

## Percentage Questions for SBI PO, IBPS PO and RBI Grade B Exams.

Percentage Quiz 16

Direction: Read the following questions carefully and choose the right answer.

1. Arjun kapoor and Anil Kapoor appear for a test. For each correct answer is awarded 1 mark and for each wrong answer 1/2 mark is deducted. Arjun kapoor answers some questions and gets 10% of his answers wrong. He secures a score of 85% which is 6 marks more than the pass marks. Anil Kapoor also answers some questions and gets 20% of his answers wrong. He gets a score of 70% which is 3 marks less than the pass mark. No marks are awarded or deducted for the unanswered questions. What is the pass mark?

A. 64 B. 51 C. 45 D. 25 E. None of these

- 2. This year, the cost of a Tomato increased by 20% over that of the last year. Last year a Tomato costed Rs.10 and a Potato costed Rs.5. This year it costs Rs.11 more to buy 5 Potato and 3 Tomato. Find the percentage increase in the price of the Potato.
- A. 4%

B. 15%

C. 27%

D. 20%

E. 42%

3. Fresh sugarcane contains 84% water and dried sugarcane contains 28% water. How many kilograms of dried sugarcane can be obtained from 90 kg of fresh sugarcane?

A. 20 B. 35 C. 47 D. 72 E. None of these

4. In Kolkata consisting of three localities Salt Lake, South Kolkata and Rajarhat the population of the three localities Salt Lake, South Kolkata and Rajarhat are in the ratio 9 : 8 : 3. In Salt Lake, 80% of the people are literate, in South Kolkata, 30% of the people are illiterate. If 90% people in Rajarhat are literate. Find the percentage literacy in these three localities in Kolkata.

A. 77.5% B. 77.0% C. 75.5% D. 75.0% E. None of these

5. In an election of 3 candidates, Narendra Modi, Rahul Gandhi and Arvind Kejriwal. Narendra Modi gets 40% more votes than Rahul Gandhi. Narendra Modi also beats Arvind Kejriwal by 54000 votes. If it is known that Rahul Gandhi gets 10% more votes than Arvind Kejriwal, find the number of voters on the voting list (given 90% of the voters on the voting list voted and no votes were illegal)

A. 404444	B. 364000	C. 400000	D. 420000	E. None of these
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6. Class A has boys to girls in the ratio 2 : 3, Class B has girls to boys in the ratio 5 : 3. If the number of students in Class A is at least twice as many as the number of students in Class B, what is the minimum percentage of boys when both classes are considered together?

A. 33.33% B. 40% C. 39.17% D. 37.5% E. None of these

7. Virat prepares a budget to visit New York. However, he spends 12% of his budget on the first 10% days of his travel when he stays in the city. He knows that he has to spend another 35% of days in city itself, after which he would travel to the country side. What should be the minimum decrease in spending in country side as a percentage of his spending in city so as to complete his travel on the initial budget itself?

A. 33.33% B. 30.3% C. 25% D. 32.23% E. None of these

8. In the year 2014, the population of a city was 20,000. The population of the city increased in 2015, 2016 and 2017 by a constant number. In the year 2018, if the population of the city was increased by 20% over the previous year then the population of the city become 11200 more than that of the year 2014. What is the ratio of the percentage increase in the population of the city over the previous year in the year 2015 to that in the year 2017 over the previous year?

A. 1 : 1 B. 5 : 6 C. 6 : 5 D. 4 : 3 E. None of these

**9.** Raju bought a washing machine at 25% discount, the listed price of which was Rs. 48000. After some time, he sold it to Kaju at 30% profit on his cost price. Now, Kaju marked up the price of the washing machine by 20% and then gave 10% discount on the marked price to Khajoor. Khajoor purchased the washing machine from Kaju and sold it back to Raju by gaining 50% profit on the price he had paid. When Raju purchased the washing machine from Khajoor then how much extra money did he pay as compared to the amount he had paid in starting?

A. Rs. 38214 B. Rs. 39816 C. Rs. 42120 D. Rs. 41468 E. None of these

**10.** In the beginning of 2017, the population of three cities - Bangalore, Chennai and Delhi was in the ratio of 4 : 5 : 6 respectively. During the year 2017, the population of the respective cities was increased by the percentage in the ratio of 7 : 5 : 9. In the beginning of 2018, the population of Delhi was 27000 more than that of the beginning of 2017 and in the beginning of the year 2018 the ratio of the population of Bangalore to Chennai was 108: 125 then during the year 2017, what was the sum of the increase in the population of all the cities together?

A. 53500 B. 52500 C. 61200	D. 49400 E. None of these
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1	2	3	4	5	6	7	8	9	10
С	D	Α	Α	Α	С	В	С	В	Α





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## **Explanations:**

1. Let Arjun kapoor attempt x questions, he gets 10% of the answers wrong.

Arjun kapoor's score =  $0.9x - (0.1x) \times \frac{1}{2} = 0.85x$ 

0.85x = 0.85z, where z is the total number of marks as well as total number of marks possible.

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So,  $x = z \Rightarrow x = 100\%$  of z

Similarly let Anil Kapoor attempt y questions

Anil kapoor's score =  $0.8y - (0.2y) \times \frac{1}{2} = 0.7y$ 

 $0.7y = 0.7z \Rightarrow y = 100\%$  of z Now, 0.85z = P + 6, where P is pass mark ...... (i) Also, 0.7z = P - 3 ...... (ii)

From (i) and (ii), we get  $0.15z = 9 \Rightarrow z = 60$ 

Putting the value of z in (ii), we get  $0.7 \times 60 = P - 3 \Rightarrow p = 42 + 3 = 45$ 

Hence, option (C) is correct.

2. Cost of the Tomato last year = Rs.10 So, Cost of the Tomato this year = 10 + 20% of 10 = Rs.(10 + 2) = Rs.12 Cost of the Potato last year = Rs.5 Let the cost of Potato this year be x Therefore, cost of 5 Potato and 3 Tomato this year =  $5x + (3 \times 12) = 5x + 36$  ..... (i) cost of 5 Potato and 3 Tomato last year =  $((5 \times 5) + (3 \times 10)) = 55$  ...... (ii) This year the cost is Rs.11 more From (i) and (ii), we get  $5x + 36 = 55 + 11 \Rightarrow 5x = (66 - 36) \Rightarrow x = 6$ Increase in the cost of Potato = (6 - 5) = Rs. 1 Percentage increase =  $\frac{1}{5} \times 100\% = 20\%$ 

Hence, option (D) is correct.

**3.** The quantity of pulp (the part that is not water) in 90 kg of fresh sugarcane

$$=\frac{16}{100}$$
 × 90 kg.

This is also the quantity of pulp in the dried sugarcane formed.

Dried sugarcane have 72% pulp

 $\frac{16}{100} \times 90 = \frac{72}{100}$ 

(Quantity of dried sugarcane formed) =  $\frac{72}{100} \times X$  (Say)

 $\Rightarrow$  X = 20

Hence, option (A) is correct.

4. Let the population of Salt Lake = 9x, The population of South Kolkata = 8x, and The population of Rajarhat = 3x The total population of these three localities = 9x + 8x + 3x = 20xThe number of literate in Salt Lake = 80% of 9x = 7.2xThe number of literate in South Kolkata = 70% of 8x = 5.6 xThe number of literate in Rajarhat = 90% of 3x = 2.7xThe total number of literate in these three localities = 7.2x + 5.6x + 2.7x = 15.5xHence. Required percentage =  $\frac{15.5 x}{20x} \times 100 = 77.5\%$ Therefore, option (A) is correct.

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5. Let Narendra Modi is denoted by M, Rahul Gandhi is denoted by R and Arvind Kejriwal is denoted by A.

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Now let R gets vote = x .....(I)
M = 1.4x .....(II)
M – A = 54000 .....(III)
R = 1.1A .....(IV)
From equation (II) and (IV) we get,
M = 1.4 \times 1.1A = 1.54 A .....(V)
From equation (III) and (V) we get.,
0.54A = 54000
A = 100000
M = 1.54 \times 10000 = 154000
R = 1.1 \times 100000 = 110000
Hence total votes pole in election = (154000 + 110000 + 100000) = 364000
From question 90% of total votes pole on voting list.
Hence vote in voting list = \frac{364000 \times 100}{90} = 404444
Therefore, option (A) is correct.
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Let us first rewrite the numbers a touch – 40% of students in Class A are boys, and 37.5% of boys in 6. class B are boys. The overall percentage of boys should lie between these two numbers.

Now, class A has at least twice as many students as class B. So, the overall weighted average should definitely be closer to the percentage of boys in class A, or closer to 40%.

Now, the number of students in class A can be much higher than the number in class B, in which case the overall percentage would practically be 40%. This is the maximum percentage that can be there.

For the minimum percentage, we need to consider the other extreme-where class A has exactly twice as many students as class B.

The weighted average would be

 $\frac{2 \times 40\% + 1 \times 37.5}{3} = 39.17\%$ 

Hence, option (C) is correct.

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7. Budget spent on 10% of days = 12% So, in 1% of days =  $\frac{12}{10}$ 

35% remaining days in city =  $\frac{12}{10} \times 35 = 42$ 

Overall budget spent on 45% of days in city = 54% Days remaining = 55%, Budget remaining = 46%

In 1% of day remaining, he can spend =  $\frac{46}{55}$  of budget

Therefore, % decrease required =  $\frac{\frac{12}{10} - \frac{46}{55}}{\frac{12}{10}} \times 100 = 30.33\%$ 

Hence, option (B) is correct.

**8.** In the year 2015, let the population of the city increased by x over the previous year

Then, In the year 2015, the population of the city = 20000 + xIn the year 2016, 20000 + x + x = 20000 + 2xIn the year 2017, 20000 + x + x + x = 20000 + 3x

In the year 2018, the population of the city = 120% of (20000 + 3x) = 20000 + 1120024000 + 3.6x = 312003.6x = 7200x = 2000

In the year 2015,

The % increase =  $\frac{2000 \times 100}{20000} = 10\%$ 

In the year 2016, the population = 20000 + 4000 = 24000In the year 2017, it increased by 2000

The % increase =  $\frac{2000 \times 100}{24000} = \frac{200}{24} = \frac{25}{3}$  %

The required ratio = 
$$10: \frac{25}{3} = 6: 5$$

Hence, option C is correct.

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9.
       The cost price for Raju = 75% of 48000 = Rs. 36000
       He sold it to Kaju for 130% of 36000 = Rs. 46800
       The marked price by Kaju = 120% of 46800 = Rs. 56160
       He sold to Khajoor for = 90% of 56160 = Rs. 50544
       Khajoor sold it back to Raju for = 150% of 50544 = Rs. 75816
       The extra money Raju paid = Rs. (75816 – 36000) = Rs. 39816
       Hence, option B is correct.
10.
       In the beginning of 2017,
       Let the population of the cities Bangalore = 4x then of Chennai = 5x and of Delhi = 6x
       Let during 2017, it was increased by 7y%, 5y% and 9y% respectively
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       Then, 9y<mark>% of 6x = 270</mark>00
       xy = 500 \times 100 ---- (I)
       And, (4x + 7y% of 4x) : ((5x + 5y% of 5y) = (400x + 28xy) : (500x + 25xy) = 108 : 125
       (400x + 28 \times 50000) : (500x + 25 \times 50000) = 108 : 125
       125 × 400x + 28 × 125 × 50000 = 108 × 500x + 108 × 25 × 50000
       54000x - 50,000x = 50000 \times (3500 - 2700)
       4000x = 50000 \times 800
       x = 10000
       From the equation (i)
       y = 5
       Therefore, during the year 2017, the total population was increased by 35% of 40,000 + 25% of 50,000
       + 45% of 60,000 = 53500
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Hence, option A is correct.

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