10th Class Practice Bits **Subject: Maths**

Maximum marks: 20 Marks **Duration: 30 Minutes**

Answer all the questions. Each question carries 1 mark **20 x 1 =20**

1. For any positive integers a and 3, there exist unique integers q and r such that a = 3q + r, where r must satisfy _____.
   (a) $0 \leq r < 3$ (b) $1 < r < 3$ (c) $0 < r < 3$ (d) $0 < r \leq 3$

2. The HCF and LCM of two numbers are 33 and 264 respectively. When the first number is completely divided by 2 and the quotient is 33. The other number is:
   (a) 66 (b) 130 (c) 132 (d) 196

3. The decimal expansion of number $\frac{441}{2^2 \times 5^3 \times 7}$ has:
   (a) a terminating decimal
   (b) non-terminating but repeating
   (c) non-terminating non repeating
   (d) terminating after two places of decimal

4. The least number that is divisible by all the numbers from 1 to 10 is:
   (a) 10 (b) 100 (c)2060 (d) 2520

5. The H.C.F of 441, 567 and 693 is:
   (a) 1 (b) 441 (c) 126 (d) 63

6. If U = {1,2,3,4,5} and A = {2,4} then A' should be
   (a){2,4,5} (b) {2,4} (c) {1,2,3,4,5} (d) {1,3,5}

7. A set containing only one element is said to be
   (a) Subset (b) singleton set (c)power set (d)empty set

8. If 2 sets A and B are given, then set consisting of all common elements of A and B, then it is called
   (a) Intersection of A and B
   (b) union of A and B
   (c) Complement of A
   (d) Complement of B

9. If A = {2, 3, 4, 5, 6} and B = {4, 5, 6, 7} then $A \cap B$ should be
   (a) {2, 3, 4, 5, 6, 7} (b) {4, 5, 6, 7} (c) {4, 5, 6} (d) {0}

10. For a set A and the universal set U, $(A \cup A^c)$
    (a) A (b) Ac (c) π (d) U

11. Which one is not a polynomial?

(a) $4x^2 + 2x - 1$ (b) $y + \frac{3}{y}$ (c) $x^3 - 1$ (d) $y^2 + 5y + 1$

12. The zero of the polynomial $p(x) = 2x + 5$ is

(a) 2 (b) 5 (c) $\frac{2}{5}$ (d) $-\frac{5}{2}$

13. The value of k, if $(x - 1)$ is a factor of $4x^3 + 3x^2 - 4x + k$, is

(a) 1 (b) 2 (c) –3 (d) 3

14. If $x + y = 3$, $x^2 + y^2 = 5$ then xy is

(a) 1 (b) 3 (c) 2 (d) 5

15. If one of the factors of $x^2 + x - 20$ is $(x + 5)$. Find the other

(a) $x - 4$ (b) $x + 2$ (c) $x + 4$ (d) $x - 5$

16. If $x = a$, $y = b$ is the solution of the pair of equation $x - y = 2$ and $x + y = 4$ then what will be value of a and b

(a) 2,1 (b) 3,1 (c) 4,6 (d) 1,2

17. Graphically pair of equations $7x - y = 5$, $21x - 3y = 10$ represents two lines which are

(a) intersecting at one point (b) intersecting at two points
(c) parallel lines (d) consistent

18. If $x = a$, $y = b$ is the solution of the equations $x + y = 5$, $2x - 3y = 4$, then the values of a and b are respectively

(a) 6, -1 (b) 2, 3 (c) 1, 4 (d) 19/5, 6/5

19. The graph $x = -2$ is a line parallel to

(a) x-axis (b) y-axis (c) both x and y axis (d) none of these

20. The graph of the equation $2x + 3y = 5$ is _____

(a) parabola (b) straight line (c) smooth curve (d) none of these