NUMBER SYSTEM

1. The value of $\sqrt[3]{\sqrt{0.000064}}$ is

a. 0.02 b. 0.2 c. 2.0 d. none

2. Taking $\sqrt{2} = 1.414, \sqrt{3} = 1.732, \sqrt{5}$ = 2.236 and $\sqrt{6}$ 2.449, then the value of

$\frac{9+\sqrt{2}}{\sqrt{5}+\sqrt{3}} + \frac{9-\sqrt{2}}{\sqrt{5}-\sqrt{3}}$ to three decimal places is

a. 9.2321 b. 13.716

c. 10.723 d. 15.892

3. The value of (1+0.1+0.11+0.111) is

a. 1.321 b. 1.211

c. 1.111 d. 1.331

4. When a number is divided by 5, it gives remainder 3. What is the remainder when square of that number is divided by 5?

a. 9 b. 3

c. 4 d. 1

5. Find the value of $(2744)^{1/3}$:

a. 24 b. 14

c. 34 d. 16

6. $2^{2n-1}=1/8^{n-3}$, then the value of n is:

a. 3 b. 2

c. 0 d. -2

7. What is the largest possible length of a scale that can be used to measure exactly the lengths 3m, 5m 10cm and 12m 90 cm?

a. 10cm b. 20 cm

c. 25 cm d. 30 cm

8. After measuring 120 m of a rope, it was discovered that the metre rod was 3 cm longer. The true length of the rope measured is

a. 116m 40cm b. 121m 20cm c. 123 m d. 123m 60cm

9. The HCF of two numbers is 6 and the LCM is 72. If one number is 24, the other number is

a. 12 b. 18

c. 36 d. 72

10. The largest number which divides by 72 and 125, leaving remainder 7 and 8 respectively is

a. 13 b. 56

c.65 d. 900

11. The largest number which divides 81 and 10, leaving the remainder 6 and 3 respectively is

a. 9 b. 15

c.18 d. 515

12. The HCF of two numbers is 15 and the LCM is 270. If one number is 45, the other number is

a. 18 b. 81

c. 90 d. 675

13. The largest number which divides 247 and 319, leaving the remainder 7 and 4 respectively is

a. 15 b. 30

c.45 d. 56

14. Find the value of:

$$\frac{(489+375)^2-(489-375)^2}{(489*375)}$$

a. 144 b. 864

c. 2 d. 4

15. Find the LCM of $\frac{1}{3}, \frac{5}{6}, \frac{2}{9,}, \frac{4}{27}$:

a. $\frac{1}{54}$ b. $\frac{10}{27}$

c. $\frac{120}{3}$ d. none of these

16. If $(a/b)^{x-1} = (b/a)^{x-3}$, then the value of x is:

a. ½ b. 1

c. 2 d. -1

17. If $a=2^{129}*3^{81}*5^{128}$, $b= 2^{127}*3^{81}*5^{128}$, $c= 2^{126}*3^{82}*5^{128}$ and $d= 2^{125}*3^{82}*5^{129}$ then the HCF of a, b,c and d is

a. $2^{125}*3^{81}*5^{129}$ b. $2^{125}*3^{81}*5^{128}$

c. $2^{125}*3^{82}*5^{128}$ d. $2^{129}*3^{82}*5^{129}$

18. Let x be a least number which when divided by 21,33,35,55 leaves in each case a remainder 3, but is exactly divisible by 67. The sum of digits of x is

a. 8 b. 10

c. 12 d. 15

19. HCF of two numbers, each consisting of four digits, is 103 and their LCM is 19261. The difference of the numbers is

a.6/8 b. 5/9

c. 5/8 d. 4/8

20. Let $a= 3^{129}*5^{128}*7^{22}$, $b= 3^{128}*5^{129}*7^{22}$,$c= 3^{128}*5^{128}*7^{22}$and $d= 3^{129}*5^{128}*7^{23}$, HCF of a,b,c and d is

a. $3^{129}*5^{128}*7^{22}$, b. $15^{128}*7^{22}$,

c. $3^{128}*5^{128}*7^{23}$, d. $15^{129}*7^{23}$,