## :- MISCELLANEOUS QUESTIONS :- (1)

1. The interior angle of a regular polygon exceeds its exterior angle by 108°. The number of sides of the polygon is :-

(a) 12 (b) 10 (c) 16 (d) 14

2. A man sells an article at 5% above its cost price. If he had bought it at 5% less than what he had paid for it and sold it at ₹ 2 less; he would have gained 10%. The cost price of the article is :-

(a) ₹ 100 (b) ₹ 400 (c) ₹ 200 (d) ₹ 300

3. The Value of $\cot 41^\circ . \cot 42^\circ . \cot 43^\circ - - - - \cot 49^\circ$

(a) $\frac{1}{\sqrt{2}}$ (b) 0 (c) 1 (d) $\frac{\sqrt{3}}{2}$

4. P and Q together can do a job in 6 days. Q and R can finish the same job in $\frac{60}{7}$ days. P started the work and worked for 3 days. Q and R continued for 6 days. Then the difference of days in which R and P can complete the job is :-

(a) 8 (b) 15 (c) 10 (d) 12

5. The perimeter of a rhombus is 60 cm and one of its diagonal is 24 cm. Then the area of the rhombus (Sq. cm).

(a) 206 (b) 108 (c) 432 (d) 216

6. A sum of ₹ 7930 is divided into 3 parts and given on a loan at 5% simple interest to A, B and C for 2, 3 and 4 years respectively. If the amounts of all three are equal after their respective periods of loan; then A received as loan of
(a) ₹ 2800 (b) ₹ 2760 (c) ₹ 2750 (d) ₹ 3050

7. If 60% of A = 30% of B; B = 40% of C and C = x% of A; then the value of x :-
(a) 200 (b) 500 (c) 300 (d) 800

8. 300 gm of Sugar Solution has 40% of Sugar in it. How much Sugar must be added to make it 50% in the Solution?
(a) 40 gm (b) 60 gm (c) 10 gm (d) 80 gm

9. Three Science classes A, B and C take a Life Science test. The average score of class A is 83. The average score of class B is 76. The average score of class C is 85. The average score of class A and B is 79 and average Score of class B and C is 81. Then the average Score of classes A, B and C is :-
(a) 81.5 (b) 81 (c) 80.5 (d) 80

## (1) MISCELLANEOUS QUESTIONS (3)

10. Pipe A can fill the tank in 6 hours and pipe B in 8 hours. If both the pipes are opend and after 2 hours pipe A is closed; howmuch time B will take to fill the remaining tank?

(a) $2\frac{1}{3}$ hours (b) $2\frac{2}{5}$ hours (c) $7\frac{1}{2}$ hours (d) $3\frac{1}{3}$ hours

11. There would be a 10% loss if rice is sold at ₹54 per kg. To earn a profit of 20% the price of rice per kg will be :-

(a) ₹ 65 (b) ₹ 70 (c) ₹ 63 (d) ₹ 72

12. A and B have their monthly incomes in the ratio 8:5; while their monthly expenditures are in the ratio 5:3. If they have saved ₹ 12,000 and ₹ 10,000 monthly respectively; then the difference in their monthly incomes is :-

(a) ₹ 44000 (b) ₹ 46,000 (c) ₹ 42,000 (d) ₹ 52,000

13. Find the Value of :-

$$\left[\sin 31^\circ \cos 59^\circ + \cos 31^\circ \sin 59^\circ\right] \div \left[\cos 20^\circ \cos 25^\circ - \sin 20^\circ \sin\right]$$

(a) 1 (b) $\frac{1}{\sqrt{2}}$ (c) 2 (d) $\sqrt{2}$

## {9} Miscellaneous Questions :- <4>

14. In $\triangle ABC$; $\angle BAC = 90^\circ$; $AD \perp BC$. If $BD = 3$ cm and $CD = 4$ cm; then the length (in cm) of AD is :-

(a) $2\sqrt{3}$ (b) 5 (c) 3·8 (d) 6

15. If $a+b+c+d = 4$; then;

$$\frac{1}{(1-a)(1-b)(1-c)} + \frac{1}{(1-b)(1-c)(1-d)} + \frac{1}{(1-d)(1-a)(1-b)} + \frac{1}{(1-d)(1-c)(1-a)} = ?$$

(a) 2 (b) 1 (c) 3 (d) 0

16. When the angle of evevation of sun increases from 30° to 60°; the shadow of a post is diminished by 5 m. Then the length of the post is

(a) $\frac{5\sqrt{3}}{2}$ m. (b) $\frac{2\sqrt{3}}{2}$ m (c) $\frac{2}{5\sqrt{3}}$ m (d) $\frac{4}{5\sqrt{3}}$ m

17. If $2x^2 - 7xy + 3y^2 = 0$; then $x:y = ?$

(a) 3:2 (b) 2:3 (c) 3:1 and 1:2 (d) 5:6

18. The perimeters of two similar triangle ABC and PQR are 36 cm and 24 cm respectively. If PQ = 10 cm; then AB = ?

(a) 16 cm (b) 12 cm (c) 14 cm (d) 15 cm

## (D) MISCELLANEOUS QUESTIONS :- (5)

19. The population of a village is 25,000. One fifth are females and the rest are males; 5% of males and 40% of females are uneducated. What percentage on the Whole are educated.

(a) 75% (b) 88% (c) 55% (d) 85%

20. Three sets of 40, 50 and 60 students appeared for an examination and the pass percentage was 100; 90 and 80 respectively. The pass percentage of the Whole Set :-

(a) $88\frac{2}{3}\%$ (b) $84\frac{2}{3}\%$ (c) $88\frac{1}{3}\%$ (d) $84\frac{1}{3}\%$

21. Find the number of zeros at the end of the product :- $\left(3^{123} - 3^{122} - 3^{121}\right) \times \left(2^{121} - 2^{120} - 2^{119}\right)$

(a) 1 (b) 119 (c) 2 (d) 121

22. ₹ 11250 are divided among A, B and C so that A may receive Onehalf as much as B and C together receive and receiver One-forth of What A and C together receive. The Share of A is more than that of B by -

(a) ₹ 2500 (b) ₹ 1500 (c) ₹ 1800 (d) ₹ 650

## (9) Miscellaneous Questions :- (6)

23. The investments made by X and Y are in the ratio 3:2. If 5% of the total profit is donated and X gets ₹ 8550 as his share of profit; then what is the amount of total profit ?

(a) ₹ 14,000 (b) ₹ 15,000 (c) ₹ 11,050 (d) ₹ 12,020

24. A merchant has 1000 kg Sugar; part of which he sells at 8% profit and the rest at 18% profit. He gains 14% on the whole; the quantity sold at 8% profit is :—

(a) 600 kg (b) 640 kg (c) 400 kg (d) 560 kg

25. If $x - \frac{1}{x} = 1$ ; then $\frac{x^4 - \frac{1}{x^2}}{3x^2 + 5x - 3} = ?$

(a) $\frac{1}{4}$ (b) $\frac{1}{2}$ (c) $\frac{3}{4}$ (d) 0