GST of 12%. What is the price of the article before GST was added? [2]
 55. A new computer costs ₹100000. The depreciation of computers is very high as new models with better technological advantages are coming into the market. The depreciation is as high as 50% every year. How much will the cost of the computer be after two years? [2]
 56. Find the amount and compound interest if the interest is compounded annually. [2]

S. No.	Principal	Rate % p.a.	Time (years)	Amount	Compound Interest
a	₹5000	9%	2	_____	_____
b	₹72,000	6%	3	_____	_____

Section C

57. The cost price of 15 pencils is the selling price of 10 pencils. What is the profit percentage? [3]

58. A sum ₹10,000 is borrowed at a rate of interest 15% per annum for 2 years. Find the simple interest on this sum and the amount to be paid at the end of 2 years. [3]
59. A businessman buys 200 litres of vegetable oil at ₹60 per litre. He spends ₹2000 on packaging and ₹6000 on transport. He then sells 1 litre packets for ₹120 each. Does he make a profit? What is the percentage of profit or loss? [3]
60. If 65% of the students in a school are boys and the number of girls is 700, find the total number of students in the school. [3]
61. Create a word problem on finding the compound interest when the rate of interest is compounded semi-annually. [3]
62. The value of a car depreciates at a rate of 10% per year. A car which was bought three years ago is now worth ₹4,73,850. What was its original price? [3]
63. The simple interest on a sum of money for 3 years at 10% per annum is ₹4500. What will be the compound interest on the same sum at the same rate for the same period, compounded annually? [3]
64. The cost of a water cooler in a shop is ₹3, 500. If 8% sales tax is charged, find the bill amount. [3]
65. Arun bought a pair of skates at a sale where the discount given was 20%. If the amount he pays is ₹1600, find the marked price. [3]
66. Find the unknown in each case. [3]
- a MP = ₹625, SP = ₹500, % Discount = ?
- b MP = ₹1780, % Discount = 15%, SP = ?

Section D

67. The population of a city was 20,000 in the year 1997. It increased at the rate of 5% p.a. Find the population at the end of the year 2000. [5]
68. The difference between compound Interest on a certain sum of money at 10% per annum for 2 years is ₹ 500. Find the sum, if the interest is compounded annually. [5]
69. What price should a shopkeeper mark on article that costs him ₹600 to gain 20%, after allowing a discount of 10%? [5]
70. A man spends 20% of his salary on house rent. After spending 40% of the remainder, he is left with ₹9600. Find his monthly salary. [5]
71. A reduction of 25% in the price of apples enables a person to buy 2 kg more apples for ₹300. Find: [5]
- a The original price per kg of apples.
- b The reduced price per kg of apples