



# R R CAMPUS



[Ground Floor, Nath kuti, Musallahpur Haat, Patna - 06 | :♦ 9135000083/93::☎ 8002169064 |  
[ For :- CSAT, SSC, IBPS (PO & Clerk), RLYS, & Others Competitive Exam ]

$$\textcircled{1} \frac{3}{1 \times 4} + \frac{5}{4 \times 9} + \frac{7}{9 \times 16} + \frac{9}{16 \times 25} + \frac{11}{25 \times 36}$$

$$= 1 - \frac{1}{36}$$

$$= \frac{35}{36} \text{ Ans } \textcircled{d}$$

$$\textcircled{2} \frac{1}{a + \frac{1}{b + \frac{1}{c + \frac{1}{2}}}} = \frac{51}{118} \text{ then } a+b+c$$

$$\therefore \frac{118}{51} \rightarrow \textcircled{2} + \frac{16}{51}$$

$$\Rightarrow \frac{51}{16} \rightarrow \textcircled{3} + \frac{3}{16}$$

$$\Rightarrow \frac{16}{3} \rightarrow \textcircled{5} + \frac{1}{3}$$

$$\therefore A+B+C = 2+3+5 = 10 \text{ Ans } \textcircled{a}$$

$$\textcircled{3} \frac{2}{15} + \frac{2}{35} + \frac{2}{63} + \frac{2}{99} + \frac{2}{143}$$

$$= \frac{2}{3 \times 5} + \frac{2}{5 \times 7} + \frac{2}{7 \times 9} + \frac{2}{9 \times 11} + \frac{2}{11 \times 13}$$

$$= \frac{1}{3} - \frac{1}{13}$$

$$= \frac{13-3}{39} = \frac{10}{39} \text{ Ans } \textcircled{b}$$

$$\textcircled{4} 2328 \times 876 \times 853 \text{ (useds)}$$

$$= 1739546784 \text{ Ans } \textcircled{1}$$

$$\textcircled{5} \frac{17 \times 13}{26} \times x = \frac{34 \times 3}{4}$$

$$\Rightarrow \frac{17}{2} \times x = \frac{17 \times 3}{2}$$

$$\therefore x = 3 \text{ Ans } \textcircled{A}$$

$$\textcircled{6} 0.4 + 0.44 + 0.444 + 0.4444 = ?$$

$$= 1.7284 \text{ Ans } \textcircled{A}$$

$$\textcircled{7} 3\frac{1}{6} + 4\frac{1}{2} + 2\frac{2}{3} - 1\frac{11}{12}$$

$$= (3+4-2-1) + \left(\frac{1}{6} + \frac{1}{2} + \frac{2}{3} - \frac{11}{12}\right)$$

$$= 4 + \left(\frac{2+6-8-11}{12}\right)$$

$$= 4 + \left(\frac{-11}{12}\right)$$

$$= 4 - \frac{11}{12}$$

$$= \frac{37}{12}$$

$$= 3\frac{1}{12} \text{ Ans } \textcircled{A}$$

$$\begin{aligned} \textcircled{8} \quad & 0.\bar{3} \times 0.\bar{4} \\ & = \frac{3}{93} \times \frac{4}{9} \\ & = \frac{4}{27} \text{ Ans } \textcircled{c} \end{aligned}$$

$$\textcircled{9} \quad \frac{(0.06)^2 + (0.47)^2 + (0.079)^2}{(0.006)^2 + (0.047)^2 + (0.0079)^2}$$

माना  $0.06 = x$   
 $0.47 = y$   
 $0.079 = z$

then  $\frac{(10x)^2 + (10y)^2 + (10z)^2}{x^2 + y^2 + z^2}$

$$= \frac{100x^2 + 100y^2 + 100z^2}{x^2 + y^2 + z^2}$$

$$= \frac{100(x^2 + y^2 + z^2)}{x^2 + y^2 + z^2}$$

$$= 100 \text{ Ans } \textcircled{c}$$

$$\begin{aligned} \textcircled{10} \quad & 4571 \div 3.265 = 1400 \\ \Rightarrow & 457.1 \div 32.65 = 14 \text{ Ans } \textcircled{c} \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad & \sqrt{15} = 3.87 \text{ then } \sqrt{\frac{3}{5}} + 6\sqrt{\frac{5}{3}} \\ & = \sqrt{\frac{3}{5} \times \frac{5}{5}} + 6\sqrt{\frac{5 \times 3}{3 \times 3}} \\ & = \frac{\sqrt{15}}{5} + \frac{6}{3} \times \frac{\sqrt{15}}{3} \end{aligned}$$

$$\begin{aligned} & = \sqrt{15} \left( \frac{1}{5} + 2 \right) \\ & = \sqrt{15} \times \frac{11}{5} \\ & = 3.87 \times \frac{11}{5} \\ & = 0.774 \times 11 \\ & = 8.514 \text{ Ans } \textcircled{b} \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad & \therefore \text{perfect square no. of} \\ & \text{A-digit number} = 2n052n+1 \\ & \therefore \text{3-digit no.} = 2 \times 3 = 6 \\ & \text{or } 6-1 = 5 \end{aligned}$$

$$\begin{aligned} & \therefore 65 \times \dots \times 1 \text{ Ans } \textcircled{A} \\ & \therefore C, \text{ नही होगा क्योंकि} \\ & \text{up to } 2^{\text{nd}} \text{ } \end{aligned}$$

$$\begin{aligned} \textcircled{13} \quad & (13.12)^2 = 172.1344 \\ & \therefore \sqrt{17213.44} + \sqrt{1.721344} \\ & = 131.2 + 1.312 \\ & = 132.512 \text{ Ans } \textcircled{C} \end{aligned}$$

$$\begin{aligned} \textcircled{14} \quad & \sqrt[3]{2.197} + (0.001728)^{\frac{1}{3}} = ? \\ & = 1.3 + 0.12 \\ & = 1.42 \text{ Ans } \textcircled{A} \end{aligned}$$



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15 
$$\sqrt{43 + \sqrt{32 + \sqrt{13 + \sqrt{9}}}}$$

$$= \sqrt{43 + \sqrt{32 + \sqrt{13 + 3}}}$$

$$= \sqrt{43 + \sqrt{32 + 4}}$$

$$= \sqrt{43 + 6}$$

$$= \sqrt{49}$$

$$= 7 \text{ Ans } \textcircled{2}$$

16 
$$4\sqrt{12} - 6\sqrt{\frac{1}{3}} - \sqrt{108}$$

$$= 8\sqrt{3} - 6\sqrt{\frac{1}{3}} - 6\sqrt{3}$$

$$= 8\sqrt{3} - 6 \times \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} - 6\sqrt{3}$$

$$= 8\sqrt{3} - \frac{6\sqrt{3}}{3} - 6\sqrt{3}$$

$$= 8\sqrt{3} - 2\sqrt{3} - 6\sqrt{3}$$

$$= 0 \text{ Ans } \textcircled{A}$$

17 
$$\begin{array}{l} 3251 \\ \quad \quad \quad \rightarrow \text{place value} = 200 \\ 3416 \\ \quad \quad \quad \rightarrow \text{face value} = 4 \\ 0.2316 \\ \quad \quad \quad \rightarrow \text{place value} = \frac{3}{1000} \end{array}$$

Now 
$$200 + 4 + \frac{3}{100}$$

$$= 204 \frac{3}{100} \text{ Ans } \textcircled{A}$$

18 
$$\text{LCM}(2, 3, 5) = 30$$

$\therefore$  500 तक 2, 3 तथा 5 से विभाजित होने वाली कुल संख्याएँ =  $\frac{500}{30} \approx 16 \text{ Ans } \textcircled{D}$

19 
$$\begin{array}{r} 330 \\ \hline 330 = 2 \times 3 \times 3 \times 11 \\ = 4 \text{ digits} \\ \therefore 2^{4-1} = 2^3 = 8 \text{ Ans } \textcircled{D} \end{array}$$

20  $2^{4n}$  जहाँ  $n$  even है तथा  $n$  एक integer है तो  $2^{4n}$  का इकाई अंक 0 या 6 होता है  $\text{Ans } \textcircled{D}$



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15

$$\begin{aligned} & \sqrt{43 + \sqrt{32 + \sqrt{13 + \sqrt{9}}}} \\ &= \sqrt{43 + \sqrt{32 + \sqrt{13 + 3}}} \\ &= \sqrt{43 + \sqrt{32 + 4}} \\ &= \sqrt{43 + 6} \\ &= \sqrt{49} \\ &= 7 \text{ Ans } \textcircled{A} \end{aligned}$$

16

$$\begin{aligned} & 4\sqrt{12} - 6\sqrt{\frac{1}{3}} - \sqrt{108} \\ &= 8\sqrt{3} - 6\sqrt{\frac{1}{3}} - 6\sqrt{3} \\ &= 8\sqrt{3} - 6 \times \frac{1}{\sqrt{3}} \times \frac{\sqrt{3}}{\sqrt{3}} - 6\sqrt{3} \\ &= 8\sqrt{3} - \frac{6\sqrt{3}}{3} - 6\sqrt{3} \\ &= 8\sqrt{3} - 2\sqrt{3} - 6\sqrt{3} \\ &= 0 \text{ Ans } \textcircled{A} \end{aligned}$$

17

3251  
 ↳ place value = 200

3416  
 ↳ face value = 4

0.2316  
 ↳ place value =  $\frac{3}{100}$

Now

$$\begin{aligned} & 200 + 4 + \frac{3}{100} \\ &= 204 \frac{3}{100} \text{ Ans } \textcircled{A} \end{aligned}$$

18

LCM(2, 3, 5) = 30  
 $\therefore$  500 तक 2, 3 तथा 5 से विभाजित होने वाली कुल संख्याएँ =  $\frac{500}{30} \approx 16$  Ans  $\textcircled{d}$

19

$$\begin{aligned} & \overline{)330} \\ & 330 = 2 \times 3 \times 3 \times 11 \\ &= 4 \text{ digits} \\ & \therefore 2^{4-1} = 2^3 = 8 \text{ Ans } \textcircled{d} \end{aligned}$$

20

$2^{4n}$  में 0 का even होना  $n$  एक integer होना  $2^{4n}$  का इकाई अंक 0 या 6 होता है Ans  $\textcircled{d}$

21)  $1 + 2 + 3 + 4 + \dots + 1625$   
 $= 1 + 2 + 6 + 24 + 120 \dots$   
2 है 3 वीं  
0 आगे 11/2  
4 पर न  
 $\therefore 1 + 2 + 3 + 6 + 24$   
 उपर = 3 Ans (C)

22)  $1 \times 2 \times 3 \times 4 \times 5 \times \dots \times \infty$   
 $= 1 \times 2 \times 6 \times 24 \times 120 \times \dots \infty$   
 $\therefore \text{उपर} = 0$  Ans (D)

23)  $(17)^{1999} + (11)^{1999} - (7)^{1999}$   
 उपर =  $(7)^3 + (1)^3 - (7)^3$   
 $= 8 + 1 - 8$   
 इसका अंक = 1 Ans (A)

24)  $2873 \times 564 \times 328 - 2589$   
 इसका अंक =  $3 \times 4 \times 8 - 9$   
 $= 6 - 9$   
 $= 7$  Ans (A)

25)  $(1917)^{429}$   
 $= \therefore 1917 \text{ का उपर} = 0$   
 $\therefore 0^{429} = 0$  Ans (C)

