OBJECTIVE TYPE QUESTIONS (NUMBER SYSTEM)

CHOOSE THE CORRECT ONE

1. How many prime number are there between 0 and 30 :-

(A) 9 (B) 10 (C) 8 (D) 11

2. Two irrational numbers between 2 and 2.5 are :-

(A) $\sqrt{5}$ and $\sqrt{2\times\sqrt{5}}$ (B) $\sqrt{5}$ and $\sqrt{2\times5}$ (C) $\sqrt{5}$ and $\sqrt{2\times\sqrt{7}}$ (D) None of these

3. The exponential form of $\sqrt{\sqrt{2}\sqrt{3}}$ is :-

(A) $6^{1/2}$ (B) $6^{1/3}$ (C) $6^{1/4}$ (D) 6

4. The rational form of -25.6875 is :-

(A) $-\frac{411}{16}$ (B) $-\frac{421}{16}$ (C) $-\frac{431}{16}$ (D) $-\frac{441}{16}$

5. The rational form of $2.74\overline{35}$ is :-

(A) $\frac{27161}{999}$ (B) $\frac{27}{99}$ (C) $\frac{27161}{9900}$ (D) $\frac{27161}{9000}$

6. The value of $0.4\overline{23}$ is :-

(A) $\frac{423}{1000}$ (B) $\frac{479}{1000}$ (C) $\frac{423}{990}$ (D) $\frac{419}{990}$

7. Which of the following is not a rational number :-

(A) $\sqrt{2}$ (B) $\sqrt{4}$ (C) $\sqrt{9}$ (D) $\sqrt{16}$

8. $1+\frac{1}{1+\frac{1}{1+1/3}}$ is equal to :-

(A) 1/3 (B) 11/7 (C) 3 (D) $1\frac{1}{3}$

9. The number $\frac{3-\sqrt{3}}{3+\sqrt{3}}$ is :-

(A) Rational (B) Irrational (C) Both (D) Can't say

10. If $x-\frac{1}{x}=\sqrt{3}$ then $x^3-\frac{1}{x^3}$ equals :-

(A) $6\sqrt{3}$ (B) $3\sqrt{3}$ (C) 3 (D) $\sqrt{3}$

11. The value of $5.\overline{2}$:-

(A) $\frac{45}{9}$ (B) $\frac{46}{9}$ (C) $\frac{47}{9}$ (D) None

12. $\frac{(x^{a+b})^2(x^{b+c})^2(x^{c+a})^2}{(x^a.x^b.x^c)^4}$ =

(A) –1 (B) 0 (C) 1 (D) None

13. The value of $\frac{(0.6)^0-(0.1)^{-1}}{(3/2^3)^{-1}(3/2)^3+\left(-\frac{1}{3}\right)^{-1}}$ is:-

(A) 3/2 (B) –3/2 (C) 2/3 (D) –1/2

14. If $2^x = 4^y = 8^z$ and $\frac{1}{2x}+\frac{1}{4y}+\frac{1}{4z}=4$, then the value of x is :-

(A) $\frac{7}{16}$ (B) $\frac{7}{32}$ (C) $\frac{7}{48}$ (D) None of these

15. If $9^{x-1} = 3^{2x-1} - 486$ then the value of x is :-

(A) 3.5 (B) 2.5 (C) 1.5 (D) 0

16. If $a = \frac{1}{3-2\sqrt{2}}$, $b = \frac{1}{3+2\sqrt{2}}$ then the value of $a^2 + b^2$ is :-

(A) 34 (B) 35 (C) 36 (D) 37

17. $\frac{2^{n+4}-2(2^n)}{2(2^{n+3})}+2^{-3}$ is equal to :-

(A) 2^{n+1} (B) $-2^{n+1} + \frac{1}{8}$ (C) $\frac{9}{8}-2^n$ (D) 1

18. If $2^{2x-y} = 32$ and $2^{x+y} = 16$ then $x^2 + y^2$:-

(A) 9 (B) 10 (C) 11 (D) 13

19. The value of $\frac{(25)^{5/2}\times(243)^{2/5}}{(16)^{3/4}\times(8)^{5/3}}$ is :-

(A) $\frac{5625}{128}$ (B) $\frac{5615}{256}$ (C) $\frac{5625}{256}$ (D) None

20. The value of $\left[(x^{a-a^{-1}})^{\frac{1}{a-1}}\right]^{\frac{a}{a+1}}$ =

(A) x (B) 1/x (C) x^a (D) $1/x^a$

21. $\sqrt[4]{\sqrt[3]{x^2}}$ =

(A) x (B) $x^{1/2}$ (C) $x^{1/3}$ (D) $x^{1/6}$

22. The value of $5\sqrt{3} - 3\sqrt{12} + 2\sqrt{75}$ on simplifying is :-

(A) $5\sqrt{3}$ (B) $6\sqrt{3}$ (C) $\sqrt{3}$ (D) $9\sqrt{3}$

23. If $\sqrt{3} = 1.732, \sqrt{5} = 2.236$, then the value of $\frac{6}{\sqrt{5} - \sqrt{3}}$ is :-

(A) 10.905 (B) 11.904 (C) 11.905 (D) None

24. The product of $4\sqrt{6}$ and $3\sqrt{24}$ is :-

(A) 124 (B) 134 (C) 144 (D) 154

25. If a = $\frac{2+\sqrt{3}}{2-\sqrt{3}}$, b = $\frac{2-\sqrt{3}}{2+\sqrt{3}}$, then the value of a + b is :-

(A) 14 (B) –14 (C) $8\sqrt{3}$ (D) $-\sqrt{3}$

26. If x = $\frac{1}{2-\sqrt{3}}$ find the value of $x^3 - 2x^2 - 7x + 5$ is :-

(A) 2 (B) 1 (C) 0 (D) 3

27. The surd $3\sqrt[4]{\sqrt[3]{5}} - \sqrt[3]{\sqrt[4]{5}}$ in its simplest form is equal to :-

(A) $2\sqrt[12]{5}$ (B) $\sqrt[12]{5}$ (C) $\sqrt[2]{5}$ (D) none of these

28. Simplify $\frac{2}{\sqrt{5}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{2}} - \frac{3}{\sqrt{5}+\sqrt{2}}$:-

(A) 1 (B) 0 (C) 10 (D) 100

29. If $\frac{5\sqrt{3}}{7-4\sqrt{3}} = 4a + \sqrt{3}b$ the value of a and b is :-

(A) a = 47, b = 27 (B) a = 27, b = 47 (C) a = 15, b = 35 (D) a = 35, b = 25

30. The value of $\sqrt[3]{24} + \sqrt[3]{81} - \sqrt[3]{192}$, is :-

(A) $\sqrt[3]{3}$ (B) $\sqrt{3}$ (C) 3 (D) None of these

OBJECTIVE — ANSWER KEY — EXERCISE-1

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	B	A	C	A	C	D	A	B	B	A	C	C	B	A	A
Que.	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Ans.	A	D	B	D	A	D	D	B	C	A	D	A	B	C	A