Sample paper -1

9th class term-2

Instructions:

1. The question paper contains four sections A, B, C and D
2. Section A has 2 marks questions
3. Section B has 3 marks questions
4. Section C has 4 marks questions
5. Section D has Case study 4 marks questions

This is not exact Blue-print paper of the CBSE board, Expecting this model paper

Section-A

Answer all the questions each carry equal marks

4 X 2 =8

1. Draw any circle and find its centre
2. If Angles of quadrilateral are 100^0 degrees 98^0 degrees $92°$ respectively find the fourth angle
3. The length, breadth and height of a cuboid are 8 m, 6 m and 4 m, respectively. Find diagonal cuboid?
4. Find the Coefficient of x^2 in

   $(3x + x^3)\left(x + \frac{1}{x}\right)$

   (**OR**) find the surface area of a sphere of diameter 14 cm

Section-B

Answer all the questions each carry equal marks

4 X 3 =12

5. A card is drawn at random from a pack of 52 playing cards. Find the probability that the card drawn is neither queen nor a jack?
6. Draw an equilateral triangle by using compass?
7. The radius of a circle is 13 cm and the length of one of its chords is 10 cm. Find the distance of the chord from the centre
8. The diameter of the Moon is approximately one-fourth of the diameter of the Earth. Find the ratio of their surface areas

OR

If (x+3) is a factor of $2x^2 + 7x + k$ then find the value of K?

Section-C

Answer any three of the questions, each carry equal marks

3X 4 =12

9. A heap of wheat is in the form of a cone, whose diameter is 10.5 m and height is 3 m. Find its volume. The heap is to be covered by canvas to protect it from rain. Find the area of the canvas required.
10. If $x^2 + \frac{1}{x^2} = 14$ then find $x^3 + \frac{1}{x^3}$
11. In the given figure, O is the center of the circle. Find the value of x
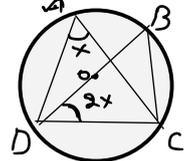
12. Show that the line segments joining the mid-point of the opposite sides of a quadrilateral bisect each other
    (OR) Cards, each marked with one of the numbers 6, 7, 8,..., 15 are placed in a box and missed thoroughly. One card is drawn at random from the box. What is the probability of getting a card with number less than 10?

Section-D

CASE study -1   **4marks**

An object which is thrown or projected into air, subject to only the acceleration of gravity is called projectile and it is its path is called its trajectory. This curved path was shown by Galileo to the parabola. Parabola is representing by polynomial if the polynomial to represent the distance covered is

$$p(x) = -3x^2 + 24x + 12$$

13. What is the degree of the polynomial?
    a) 0   b)1   c) 2   d)3
14. find the height of the projectile five seconds after its launch
    a) 57m   b)32m   c) 85m   d)68m

15. The polynomial is classified as .... on the basis of number of terms

   a) linear polynomial   b) Monomial
   c) Binomial   d) Trinomial

16. The name of polynomial on the basis of degrees
   a) quadratic   b) cubic
   c) constant   d) Biquadratic

CASE study -2

   One day, during games period four friends A, B.C and D planned to play game using number card They prepared 25 numbered cards with labelled to 25 and then, they put all the number cards in the empty chalk box available in the classroom.
In the game, every friend was asked to pick the card randomly and after each draw, card was replaced back in the chalk box.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

17. Find the probability, first boy pick the card and get the card with an odd number
   a) ¼   b) $\frac{10}{25}$ (c) $\frac{13}{25}$ (d) $\frac{12}{25}$

18. If the card drawn in first case is replaced and the second boy draws a card. What is the probability getting a composite number?

   a) $\frac{3}{5}$ b) $\frac{4}{5}$ (c) $\frac{7}{8}$ (d) $\frac{9}{11}$

19. If the card drawn is not replaced in the second draw, what is the probability that he goes a multiple of 3 greater than 4?
   a) $\frac{1}{11}$ b) $\frac{7}{20}$ (c) $\frac{6}{19}$ (d) $\frac{5}{19}$
20. Probability of sure event is

   a) 0   b) 1   (c) 2   (d) 5