**PERCENTAGE LEVEL 01 (Calculation based: 20 QUESTIONS)**

**1.** Express the 30% as fraction.

**2.** Express the 42.84 % as fraction.

**3.** Express the 7/8 as percentage.

**4.** Express the 5/9 as percentage.

**5.** Find the value of 83.33% of 480.

**6.** 15% of 4 hours is how many minutes?

**7.** 30% of a number is 225. Find the number.

**8.** In a class of 480 students, 35% failed the exam. How many students passed?

**9.** If 16.66% of a number is added with itself then the result becomes 4956. Find the original number.

**10.** If 11.11% of number is added with itself then the result becomes 900. Find the original number.

**11.** If Rahul earns 25% more than Aryan. What % less does Aryan earn than Rahul?

**12.** If 60% of the students in a school are boys and the number of girls is 972. How many boys are there in the school?

**13.** If 50 % of P = 25% of Q, then P = x% of Q. Find x.

a. 0.5 b.2

c. 50 d. 0.005

**14.** Atharv buys a cycle for Rs.1400 and sells it at a loss of 15%. What is the selling price of the cycle?

a) Rs.1090 b) Rs.1160 c) Rs.1190

d) Rs1202 e) None of these

**15.** What is 10% of 30% of 140?

**16.** 200% of 5% of 50 is

a. 50 b. 5

c. 10 d. 25

**17.** If 16 is added in a number then the result becomes 116.66% of itself. Find the number**.**

**18**. If 60% of the students in a school are boys and the number of girls is 972. How many boys are there in the school?

a)486 b) 972

c) 1458 d) None of these

**19.** How many girls are there in the school?

a)486 b) 972

c) 1458 d) None of these

**20.** You gain 70 paise on Rs.70. Your gain percent is

a) 0.1% b) 1% c) 7%

d) 10% e) None of these

**PERCENTAGE LEVEL 01 (Word problems: 20 QUESTIONS)**

**21.** If the length of rectangle is increased by 37.5% and its breadth is reduced by 20%. What is the percentage change in its area?

a. 40% b. 44%

c. 10% d. 4%

**22.** The sale of cinema ticket is increased by 571/7% and the price of ticket increased by 162/3%. What is the % change in its revenue?

a. 42% b. 831/3%

c. 35% d. 162/3%

**23.** The population of a Rampur is 27,954. 4 out of 9 of them are males and rest are females. 50% male are married to the females of that town only. What is the % of married population?

a. 44.44% b. 22.22%

c. 12,424 d. None of these

**24.** How many males are unmarried in Rampur?

a. 6,212 b. 12,424

c. 15,530 d. 3,106

**25**. If the price of sugar in the market falls down by 30%. Them by how much % the consumption should be increased so that expenditure remains same.

a. 30% b. 14.28%

c. 42.85% d. 71.42%

**26.** A man spends 75% of his income. If his income is increased by 20% and expenditure is increased by 10%. Find the % change in the saving?

a. -50% b. +50%

c. +5% d. None of these

**27.** The salaries of Akash, Bipin, Chetan are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be the new ratio of their salaries?

a) 3: 3 : 10 b) 10 : 11 : 20

c) 23:33:60 d) Cannot be determined e) None of these

**28.** Two equal containers are filled with the mixture of milk and water. The concentration of milk in each of the container is 20% and 25% respectively. What is the ratio of water in both the containers respectively?

a) 15:16 b) 16 : 15

c) 4:5 d) 5:4 e) None of these

**29.** In a college, 40% of the students were allotted group A, 75% of the remaining were given group B and the remaining 12 students were given group C. Then the number of students who applied for the group is

(a) 100 (b) 80

(c) 60 (d) 92

**30.** A box has 100 blue balls, 50 red balls, 50 black balls. 25% of blue balls and 50% of red balls are taken away. Percentage of black balls at present is

(a) 50% (b) 331/3 %

(c) 25% (d) 40%

**31.** Two numbers are respectively 25% and 20% less than a third number. What per cent is the first number of the second ?

(a) 5% (b) 75%

(c) 80% (d) 93.75%

**32.** In an office, 40% of the staff is female. 70% of the female staff and 50% of the male staff are married. The percentage of the unmarried staff in the office is

(a) 64 (b) 60

(c) 54 (d) 42

**33.** Akshay received an annual salary of $3,660 in the year 2023. This was 20% more than his salary in 2022. What was his salary in 2022?

(a) $3,005 (b) $ 3,500

(c) $3,000 (d) $3,050

**34.** The expenses on rice, fish and oil of a family are in the ratio 12:17:3. The prices of these articles are increased by 20%, 30% and 50% respectively. The total expenses of family on these articles are increased by

(a) 141/8% (b)71/8%

(c) 561/8% (d) 281/8%

**35.** In one litre of a mixture of alcohol and water, water is 30%. The amount of alcohol that must be added to the mixture so that the part of water in the mixture becomes 15% is:

(a) 1000 ml (b) 300 ml

(c) 700 ml (d) 900 ml

**36.** Two successive price increases of 10% and 10% of an article are equivalent to a single price increase of

(a) 19% (b) 21%

(c) 20% (d) 22%

**37.** If each side of a cube is increased by 10% the volume of the cube will increase by

(a) 30% (b) 10%

(c) 33.1%  (d) 25%

**38.** In a college election a candidate secured 62% of the votes and is elected by a margin of 144 votes. The total number of votes polled is:

(a) 925 (b) 1200

(c) 600 (d) 800

**39.** The value of a machine depreciates every year by 10%. If its present value is 50,000 then the value of the machine after 2 years is \_\_\_\_\_\_\_\_\_.

(a) (3) 40,050 (b) 40,005

(c) 45,000 (d)40,500

**40.** A sugar solution of 3 litre contain 60% sugar. One liter of water is added to this solution. Then the percentage of sugar in the new solution is:

(a) 30 (b) 50

(c) 45 (d) 60

**PERCENTAGE LEVEL 02 (40 QUESTIONS)**

**1.** The price of sugar is increased by 16.66% and the consumption of a family is decreased by 20%. What is the % change in his expenditure?

a. 6.66% b. 7.14%

c. 15% d. None of these

**2.** The sale of a cinema ticket is increased by 571/7% and the price of ticket is increased by 162/3%. Find the % change in its revenue.

a.45.45% b. 42%

c. 77% d. None of these

**3.** In Bhopal Express there are as many as coaches as there are number of seats in each coach. In one of the coach carrying 25 persons is filled with 713/7% of its capacity. What is the maximum number of passengers that can be accommodated if it has minimum 20% seats always vacant.

a. 1225 b. 245

c. 980 d. 625

**4.** When Sakshi score 30% marks then she fails by 5 marks. But when she score 40% marks, she got 10 more marks then passing %. Find maximum marks of the exam

a. 50 b. 100

c. 150 d. 200

**5**. Passing % is ……….

a. 50% b. 32%

b. 35% d. None of these

**6.** In a school, 10% of the boys are same in number as 1/4th of the girls. What is the ratio of boys to girls in that school?

a) 3 : 2 b) 5 : 2 c) 2 : 1

d) 4 : 3 e) None of these

**7.** A vessel of capacity 2 litre has 25% alcohol and another vessel of capacity 6 litre had 40 alcohol. The total liquid of 8 litre was poured out in a vessel of capacity 10 litre and thus the rest part of the vessel was filled with the water. What is the new concentration of mixture?

a) 31% b) 71% c) 49%

d) 29% e) None of these

**8.** Seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40%, 50% and 75% respectively, what will be the ratio of increased seats?

a) 2 : 3 : 4 b) 6:8:9 b) 6 : 7 : 8

d) Data inadequate e) None of these

**9.** In an election two candidates participated. 20% voters did not cast their votes, out of which 600 votes declared invalid and the winner get 75% of valid votes and wins by 1500 votes. Find the number of voting list.

a. 4500 b. 3600

c. 1500 d. 3000

**10.** Mohan works 60 hours per week and earns Rs.2400 as wages. If his per hour wage is increased by 40% and duration of work reduced by 16.66%. What is the % change in his income?

a. 40% b. 16.66**%**

c. 14.28% d. Cannot be determined

**11.** In an election, three candidates contested. The first candidate got 40% votes and the second got 36% votes. If total number of votes polled were 36000, find the number of votes got by the 3rd candidate.

(a) 8040 (b) 9360

(c) 8640 (d) 9640

**12.** The population of a city is 20000. It increases by 20% during the first year and 30% during the second year. The population after two years will be:

(a) 32000 (b) 31200

(c) 40000 (d) 30000

**13.** The value of a property decreases every year at the rate of 5%. If its present value is 4,11,540, what was its value 3 years ago?

(a) 4,50,000 (b) 4,75,000

(c) 4,60,000 (d)4,80,000

**14.** In a town, the population was 8000. In one year, male population increased by 10% and female population increased by 8% but the total population increased by 9%. The number of males in the town was:

(a) 4000 (b) 5000

(c) 4500 (d) 6000

**15.** In a motor of 120 machine parts, 5% parts were defective. In another motor of 80 machine parts, 10% parts were defective. For the two motors considered together, the percentage of defective machine parts was

(a) 7 (b) 6.5

(c) 7.5 (d) 8

**16.** An interval of 3 hours 40 minutes is wrongly estimated as 3 hours 45.5 minutes. The error percentage is

(a) 5.5% (b) 5%

(c) 5.2% (d) 2.5%

**17.** A man bought some eggs of which 10% are rotten. He gives 80% of the remainder to his neighbours. Now he is left out with 36 eggs. How many eggs he bought?

(a) 40 (b) 200

(c) 100 (d) 72

**18.** Tickets for all but 100 seats in a 10,000 seats stadium were sold. Of the tickets sold, 20% were sold at half price and the remaining tickets were sold at the full price of 20. The total revenue from the ticket sales, in

(a) 158400 (b) 178200

(c) 180000 (d) 198000

**19.** Rani’s weight is 25% that of Meena’s and 40% that of Tara’s. What percentage of Tara’s weight is equal to Meena’s weight?

(a) 160% (b) 140%

(c) 120% (d) 100%

**20.** The population of a town is 9000. It the number of females increases by 5% and the males by 7.5%, what will be the total population after increase. The number of females currently is 3000.

**(**a) 9600 (b) 10500

(c) 9200 (d) 9540

**21.** Ratio of the earnings of A and B is 4 : 7. If the earnings of A increase by 50% and those of B decrease by 25%, the new ratio of their earnings becomes 8 : 7. What are A’s earnings?

a) Rs.21,000 b) Rs.26,000 c) Rs.28,000

d) Data inadequate e) None of these

**22.** A couple got married 9 years ago when the age of wife was 20% less than her husband. 6 years from now the age of wife will be only 12.5% less than her husband. Now they have six children including single, twins and triplets and the ratio of their ages is 2 : 3 : 4 respectively. What can be the maximum possible value for the present age of this family?

a) 110 years b) 83 years **c) 103 years**

d)105 years e) None of these

**23.** The Government reduced the price of sugar by 10 per cent. By this a consumer can buy 6.2 kg more sugar for 837. The reduced price per kg of sugar is

(a) 12.50 (b) 13.50

(c) 13.00 (d)14.00

**24.** On a certain date, Pakistan has a success rate of 60% against India in all the ODIs played between the two countries. They lost the next 30 ODIs in a row to India and their success rate comes down to 30%. The total number of ODIs played between the two countries is

(a) 50 (c) 60

(c) 45 (d) 30

**25.** A Set A consists of integers 27, 28, 30, 32, and 33. If integer k is included in the average of set A will increase by 30%. What is the value of integer K?

(a) 68 (b) 84

(c) 79 (d) 92

**26.** Neha’s weight is 140% of Tina’s weight. Mina’s weight is 90% of Lina’s weight. Lina weighs twice as much as Tina. If Neha’s weight is x% of Mina’s weight, then x is equal to:

(a) 642/9 (b) 90

**(c) 777/9** (d) 1284/7

**27.** The number of seats in a cine ma hall is increased by 25%. The cost of each ticket is also increased by 10%. The effect of these changes on the revenue collection will be an increase of

(a) 37.5% (b) 47.5%

(c) 45.5% (d) 49.5%

**28.** A and B are two fixed points 5 cm apart and C is a point on AB such that AC is 3 cm. If the length of AC is increased by 6%, the length of CB is decreased by

(a) 6% (b) 8%

(c) 7% (d) 9%

**29.** Rahul has twice as much money as that of Sharad and Sharad has 50% more money than that of Priyanshu. If the average money of all of them is 110, then the money, which Rahul has, is

(a) 55 (b)90

(c) 60 (d)180

**30.** In a class, the average score of girls in an examination is 73 and that of boys is 71. The average score for the whole class is 71.8. Find the percentage of girls.

(a) 40% (c) 55%

(b) 50% (d) 60%

**31.** Ram recently passed the 5th class exam and now he is in 6th standard. He is very weak in maths and he hates numbers. During a geometry class, teacher asked everyone to draw a line of length 1.5 meters. Ram tried a lot to draw it of the exact size but couldn’t draw the exact length. After some time, when the length of the line drawn by Ram was measured, it is found to be of 1.55 metres. What will be the value of error percent ?

(a) 0.05% (b) 31/3%

(c) 37/31% (d) 0.5%

**32.** A number, on subtracting 15 from it, reduces to its 80%. What is 40% of the number?

(a) 75 (b) 30

(c) 60 (d) 90

**33.** If the price of sugar increases by 20%, one can buy 2 kg less for Rs. 50. What is the amount of sugar that could be bought before price hike?

(a) 10 kg. (b) 14 kg.

(c) 12 kg. (d) 16 kg.

**34.** In an election 10% of the voters on the voters’ list did not cast their votes and 60 voters cast their ballot papers blank. There were only two candidates. The winner was supported by 47% of all the voters in the list and he got 308 votes more than his ri val. The number of voters on the list was

(a) 3600 (b) 4575

(c) 6200 (d) 6028

**35.** Ramesh Ambani imported Lap tops, worth Rs. 210000, Mobile phones worth Rs. 100000 and Television sets worth Rs. 150000. He had to pay 10% duty on laptops, 8% on Phones and 5% on Television sets as a special case. How much total duty (in Rupees) he had to pay on all items as per above details?

(a) 36500 (b) 37250

(c) 37000 (b) 37500

**36.** An army lost 10% of its men in war, 10% of the remaining died due to disease and 10% of the rest were declared disabled. Thus the strength of the army was reduced to 7,29,000 active men. The original strength of the army was

(a) 1500000 (b) 1200000

(c) 1000000 (d) 1100000

**37.** A factory’s yearly budget for the purchase of employees’ protection shoes increased by 60% this year over last year. If the price of the shoes increased by 20% this year, then the number of shoes it can purchase this year is what percent greater than the number of shoes it purchased last year?

(a) 40% (b) 42%

(c) 331/3 % (d) 48%

**38.** Shelf A has 4 5 of the number of books that shelf B has. If 25% of the books in A are transferred to B and then 25% of the books from B are transferred to A, then the percentage of the total number of books that A will have is

(a) 25% (b) 50%

(c) 75% (d) 100%

**39.** Out of 2500 people, only 60% have the saving habit. If 30% save with bank, 32% with post office and the rest with shares, the number of shareholders are

(a) 450 (b) 570

(c) 950 (d) 1250

**40.** There is company named Birla Limited. Company is located 1450 km from Delhi. Revenue generated by this company for the year 2022 was 4.3 Crore Rs. If the value of a company stock drops from Rs. 25 per share to Rs. 21 per share, the percentage decrease per share is:

(a) 4 (b) 12

(c) 8 **(**d) 16

**Answer Keys:**

**Level 01**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3/10 | 3/7 | 87.5% | 55.55% | 400 | 36 | 750 | 312 | 4248 | 810 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 20% | 1458 | c | a | 4.2 | b | 96 | c | b | b |

**Level 01(Word Problem)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| c | b | a | a | b | b | c | b | b | b |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| d | d | d | d | a | b | c | c | d | c |

**Level 02**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| **a** | **d** | **c** | **c** | **d** | **b** | **d** | **a** | **a** | **b** |
| **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** |
| **c** | **b** | **d** | **a** | **a** | **d** | **b** | **b** | **a** | **a** |
| **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** | **30** |
| **d** | **c** | **b** | **d** | **b** | **c** | **a** | **d** | **d** | **a** |
| **31** | **32** | **33** | **34** | **35** | **36** | **37** | **38** | **39** | **40** |
| **b** | **b** | **c** | **c** | **a** | **c** | **c** | **b** | **b** | **d** |