

BOOST UP PDFS | Quantitative Aptitude | Percentage (Moderate Level Part-1)

Recommend for SBI PO, SBI Clerk, IBPS RRB/PO/Clerk Exams

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1. 1100 boys and 700 girls are examined in a test; 42% of the boys and 30% of the girls pass. The percentage of the total who failed is?

- a. 58
- b. $62 \frac{2}{3}$
- c. 64
- d. 67
- e. None of these

2. 405 sweets were distributed equally among children in such a way that the number of sweets received by each child is 20% of the total number of children. How many sweets did each child received?

- a. 9
- b. 10
- c. 11
- d. 12
- e. None of these

3. The population of a town is 3, 11, 250. The ratio between women and men is 43 : 40. If there are 24% literate among men and 8% literate among women, the total number of literate persons in the town is:

- a. 41800
- b. 48900

c. 56800

d. 99600

e. 96900

4. A bag contains 600 coins of 25 p denomination and 1200 coins of 50 p denomination. If 12% of 25 p coins and 24% of 50 p coins are removed, the percentage of money removed from the bag is nearly?

- a. 21.6 %
- b. 15.3 %
- c. 14.6 %
- d. 12.5 %
- e. None of these

5. In a competitive examination in State A, 6% candidates got selected from the total appeared candidates. State B had an equal number of candidates appeared and 7% candidates got selected with 80 more candidates got selected than A. What was the number of candidates appeared from each State ?

- a. 4000
- b. 8000
- c. 12000
- d. 16000

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e. None of these

6. Ali the barber shaved 40 % of his customers and gave a haircut to 80 % of his customers. He charged Rs. 7 for a shave and Rs. 5 for a haircut. If 20 % of customers who opted for a shave also had a hair-cut, what were Khan's earnings if he had 75 customers (in Rs.)?

- a. 410
- b. 1,020
- c. 510
- d. Cannot be determined
- e. None of these

7. In a class of 80 students and 5 teachers, each student got sweets that are 15% of the total number of students and each teacher got sweets that are 25% of the total number of students. How many sweets were there?

- a. 1060
- b. 960
- c. 1020
- d. 920
- e. None of these

8. Flower nectar is processed to extract honeybees. How much flower nectar must be processed to yield 1 kg of pure honey, if nectar contains 70% water, and the honey obtained from this nectar contains 17% water?

- a. 2.77 kg
- b. 1.54 kg

c. 4.01 kg

d. 3.5 kg

e. 4.5 kg

9. Rohan spends 24% of an amount of money on an insurance policy, 34% on food, 19% on children's education and 17% on recreation. He deposits the remaining amount of Rs. 540 in bank. How much total amount does he spend on food and insurance policy together?

- a. Rs. 6350
- b. Rs. 5220
- c. Rs. 5890
- d. Rs. 6458
- e. None of these

10. In an election, candidate A got 75% of the total valid votes. If 15% of the total votes were declared invalid and the total numbers of votes is 560000, find the number of valid vote polled in favor of candidate?

- a. 84000
- b. 83000
- c. 84000
- d. 86000
- e. None of these

11. A shopkeeper bought 600 oranges and 400 bananas. He found 15% of oranges and 8% of bananas were rotten. Find the percentage of fruits in good condition?

- a. 66
- b. 77

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c. 88

d. 90

e. None of these

12. A candidate who gets 20% marks fails by 10 marks but another candidate who gets 42% marks gets 12% more than the passing marks. Find the maximum marks.

a. 50

b. 100

c. 150

d. 200

e. None of these

13. The percentage of metals in a mine of zinc ore is 60%. Now the percentage of silver is $\frac{3}{4}$ % of metals and the rest is zinc. If the mass of ore extracted from the mine is 8000 kg, the mass (in kg) of zinc is?

a. 5147 kg

b. 4764 kg

c. 3587 kg

d. 2125 kg

e. None of these

14. A jar can 20 litre milk. From the jar, 4 litres milk was taken out and replaced with an equal quantity of water. If 4 litres of the newly formed mixture is taken out of the can, then what is the final quantity of milk left in the can?

a. 14.5 lit

b. 12.8 lit

c. 11.6 lit

d. 10.46 lit

e. None of these

15. The cost of packaging of the fruits is 30% the cost of fresh fruits. The cost of fruits increased by 20% but the cost of packaging decreased by 25%, then the percentage change of the cost of packed oranges, if the cost of packed fruits is equal to the sum of the cost of fresh fruits and cost of packaging?

a. 4%

b. 6.5%

c. 5.2%

d. 4.8%

e. None of these

16. In a college there are 60% female students. 50 % of all the male students are in computer department.

If there are total 62% students in computer department out of total 2400 students, then the no. of female students who are in computer department?

a. 528

b. 1488

c. 1008

d. 730

e. None of these

17. In an election only two candidates M and N contested 30% of the voters did not vote and 1600 votes were declared as invalid. The winner, M got 4800 votes more than his opponent thus he secured 51% votes of the total voters on the voter list.

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Percentage votes of the loser candidate, N out of the total voters on the voter list is?

- a. 5%
- b. 4%
- c. 2%
- d. 3%
- e. None of these

18. In a factory there are three types of bulbs L1, L2 and L3 which produces 20%, 15% and 32% of the total products respectively. L1, L2 and L3 produces 3%, 7% and 2% defective products, respectively.

Find the percentage of non-defective products ?

- a. 46%
- b. 30%
- c. 53%
- d. 64%
- e. None of these

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

- a. 3600
- b. 6200
- c. 4575
- d. 6028
- e. None of these

20. Deepak was to get a 50% hike in his pay but the computer operator wrongly typed the figure as 80% and printed the new pay slip. He received this revised salary for three months before the organization realized the mistake. What percentage of his correct new salary will get in the fourth month, if the excess paid to him in the previous three months is to be deducted from his fourth month?

- a. 30%
- b. 40%
- c. 45%
- d. 25%
- e. None of these

21. Sohan spends 23% of an amount of money on an insurance policy, 33% on food, 19% on children's education and 16% on recreation. He deposits the remaining amount of Rs. 504 in bank. How much total amount did he spend on food and insurance policy together?

- a. Rs.3146
- b. Rs.3126
- c. Rs.3136
- d. Rs.3048
- e. None of these

22. In a Bookshelf 60% of the books are in Tamil, 60% of the remaining books are in English rest of the books are in Hindi. If there are 2400 books in English, then the total number of books in Hindi are?

- a. 1300

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- b. 1250
- c. 1600
- d. 1450
- e. None of these

23. The income of a person is 10000 and its expenditure is 6000 and thus saves 4000rs. In the next year his income is increased by 10% and its expenditure increased by 20%. Now his saving is what percent lower than the previous saving?

- a. 5%
- b. 7.5%
- c. 10%
- d. 15%
- e. None of these

24. There are 2500 students who appeared for an examination. Out of these, 35% students failed in 1 subject and 42% in other subject and 15% of students failed in both the subjects. How many of the students passed in either of the 2 subjects but not in both?

- a. 1925
- b. 1175
- c. 1275
- d. 1100
- e. 1800

25. In an examination, Mani scored 45% marks and failed by 18 marks. In the same examination, Radhika scored 54% marks and get 27 marks more

than the passing marks. What is the score of Mohan in the same examination, who secured 75 % marks?

- a. 420
- b. 440
- c. 375
- d. 360
- e. None of these

26. 15 % of monthly salary of P is equal to 30% of monthly salary of Q and 20 % of monthly salary of Q is equal to 30 % of monthly salary of R. If R's monthly income is Rs. 40000, then the total income of P, Q and R is?

- a. Rs. 227500
- b. Rs. 235800
- c. Rs. 215000
- d. Rs. 220000
- e. None of these

27. The cost of a camera is Rs. 3500 more than that of a phone. 3 phone and 3 camera cost is Rs. 70500. Find the cost of a camera?

- a. Rs. 14000
- b. Rs. 13500
- c. Rs. 15500
- d. Rs. 12500
- e. None of these

28. In a class 125 students, if the ratio of boys and girls in a class is 3: 2. If 24% of the boys and 20% of the girls are interested in dance, then find the % of students who are all not interested in dance?

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- a. 72.5 %
- b. 75.8 %
- c. 77.6 %
- d. 65.6 %
- e. None of these

29. Vasu gave 65% of the amount he had to Jega. Jega gave $\frac{2}{5}$ th of what he received from Vasu to Saratha. After paying Rs. 320 to the taxi driver out of the amount he gets from Jega, Saratha is now left with Rs. 1500. How much amount did Vasu have?

- a. Rs. 8500
- b. Rs. 6500
- c. Rs. 7000
- d. Rs. 9000
- e. None of these

30. Kavi scored 92 marks in Computer. He scored 64% marks in Hindi and X marks in GK. The maximum marks for each subject is 200. The overall percentage of marks obtained by Kavi in all three subjects together is 65%. How much marks did Kavi score in GK?

- a. 160
- b. 192
- c. 126
- d. 148
- e. 170

31. The total salary of Kiran and Varnan in an organisation is Rs. 28000. Kiran & varnan's salary is increased by 6% and 8% respectively, then their

increased total salary will be Rs. 29940. Find the salary of Kiran?

- a. Rs. 15000
- b. Rs. 18000
- c. Rs. 20000
- d. Rs. 10000
- e. Rs. 12000

32. Yuva gave 25% of a certain amount of money to Ram. From the money Ram received, he spent 20% on buying books and 35% on buying a watch. After the mentioned expenses, Ram has 2700 remaining. How much did Yuva have initially?

- a. 16000
- b. 15000
- c. 24000
- d. 27000
- e. 20000

33. In a company ABC Pvt Ltd, the ratio of total number of undergraduate employees to the total number of graduate employees is 13:23. The company has only two branches- one is in Chennai and another is in Delhi. If the total number of undergraduate employees in Chennai branch is 351, Which is 30% of the total undergraduate employees in the company, what is the total number of graduate employees in the company?

- a. 2185
- b. 1950
- c. 2070

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d. 1970

e. 2170

34. Jaya's attendance for first two semesters out of four was 60% and 70%, respectively. What is the minimum attendance required in third semester so that her average attendance will be 80% throughout four semesters? (Assume equal number of days among the four semesters)

a. 85%

b. 90%

c. 95%

d. 70%

e. None of these

35. $\frac{2}{5}$ th of the voters promise to vote for A and the rest promised to vote for B. Of these, on the last day 15% of the voters went back of their promise to vote for A and 25% of voters went back of their promise to vote for B, and A lost by 200 votes. Then, the total number of voters is?

a. 10000

b. 11100

c. 11000

d. 9500

e. None of these

36. A box has 100 blue balls, 50 red balls and 50 black balls, 25% of blue balls and 50% of red balls are taken away. Then, percentage of black balls at present is

a. 95%

b. 50 %

c. 100%

d. $100/3\%$

e. None of these

37. Six-eleventh of a number A is equal to twenty two percent of number B. Number B is equal to the one-fourth of number C. The value of the third number C is 2400, what is the 45% of first number A?

a. 110

b. 108.9

c. 117

d. 208.9

e. None of these

38. Three candidates contested an election and received 1136, 7636 and 11628 votes respectively. What percentage of the total votes did the winning candidate get?

a. 57%

b. 60%

c. 65%

d. 90%

e. None of these

39. In a 120 litre mixture of milk and water, the percentage of water is only 20%, the milkman gave 15 litres of this mixture to a customer and then added 15 litres of water to the remaining mixture. What is the percentage of milk in the final mixture?

a. 58%

b. 68%

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c.56%

d.62%

e.70%

40. In two alloys Copper and zinc in the ratio of 3:4 and 3:2 respectively. 28 kg of 1st alloy and 35 kg of 2nd alloy and some quantity of pure zinc is melted together. The final alloy has copper and zinc in the ratio of 4:5. Find the amount of pure zinc melted?

a. 15.35

b. 11.25

c. 15

d. 16

e. None of these

41. A vessel contains 56 litres of mixture of milk and water in the ratio of 3:4. If 21 litres of mixture is taken out from that vessel and then 15 litres of water added to it, what will be the percentage of milk in the final mixture?

a.35%

b.37.5%

c.38%

d.29%

e. None of these

42. There are two containers of equal capacity. The ratio of water to alcohol in the first container is 6:7, and in the second container is 4:5. If they are mixed up, the ratio of water to alcohol in the mixture will be?

a. 6:4

b. 64:53

c. 17:19

d. 53:64

e. 11:13

43. A container contains a mixture of water and milk in the ratio of 7:5. When 9 litres of mixture is drawn out and the remaining part of the container is filled with 9 lit milk, the ratio of water to milk becomes 7:9. How many litres of water does the container have initially?(in litres)

a. 16

b. 24

c. 21

d. 18

e. 25

44. The income of A is 150% of the income of B and the income of C is 120% of the income of A. If the total income of A, B and C together is Rs. 86,000, what is C's income?

a. Rs. 30,000

b. Rs. 32,000

c. Rs. 20,000

d. Rs. 36,000

e. None of these

45. A vessel is filled with milk and water. 60% of milk and 40% of water is taken out from the vessels and it is found that the vessel is vacated by 55% and it has 160L mixture. Find the quantity of milk and water in the mixture respectively inside the vessel?

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a. 60L,100L

b. 100L,60L

c. 40L,120L

d. 120L,40L

e. None of these

46. There are two containers of equal capacity. The ratio of milk to water in the first container is 5: 3 and in the second container it is 4:3.If they are mixed up, the ratio of milk to water in the mixture will be?

a. 45:67

b. 67:45

c. 67:115

d. 45:115

e. None of these

47. A caretaker of zoo counted the heads of the animals in a zoo and found it to be 80. When he counted the legs of the animals he found it to be 260. If the zoo had either Hornbill or jackal, how many jackals were there in the zoo?(In the zoo, each jackal had four legs and each hornbill had two legs)

a. 40

b. 30

c. 50

d. 60

e. Cannot determined

48. Two gallons of a mixture of spirit and water contains 12% of water. They are added to 3 gallons of another mixture, containing 7% of water, again half

of a gallon of water is added to the whole mixture.

Find percentage of water in the resulting mixture?

a. 17 $\frac{3}{11}$

b. 16 $\frac{12}{11}$

c. 14 $\frac{1}{11}$

d. Cannot be determined

e. None of these

49. Alok bought 25 kg of rice at the rate of Rs. 6 per kg and 35 kg of rice at the rate of Rs. 7 per kg. He mixed both type of rice and sold the mixture at the rate of Rs. 6.75 per kg. What was his gain or loss in the transaction?

a. Rs. 16 gain

b. Rs. 16 Loss

c. Rs. 20 gain

d. Rs. 10 gain

e. Rs. 10 loss

50. An alloy contains zinc and copper in the ratio 5 : 8 and another alloy contains zinc and copper in the ratio 5 : 3. If equal amount of both the alloys are melted together, then the ratio of zinc and copper in the resulting alloy is

a. 25 : 24

b. 3 : 8

c. 103 : 105

d. 105 : 103

e. 8 : 3

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Answer with Solution

Solution (1-50)

1. B

Total number of students = 1100 + 700 = 1800.

Number of students passed = (42% of 1100 + 30% of 700) - (462 + 210) = 672.

Number of failures = 1800 - 672 = 1128.

Percentage failure = $(1128/1800 * 100)\% = 62 * 2/3 \%$.

2. A

Let the total number of children be x.

Then, $x * (20\% \text{ of } x) = 405$

$\Rightarrow x * 20x/100 = 405$

$x^2 = 405 * 5 = 2025$

$\Rightarrow x = 45$

Number of sweets received by each child = 20% of 45 =

9.

3. B

Total literate persons

$$= \frac{43}{83} \times \frac{8}{100} \times 3,11,250 + \frac{40}{83} \times \frac{24}{100} \times 3,11,250 = 48900$$

4. A

Total money = Rs. $[600 * (25/100) + 1200 * (50/100)] =$ Rs.

750.

25 paise coins removed = Rs. $(600 * 12/100) =$ 72.

50 paise coins removed = Rs. $(1200 * 24/100) =$ 288.

Money removed = Rs. $(72 * 25/100 + 288 * 50/100) =$

Rs. 162.

Required percentage = $(162/750 * 100)\% = 21.6 \%$.

5. B

Let the number of candidates appeared from each state be x.

In state A, 6% candidates got selected from the total appeared candidates

In state B, 7% candidates got selected from the total appeared candidates

But in State B, 80 more candidates got selected than State A

From these, it is clear that 1% of the total appeared candidates in State B = 80

\Rightarrow total appeared candidates in State B = $80 \times 100 = 8000$

\Rightarrow total appeared candidates in State A = total appeared candidates in State B = 8000

6. C

Total customers = 75

Numbers of customers shaved = $75 * 40/100 = 30$

Number of customers who got hair cut = $75 * 80/100 = 60$

\therefore His total income = $(30 * 7) + (60 * 5) = 210 + 300 = 510$.

7. A

Total number of sweets

$= 80 \times 15 \times 80/100 + 5 \times 80 \times 25/100$

$= 960 + 100 = 1060$

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8. C

. Equate the amount of honey in nectar and honey, because we need pure honey only and not water.

Let x = amount of nectar to be processed, then

$$x \times \frac{30}{100} \times \frac{83}{100} = 1 \quad , \quad (1\text{kg of pure honey})$$

$$\Rightarrow x = 4.01 \text{ kg}$$

9. B

Remaining % of amount with Rohan

$$= 100 - (24 + 34 + 17 + 19)$$

$$= 100 - 94$$

$$= 6\%$$

$$\Rightarrow 6\% = 540$$

$$\Rightarrow 100\% = ?$$

$$540 \times 100/6 = \text{Rs. } 9000$$

Now, Money spent on insurance and food is

$$= 34 + 24 = 58\% \text{ of } 9000$$

$$= 58 \times 9000/100$$

$$= 58 \times 90$$

$$= \text{Rs. } 5220$$

10. E

Total number of invalid votes = 15 % of 560000

$$= 15/100 \times 560000$$

$$= 840000/100$$

$$= 84000$$

$$\text{Total number of valid votes } 560000 - 84000 = 476000$$

Percentage of votes polled in favour of candidate A = 75

%

Therefore, the number of valid votes polled in favour of

candidate A = 75 % of 476000

$$= 75/100 \times 476000$$

$$= 35700000/100$$

$$= 357000$$

11.C

Total number of fruits shopkeeper bought = 600 + 400 =

$$1000$$

Number of rotten oranges = 15% of 600

$$= 15/100 \times 600$$

$$= 9000/100 = 90$$

Number of rotten bananas = 8% of 400

$$= 8/100 \times 400$$

$$= 3200/100 = 32$$

Therefore, total number of rotten fruits = 90 + 32 = 122

Therefore Number of fruits in good condition = 1000 -

$$122 = 878$$

Therefore Percentage of fruits in good condition =

$$(878/1000 \times 100)\%$$

$$= (87800/1000)\%$$

$$= 87.8\% \Rightarrow 88(\text{APPROX})$$

12. B

From the given statement pass percentage is

$$42\% - 12\% = 30\%$$

By hypothesis, 30% of x - 20% of x = 10 (marks)

i.e., 10% of x = 10

Therefore, x = 100 marks.

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13. B

Mass of zinc ore = 8000 kg

Mass of metal = 60% of 8000 = 4800 kg

Mass of silver in metal = $\frac{3}{4} \times 4800/100 = 36$ kg

Mass of zinc = 4800 - 36 = 4764 kg.

14. B

This can be solved as

$$20(1 - 4/20)^2 = 20(1 - 1/5)^2 = 20(4/5)^2 = 20(16/25) = 64/5 = 12.8$$

15. E

Let initial Cost of fresh, fruits = 100.

Packaging cost = 30. Initial total cost = 100 + 30 = 130

After increasing in cost of fresh fruit 20%,

Cost of fresh fruits = 120

And cost of packing decreases by 25 % so,

Cost of packing = $\frac{3}{4} \times 30 = 22.5$

Total cost = 120 + 22.5 = 142.5

Increased cost = 142.5 - 130 = 12.5

% increased = $(12.5 \times 100) / 130 = 9.61\%$

16. C

Let 60% students are female and 40% are male.

Then, (50% male) 20% of male are in computer department and $(62 - 20)42\%$ are female in computer department.

Female in computer department = $(2400 \times 42) / 100 = 1008$.

17. D

Total voters on the voter list = x

$$51/100x + 51/100x - 4800 = 70/100x - 1600$$

$$102x/100 - 4800 = 70/100x - 1600$$

$$32x/100 = 3200$$

$$x = 10000$$

Votes of the loser candidate = 5100 - 4800 = 300

Percentage votes of the loser candidate = $300/10000 \times$

$$100 = 3\%$$

18. D

$$(20 \times 0.97) + (15 \times 0.93) + (32 \times 0.98) = 19.4 + 13.95 + 31.36 = 64.71$$

19. B

Let total number of voters = x

People who voted for the winner are = 0.47x

People who voted for the loser are = 0.47x - 308

People who cast blanks are = 60

and people who did not vote are = 0.1x

solve the following equation

$$0.47x + 0.47x - 308 + 60 + 0.1x = x \Rightarrow x = 6200$$

20. B

Assume Deepak's salary = 10000

original hike(50%) amount = 5000 ; Revised salary = 15000

Wrongly typed(80%) hike amount = 8000

Diff = 3000; For three months = 9000

Fourth Month Salary = 15000 - 9000 = 6000

$$15000 \times x / 100 = 6000 \Rightarrow x = 40\%$$

21. C

Savings(%)

$$[100 - (23 + 33 + 19 + 16)]\% = 9\%$$

$$9\% \text{ of } x = 504$$

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$$\Rightarrow x = 504 * 100/9 = 5600$$

Amount spend on food and insurance policy together =

$$56\% \text{ of } 5600 = \text{Rs.}3136$$

22. C

Let there are X books in the Bookshelf.

$$\text{Number of Tamil books} = 60\% \text{ of } X = 60X / 100 = 0.6X$$

$$\text{Remaining Books} = X - 0.6X = 0.4X$$

$$\text{Number English books} = 40\% \text{ of reaming books} = 60\% \text{ of } 0.4X = 0.24X.$$

$$\text{Hindi Books} = X - 0.6X - 0.24X = 0.16X$$

$$\text{Given, } 0.24X = 2400$$

$$X = 2400/0.24 = 10000$$

$$\text{Urdu Books} = 0.16X = 0.16 * 10000 = 1600.$$

23. A

Initially I-E = S (I = Income, E = expenditure, S = saving)

$$10000 - 6000 = 4000(\text{saving})$$

Now, I = 11000 and E = 7200. So saving = I - E = 3800.

$$[(4000 - 3800)/4000] * 100 = 5\%$$

24. B

$$\text{Failed in 1st subject} = (35/100) * 2500 = 875$$

$$\text{Failed in 1st subject} = (42/100) * 2500 = 1050$$

$$\text{Failed in both} = (15/100) * 2500 = 375$$

$$\text{So failed in 1st subject only} = 875 - 375 = 500$$

$$\text{failed in 2nd subject only} = 1050 - 375 = 675$$

$$\text{passed in 1st only} + \text{passed In 2nd only} = 675 + 500 = 1175$$

25. C

Here passing marks equal. So,

$$\Rightarrow 45\% \text{ of total marks} + 18 = 54\% \text{ of total marks} - 27$$

$$\Rightarrow 18 + 27 = (54 - 45)\% \text{ of total marks}$$

$$\Rightarrow 45 = 9\% \text{ of total marks}$$

$$\Rightarrow \text{Total marks} = 45 * (100/9) = 500$$

$$\text{Mohan's mark} = (75/100) * 500 = 375$$

26. D

$$15P/100 = 30Q/100 \rightarrow 1$$

$$20Q/100 = 30R/100 \rightarrow 2$$

$$\text{From 1, } P = 2Q$$

$$\text{From 2, } 2Q = 3R \text{ (Here, } R = 40000)$$

$$Q = (3 * 40000)/2 = 60000$$

$$P = 2Q = 2 * 60000 = 120000$$

$$P + Q + R = 120000 + 60000 + 40000$$

$$\Rightarrow 220000$$

The total income of P, Q and R is Rs. 220000

27. B

Let the cost of a phone be Rs. x

$$\text{The cost of a camera} = x + 3500$$

$$3 * (x + 3500) + 3x = 70500$$

$$3x + 10500 + 3x = 70500$$

$$6x + 10500 = 70500$$

$$6x = 70500 - 10500$$

$$X = 60000/6$$

$$X = 10000$$

The cost of a phone = Rs. 10000

The cost of a camera = Rs. (10000 + 3500) = Rs. 13500

28. C

Total no of students = 125

The ratio of boys and girls in a class = 3 : 2 (3x, 2x)

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Boys = $125 \times (3/5) = 75$, Girls = $125 \times (2/5) = 50$
24% of boys interested in dance = $75 \times 24/100 = 18$
20% of girls interested in dance = $50 \times 20/100 = 10$
Total number of students, who are all not interested in dance,
 $\Rightarrow 125 - (18 + 10) = 125 - 28 = 97$

Required % = $(97/125) \times 100 = 77.6\%$

29. C

Let Vasu's amount be x,

Saratha now having the amount of 1500,

$$\Rightarrow (x \times (65/100) \times (2/5)) - 320 = 1500$$

$$\Rightarrow x \times (65/100) \times (2/5) = 1820$$

$$\Rightarrow x = 1820 \times (100/65) \times (5/2) = \text{Rs. } 7000$$

Vasu initially having an amount of Rs. 7000

30. E

The maximum marks for each subject is 200

Kavi's Computer mark = 92

Hindi Mark = 64% = $(64/100) \times 200 = 128$

The overall percentage of all three subjects together

$$\Rightarrow 65\% = (65/100) \times 600 = 390$$

Kavi's total mark,

Computer + Hindi + GK = 390

$$92 + 128 + \text{GK} = 390$$

$$\Rightarrow \text{GK} = 390 - 220$$

$$\Rightarrow \text{GK} = 170$$

31. A

Total salary of Kiran and Varnan = Rs. 28000

Salary of Kiran = x, Salary of Varnan = 28000 - x

According to the question,

$$X \times (106/100) + (28000 - x) \times (108/100) = 29940$$

$$(106x/100) + (3024000 - 108x)/100 = 29940$$

$$106x + 3024000 - 108x = 2994000$$

$$3024000 - 2994000 = 2x$$

$$30000 = 2x$$

$$X = 15000$$

Kiran Salary = Rs. 15000

Varnan's salary = 28000 - 15000 = Rs. 13000

32. C

Yuva gave 25% of a certain amount of money to Ram

Ram = 25% of Yuva

From the money Ram received, he spent 20% on buying books and 35% on buying a watch

$$\text{Remaining} = 100 - (20\% + 35\%) = 45\%$$

$$45\% \text{ of amount} = 2700$$

$$\Rightarrow (45/100) \times X = 2700$$

$$\Rightarrow X = 6000$$

Ram's Total amount = 6000

Ram = 25% of Yuva

$$6000 = (25/100) \times \text{Yuva}$$

$$\Rightarrow \text{Yuva} = 24000$$

33. C

The ratio of total number of undergraduate employees to the total number of graduate employees is 13:23

$$\bullet \text{Un gra} : \text{Gra} = 13:23$$

30 % of total undergraduate employees = 351

$$\Rightarrow (30/100) X = 351$$

$$\Rightarrow X = 351 \times 100/30$$

$$\Rightarrow X = 1170 \text{ (Here X is undergraduate employees)}$$

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$$13's = 1170$$

$$\Rightarrow 1's = 1170/13 = 90$$

Total number of graduate employees is,

$$\Rightarrow 23's = 23 * 90 = 2070$$

34. B

Correct Answer is: b)90%

Let, there are 100 days in each semester

$$\begin{aligned} \text{then, Jaya's total attendance for four semesters} &= 4 \times 80 \\ &= 320 \text{ days} \end{aligned}$$

To minimize her attendance in 3rd semester, we must assume 100% attendance in 4th semester.

$$\begin{aligned} \text{Thus, minimum attendance required in 3rd semester} &= \\ &= 320 - (60 + 70 + 100) \end{aligned}$$

$$= 90 \text{ days}$$

$$= \text{i.e. } 90\%$$

35. A

Let x be the total number of voters

$$\text{Voters promised to A} = 2x/5$$

$$\text{Voters backed out} = 15\% \text{ of } 2x/5$$

$$\text{Voters promised to B} = 3x/5$$

$$\text{Voters backed out} = 25\% \text{ of } 3x/5$$

$$\begin{aligned} \text{Total No. of votes for A} &= 2x/5 - 15\% \text{ of } 2x/5 + 25\% \text{ of } \\ &= 3x/5 \end{aligned}$$

$$= 49x/100$$

$$\begin{aligned} \text{Total No. of votes for B} &= 3x/5 - 25\% \text{ of } 3x/5 + 15\% \text{ of } \\ &= 2x/5 \end{aligned}$$

$$= 51x/100$$

$$51x/100 - 49x/100 = 200 \quad \dots \text{ (Given)}$$

$$x = 10000$$

36. C

$$\text{No. of blue balls} = 100$$

$$\text{No. of red balls} = 50$$

$$\text{No. of black ball} = 50$$

$$\text{Reduction in blue ball is } 25\%$$

$$\text{Remaining blue balls} = 75$$

$$\text{Now, reduction in red balls} = 50\%$$

$$\text{Remaining red balls} = 25$$

$$\text{Total remaining balls} = 75 + 25 + 50 = 150$$

$$\text{Percentage of black balls} = 50/150 * 100 = 100/3\%$$

37. B

Let the numbers are a, b, c

Now according to the question

$$6a/11 = 22b/100 \quad \dots(1)$$

$$\text{And } b = c/4 \quad \dots(2)$$

We are also given by the value of c i.e. 2400

So the value of b would be 600

Now put b = 600 in equation (1)

$$6a/11 = (22 \times 600)/100$$

$$6a/11 = 132$$

$$a = 242$$

$$\text{Now } 45\% \text{ of } 242 = 108.9$$

38. A

$$\text{Total number of votes polled} = (1136 + 7636 + 11628) = 20400.$$

$$\therefore \text{ Required percentage} = \left(\frac{11628}{20400} \times 100 \right) \% = 57\%.$$

39. E

Total quantity of milk and water is 120 litres.

In that percentage of water is 20%

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$$\Rightarrow 120 * (20/100) = 24 \text{ litres}$$

$$\text{Milk in the mixture} = 120 - 24 = 96 \text{ litres}$$

The milkman gave 15 litres of this mixture to a customer and then added 15 litres of water to the remaining mixture

$$\text{Milk} = 15 * 96 / 100 = 12 \text{ litres}$$

$$\text{Remaining quantity} = 96 - 12 = 84 \text{ litres}$$

$$\text{The percentage of milk in the mixture} = 84 * 100 / 120 = 70\%$$

40. B

$$\text{In first alloy, the copper} = 28 * (3/7) = 12 \text{ kg, Zinc}$$

$$= 28 * (4/7) = 16 \text{ kg}$$

$$\text{In second alloy, the copper} = 35 * (3/5) = 21 \text{ kg, zinc} =$$

$$35 * (2/5) = 14 \text{ kg}$$

$$\Rightarrow 33 / (30 + x) = 4/5$$

$$\Rightarrow 165 = 120 + 4x$$

$$\Rightarrow 45 = 4x$$

$$\Rightarrow x = 11.25$$

41. E

A vessel contains 56 litres of mixture of milk and water in the ratio of 3:4

$$\text{Total quantity of milk} = 56 * (3/7) = 24 \text{ litres}$$

$$\text{Total quantity of water} = 56 * (4/7) = 32 \text{ litres}$$

$$\text{Milk in 21 litres of mixture} = 21 * (3/7) = 9$$

$$\text{New mixture} = 56 - 21 + 15 = 50 \text{ litres}$$

$$\text{Milk in new mix} = 24 - 9 = 15$$

$$\% \text{ of milk in final mixture} = (15/50) * 100 = 30\%$$

42. D

$$\text{Sum of the ratios} = 6 + 7 = 13 \text{ and } 4 + 5 = 9$$

As both the containers have equal volume, each container's volume

$$\Rightarrow 13 * 9 = 117 \text{ litres}$$

The ratio in the first container becomes

$$6 * 9 : 7 * 9 = 54 : 63$$

In the second container the ratio will be,

$$13 * 4 : 13 * 5 = 52 : 65$$

Adding both, we get

$$\text{Water: Alcohol} \Rightarrow (54 + 52) : (63 + 65) = 106 : 128 = 53 : 64$$

43. C

A container contains a mixture of water and milk in the ratio of 7:5

$$\text{Water in the container} = 9 * (7/12) = 21/4 \text{ litres}$$

$$\text{Milk in the container} = 9 * (5/12) = 15/4 \text{ litres}$$

$$(7x - 21/4) / (5x - 15/4 + 9) = 7/9$$

$$\Rightarrow x = 3$$

Initially, the container have 21 litres ($7x = 7 * 3$) of water. = 21

44. D

Sol. Let income of B be x

So, income of A and C would be 1.5x and 1.8x

$$\text{Now, } 1.5x + x + 1.8x = 86000$$

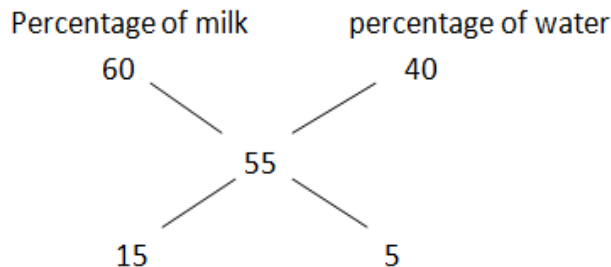
$$\text{or, } x = 20000$$

$$\therefore \text{Income of C} = 1.8 \times 20000 = 36000$$

45. C

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Milk: Water = 15:5 = 3:1

Quantity of remaining milk = $\frac{3}{4} \times 160 = 120L$

Quantity of remaining water = $\frac{1}{4} \times 160 = 40L$

46. B

M : W

1st = 5 : 3

2nd = 4 : 3

1st container: $m = \frac{5}{8}$; $w = \frac{3}{8}$

2nd container: $3 = \frac{4}{7}$; $w = \frac{3}{7}$

Milk = $\frac{5}{8} + \frac{4}{7} = \frac{35+32}{56} = \frac{67}{56}$

Water = $\frac{3}{8} + \frac{3}{7} = \frac{21+24}{56} = \frac{45}{56}$

Milk : water = 67 : 45

47. C

Let the number of jackals be x

Then the number of hornbills = $80 - x$

Each hornbill has two legs and each jackal has four legs

Therefore total number of legs = $4x + 2(80 - x) = 260$

$4x + 160 - 2x = 260$

$2x = 100$

$x = 50$

48. A

Required percentage of water

$$= \frac{\frac{12}{100} \times 2 + \frac{7}{100} \times 3 + 0.5}{5.5} \times 100$$

$$= \frac{95}{5.5}$$

$$= \frac{190}{11}$$

$$= 17 \frac{3}{11} \%$$

49. D

Loss or gain in the transaction

$$= 6.75 \times 60 - (25 \times 6 + 35 \times 7)$$

$$= 10 \text{ rs gain}$$

50. D

Let 1kg of each is taken and melted

$$\text{Required ratio} = \frac{\frac{5}{13} + \frac{5}{8}}{\frac{13}{8} + \frac{3}{8}}$$

$$= 105/103$$