Meritorious Tutorials

#33, Kesar Garden Sec-20, Kharghar Navi Mumbai

ADMISSION TEST

Class 10 - Admission Test

Time Allowed: 30 minutes **Maximum Marks: 25**

General Instructions:

All the questions are compulsory.

1. A spherical ball of diameter 21cm is melted and recast into cubes each of side 1cm. The numbers of cubes so formed are **[1]**

   a) 5000 b) 4800

   c) 4851 d) 4000

2. The abscissa of any point on y-axis is **[1]**

   a) 1 b) any number

   c) -1 d) 0

3. If the probability of happening of an event is $\frac{3}{7}$, then the probability of not happening of this event is: **[1]**

   a) 1 b) $\frac{4}{7}$

   c) 0 d) $\frac{2}{7}$

4. In $\triangle ABC$, if $\angle A = 100°$, AD bisects $\angle A$ and $AD \perp BC$. Then, $\angle B$ = **[1]**

   a) 50° b) 40°

   c) 100° d) 90°

5. In a medical examination of students of a class, the following blood groups are recorded: **[1]**

Blood group	A	AB	B	O
Number of students	10	13	12	5

   A student is selected at random from the class. The probability that he/she has blood group B, is :

   a) $\frac{1}{4}$ b) $\frac{1}{8}$

   c) $\frac{3}{10}$ d) $\frac{13}{40}$

6. The smallest rational number by which $\frac{1}{3}$ should be multiplied so that its decimal expansion terminates after one place of decimal, is **[1]**

   a) $\frac{1}{10}$ b) 30

   c) $\frac{3}{10}$ d) 3

7. The number of spherical balls each of radius 1cm can be made from a solid sphere of lead of radius 6cm is **[1]**

   a) 576 b) 512

   c) 216 d) 1024

8. $(125)^{-1/3} = ?$ **[1]**

a) $-\frac{1}{5}$ b) -5

c) $\frac{1}{5}$ d) 5

9. Between two rational numbers **[1]**

a) there are only rational numbers and no irrational number b) there are infinitely many rational numbers

c) there is exactly one rational number d) there is no rational number

10. The probability that a boy will get married to his girlfriend is $\frac{2}{7}$, then the probability that he will not get married to his girlfriend will be:- **[1]**

a) $\frac{5}{7}$ b) $\frac{2}{7}$

c) $\frac{7}{2}$ d) $\frac{7}{10}$

11. An irrational number between $\frac{3}{8}$ and $\frac{5}{8}$ is _____. **[1]**

a) $\frac{1}{2}\left(\frac{3}{8}+\frac{5}{8}\right)$ b) $\left(\frac{3}{8}\times\frac{5}{8}\right)$

c) $\sqrt{\frac{3}{8}\times\frac{5}{8}}$ d) $\sqrt{\frac{3}{8}+\frac{5}{8}}$

12. If a sphere is inscribed in a cube, then the ratio of the volume of the cube to the volume of the sphere is **[1]**

a) $6:\pi$ b) $\pi:6$

c) $\pi:4$ d) $4:\pi$

13. If $\left(3x+\frac{1}{2}\right)\left(3x-\frac{1}{2}\right)$ = $9x^2$ - p then the value of p is **[1]**

a) $\frac{1}{4}$ b) $-\frac{1}{4}$

c) 0 d) $\frac{1}{2}$

14. Ordinate of a point is positive in **[1]**

a) quadrant II only b) quadrant I and II

c) quadrant IV and III d) quadrant I only

15. The ratio of the volumes of two cones with equal heights and ratio of their radii as 2 : 5 is **[1]**

a) 4: 25 b) 2 : 25

c) 2 : 5 d) 4 : 5

16. Points (1, 0) and (-1, 0) lies on **[1]**

a) line x + y = 0 b) y-axis

c) x-axis d) line x - y = 0

17. If $x+\frac{1}{x}=3$, then $x^6+\frac{1}{x^6}$ = **[1]**

a) 927 b) 364

c) 414 d) 322

18. $2\sqrt{3}+\sqrt{3}$ is equal to **[1]**

a) $2\sqrt{6}$ b) $3\sqrt{6}$

c) 3 d) $3\sqrt{3}$

19. If one of the zeroes of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is **[1]**

a) -2 b) -10

c) -7 d) 10

20. 80 bulbs are selected at random from a lot and their lifetime in hours is recorded as under. **[1]**

Lifetime (in hours)	300	500	700	900	1100
Frequency	10	12	23	25	10

One bulb is selected at random from the lot. What is the probability that its life is more than 500 hours?

a) $\frac{29}{40}$ b) $\frac{11}{40}$

c) $\frac{27}{40}$ d) $\frac{5}{16}$

21. 12-year-old Manick is three times as old as his brother Rahul. How old will Manick be when he is twice as old as Rahul? **[1]**

a) 16 years b) 14 years

c) 18 years d) 20 years

22. How many triangles and rectangles are there in the adjoining figure? **[1]**

a) 12 rectangles, 10 triangles b) 8 rectangles, 4 triangles

c) 8 triangles, 4 rectangles d) 12 triangles, 10 rectangles

23. Eight friends A, B, C, D, E, F, G and H are sitting in a circle facing the centre, not necessarily in the same order. D sits third to the left of A. E sits to the immediate right of A. B is third to the left of D. G is second to the right of B. C is neighbour of B. C is third to the left of H. Who are the neighbours of G? **[1]**

a) D and F b) A and F

c) C and A d) D and C

24. If X + Y means X is brother of Y; X - Y means X is sister of Y; X ∅ Y means X is wife of Y; and X # Y means X is father of Y, then which of the following indicates S is son of P? **[1]**

a) P ∅ Q # S - R - T b) P ∅ Q # R - S + T

c) P ∅ Q # R + S - T d) P ∅ Q # R - T + S

25. In a certain code language, TERMITE is written as UDSLJSF. How is MINISTER written in that code language? **[1]**

a) NHHOTSFQ b) NHOHSTFQ

c) NHOHTSQF d) NHOHTSFQ