

EXAM DATE : 1-September-2016 Evening Shift

Question 1.A, B and C can work together for Rs. 550/- A and B together are to do $\frac{7}{11}$ of the work. The share of C should be?

Options:

- (A) Rs. 200
- (B) Rs. 300
- (C) Rs. 400
- (D) Rs. 450

Question 2.In ΔABC , the height CD intersects AB at D. The midpoints of AB and BC are P and Q respectively. If AD = 8 cm and CD = 6 cm, then the length of PQ is?

Options:

- (A) 3 cm
- (B) 7 cm
- (C) 9 cm
- (D) 5 cm

Question 3.The price of a chair is Rs. 500. It has been sold at two successive discounts of 10% each. What is its selling price?

Options:

- (A) Rs. 400
- (B) Rs. 405
- (C) Rs. 415
- (D) Rs. 425

Question 4.The percent profit made when an article is sold for Rs. 78 is twice as much as when it is sold for Rs. 69, the cost price of the article is?

Options:

- (A) Rs. 60
- (B) Rs. 51
- (C) Rs. 55.50
- (D) Rs. 70

Question 5.In a Village panchayat society 574 names are enlisted as 'below poverty level'. If 14% of the villagers are below poverty level, the total number of villagers is?

Options:

- (A) 4100
- (B) 4200
- (C) 4000
- (D) 3800

Question 6.A train 240 meters in length crosses a telegraph post in 16 seconds. The speed of the train is?

Options:

- (A) 50 Km/hr
- (B) 52 Km/hr

- (C) 54 Km/hr
- (D) 56 Km/hr

Question 7. If $a^2 + 1 = a$, then the value of a^3 is

Options:

- (A) 0
- (B) 1
- (C) -1
- (D) 2

Question 8.

If $x + 3y = -3x + y$, then $\frac{x^2}{2y^2}$ is equal to

Options:

- (A) $\frac{1}{8}$
- (B) $\frac{1}{2}$
- (C) $\frac{1}{4}$
- (D) 4

Question 9. From an external point two tangents to a circle are drawn. The chord passing through the points of contact subtends an angle 72° at the centre. The angle between the tangents is?

Options:

- (A) 36°
- (B) 72°
- (C) 108°
- (D) 144°

Question 10. Length of three line segments is given. Is construction of a triangle possible with the segments in the given cases?

Options:

- (A) 8 cm, 7 cm, 18 cm
- (B) 8 cm, 15 cm, 17 cm
- (C) 10 cm, 6 cm, 4 cm
- (D) 8 cm, 10 cm, 20 cm

Question 11. If $\sin\theta + \operatorname{cosec}\theta = 2$, then the value of $\sin^7\theta + \operatorname{cosec}^7\theta$ is

Options:

- (A) 27
- (B) 2-7
- (C) 2
- (D) 2-1

Question 12. A man has some hens and some cows. If the total number of heads of hens and cows together is 50 and the number of feet of hens and cows together is 142, then the number of cows is

Options:

- (A) 21
- (B) 25
- (C) 27
- (D) 29

Question 13. In a class, average height of all students is 'a' cms. Among them, average height of 10 students is 'b' cms and the average height of the remaining students is 'c' cms. Find the number of students in the class. (Here $a > c$ and $b > c$)

Options:

(A)

$$(a(b-c))/(a-c)$$

(B)

$$((b-c))/((a-c))$$

(C)

$$(b-c)/(10(a-c))$$

(D)

$$(10(b-c))/(a-c)$$

Question 14.

The simplified value of $\frac{3\sqrt{7}}{\sqrt{5} + \sqrt{2}} - \frac{5\sqrt{5}}{\sqrt{2} + \sqrt{7}} + \frac{2\sqrt{2}}{\sqrt{7} + \sqrt{5}}$ is

Options:

- (A) 0
- (B) 1
- (C) 5
- (D) 6

Question 15. If $(a+b-6)^2 + a^2 + b^2 + 1 + 2b = 2ab + 2a$, then the value of a is

Options:

- (A) 7
- (B) 6
- (C) 3.5
- (D) 2.5

Question 16. Two circles of radii 17 cm and 8 cm are concentric. The length of a chord of greater circle which touches the smaller circle is

Options:

- (A) 15 cm

- (B) 16 cm
- (C) 30 cm
- (D) 34 cm

Question 17. The least six digit number which is a perfect square is

Options:

- (A) 100489
- (B) 100000
- (C) 100256
- (D) 100225

Question 18. The percentage change of a number when it is first decreased by 10% and then increased by 10% is

Options:

- (A) 0.1 % increase
- (B) 1 % decrease
- (C) 0.1 % decrease
- (D) No changes

Question 19.

Find the angular elevation of the Sun when the shadow of a 15m long pole is $\frac{15}{\sqrt{3}}$ metres

Options:

- (A) 45°
- (B) 60°
- (C) 30°
- (D) 90°

Question 20. If $2y \cos\theta = x \sin\theta$ and $2x \sec\theta - y \operatorname{cosec}\theta = 3$ then what is the value of $x^2 + 4y^2$?

Options:

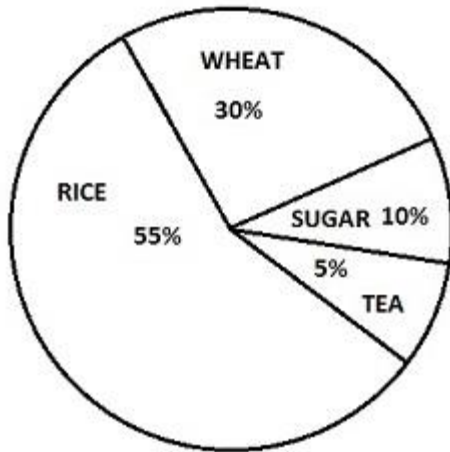
- (A) 4
- (B) 1
- (C) 2
- (D) 5

Question 21. The difference between compound interest and simple interest on an amount of Rs. 15,000 for 2 years is Rs. 96. The rate of interest per annum is?

Options:

- (A) 6%
- (B) 7%
- (C) 8%
- (D) 9%

Question 22. In the given Pie-chart, the comparative study of the production of Rice, Wheat, Sugar and Tea of a country is given. Study the Pie-Chart and answer the following questions

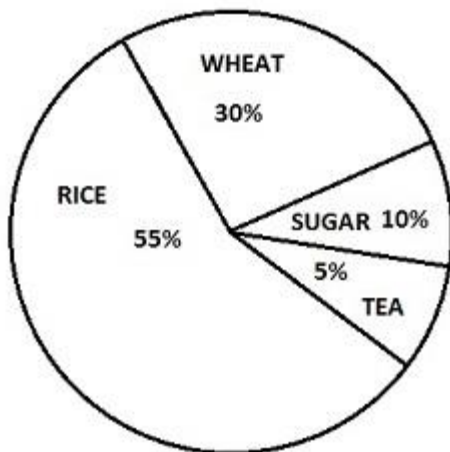


From this diagram, the ratio of sum of wheat and sugar production to difference in production of rice and tea is

Options:

- (A) 4:5
- (B) 5:4
- (C) 6:1
- (D) 1:6

Question 23. In the given Pie-chart, the comparative study of the production of Rice, Wheat, Sugar and Tea of a country is given. Study the Pie-Chart and answer the following questions

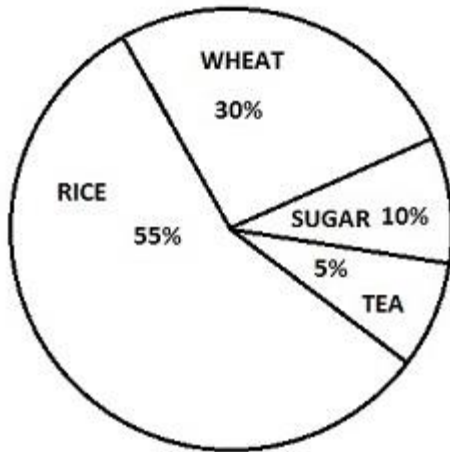


The production of rice and tea is more/greater than production of wheat by-

Options:

- (A) 50%
- (B) 100%
- (C) 75%
- (D) 66.6%

Question 24. In the given Pie-chart, the comparative study of the production of Rice, Wheat, Sugar and Tea of a country is given. Study the Pie-Chart and answer the following questions.

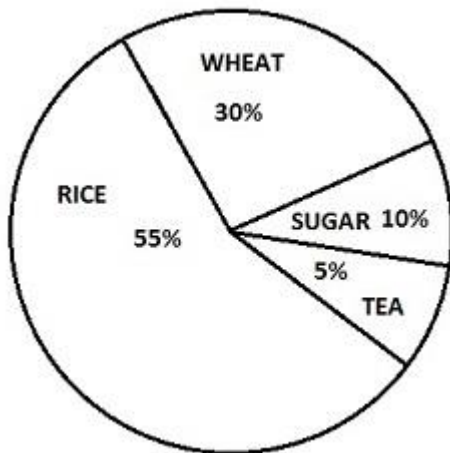


The Central angle of Wheat % is

Options:

- (A) 48°
- (B) 98°
- (C) 110°
- (D) 108°

Question 25. In the given Pie-chart, the comparative study of the production of Rice, Wheat, Sugar and Tea of a country is given. Study the Pie-Chart and answer the following questions.



The total production of Rice, Wheat, sugar and Tea (In Kgs) is 500000 Kgs. The production of Rice in the country is

Options:

- (A) 175000 Kg
- (B) 395000 kg
- (C) 275000 Kg
- (D) 27500 Kg

Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer
1	A	2	D	3	B	4	A	5	A
6	C	7	C	8	A	9	C	10	B
11	C	12	A	13	D	14	A	15	C
16	C	17	A	18	B	19	B	20	A
21	C	22	A	23	B	24	D	25	D

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