Pabna Cadet College

First Fortnightly Exam - 2021

Subject: Mathematics

Class: VIII

Time: 20 minutes Full Marks: 20

Answer all the questions

1. The profit of a principal in 12 years is half of the principal; what is the rate of profit?

i. 4.17% ii. 4.13%% iii. 0.0417% iv. 5.17%

2. A product is bought at 70 tk. and sold at 65 tk.; what is percentage of loss?

i. 6.17% ii. 7.14% iii. 7.24% iv. 4.27%

3. A shopkeeper sells a sack of rice at 3500 taka and thereby makes a profit of 268 taka; what is the purchasing price?

i. 3233 ii. 3223 iii. 2332 iv. 3332

4. What is the simple profit of tk. 2000 in 4 years at simple profit of 5% per annum?

i. 300 ii. 400 iii. 350 iv. 320

Answer the questions (5-7) based on the following information

At the same rate, taka 200 will be double as profit-principal in 6 years and triple in n years.

5. How much will the profit increase in 6 years?

i. 100 ii. 150 iii. 200 iv. 220

6. What will be the profit in n years?

i. 400 ii. 300 iii. 200 iv. 600

7. What is the value of n?

i. 8 ii. 10 iii. 12 iv. 6

8. The length of a side of a square is 8 meters; what is the length of diagonal (in m)?

i. 8.2 ii. $8\sqrt{2}$ iii. 11.31 iv. both iii and iv

9. The unit to measure the volume of liquid is-

i. Gram ii. Liter iii. Meter iv. Decimeter

10. 12 km = — mile

i. 7.45 ii. 4.57 iii. 7.54 iv. 5.47

11. 1 metric ton = how many kg?

i. 10 ii. 100 iii. 1000 iv. 10,000

12. At what temperature is the weight of 1 cubic centimeter of pure water is 1 gram?

i. 4^oC ii. 4^oF iii. 4^oK iv. 100^oC

13. 2 nautical miles = — feet.

i. 21152 ii. 11252 iii. 12252 iv. 12152

Answer questions 14-16 based on the following.

The length and breadth of a rectangular garden are 25m and 20m, respectively, with a 2m wide road surrounding it.

14. What is area of the garden?
    i. 500 sq.m. ii. 500 sq.cm iii. 500 m iv. 300 sq.m
15. What of is the area of the total plot (sq.m.)?
    i. 600 ii. 594 iii. 696 iv. 694
16. What is the area of the road (sq. meter)?
    i. 136 ii. 96 iii. 180 iv. 196
17. If a + b = 5 and ab = 10, $a^2 + b^2 =$?
    i. 10 ii. 45 iii. 5 iv. 50
18. If $a^2 - 1 = 5a$, what is the value of $a^2 + \frac{1}{a^2}$?
    i. 27 ii. 23 iii. 21 iv. 25
19. $(a + b - c)^2 =$ —
    i. $a^2 + b^2 + c^2 - 2ab - 2ac - 2bc$ ii. $a^2 + b^2 - c^2 + 2ab + 2ac + 2bc$
    ii. $a^2 + b^2 + c^2 + 2ab - 2ac - 2bc$ iv. $a^2 + b^2 - c^2 + 2ab - 2ac - 2bc$
20. a+b=4 and a-b=2; ab=?
    i. 3 ii. 10 iii. 16 iv. 20

Answers

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Answer	i	ii	iv	ii	iii	i	iii	iv	ii	i	ii	i	iv	i	iii	iv	iii	i	iii	i

—Good Luck—