PRACTICES QUESTION PAPER - 3

CLASS-IX

MATHEMATICS

Time: 3 Hrs. **M.M. 80**

General Instruction:

1. All questions are compulsory.
2. The paper consists of 40 questions divided into four sections A, B, C and D. Section A comprises of 20 questions of 1 marks each. Section B comprises of 6 question of 2 marks each. Section C comprises of 8 questions of 3 marks each. Section D comprises of 6 question of 4 marks each.
3. There is no over all choice in this question paper. All though internal choices has been provided in some question.

SECTION - A

1. A national number $\frac{5}{7}$ is equivalent to

   a) $\frac{15}{17}$ b) $\frac{25}{27}$

   c) $\frac{10}{14}$ d) $\frac{10}{27}$

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

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

   c) 5 d) $-\frac{5}{2}$

3. The polynomial of type ax^2+bx+c, when a=0

   a) Linear b) Quadratic

   c) Cubic d) Biquadratic

4. Through which of the following point, the graph of $y = -x$ passes?

   a) (1, 1) b) (0, 1)

   c) (–1, 1) d) (0, 0)

5. Graph of which question is parallel to *x-axis* ?

a) $y = x+1$ b) $y = 2$

c) $x = 3$ d) $x = 2y$

6. What is the measure of an angle whose measure is 32° less than its supplement ?

a) 148° b) 60°

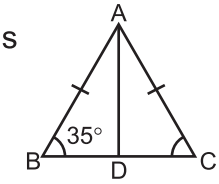
c) 74° d) 55°

7. If $\angle P$ and 100° form a linear pair. What is the measure of $\angle P$.

a) 80° b) 180°

c) 120° d) 75°

8. In the given figure AD is the median then $\angle BAD$ is



a) 70° b) 55°

c) 110° d) 35°

9. In two triangles ABC and DEF, AB = DE, BC = DF and AC=EF then

a) $\Delta ABC \cong \Delta DEF$ b) $\Delta ABC \cong \Delta FED$

c) $\Delta ABC \cong \Delta EDE$ d) None of these

10. If P(E) = 0.37 then P(Not E) will be

a) 0.37 b) 0.74

c) 0.57 d) 0.63

11. The radius of hemisphere is "*r* " what is its total surface area.

a) $\frac{2}{3}\pi r^3$ b) $3\pi r^2$

c) $2\pi r^2$ d) $\frac{4}{3}\pi r^2$

12. The sides of a triangle are in the ration 3 : 4 : 5. If its perimeter is 36cm. Then what is its area ?

a) $72cm^2$ b) $67cm^2$

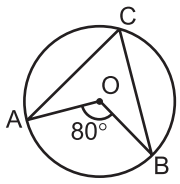
c) $32cm^2$ d) $54cm^2$

13. The mean of 5 numbers is 30. If one number is excluded their mean becomes 28. What is excluded number.

a) 38 b) 35

c) 32 d) 36

14. In the given figure if O is the centre of a circle, then measure of $\angle ACB$ is



a) 80° b) 40°

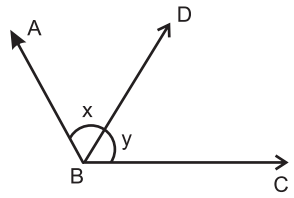
c) 160° d) 35°

15. In ΔABC, AB = AC and $\angle B = 65°$ then $\angle C$ is equal to

a) 130° b) 32°

c) 70° d) 65°

16. For what value of x+y in given figure ABC be a line ? justify y-axis answer.



17. How many linear equations is *x* and *y* can be satisfied by x=1 and y=2 ?

18. Fill in the blank

An arc is a _____ when its ends are the ends of a diameter.

19. Write the class size of 0–4, 5–9, 10–14

* Write the class limits in 10.4, 11.4, 12.4

20. Two parallelograms are on same base and between same parallels. The ratio of their areas is 1:1 (True/False)

or

A median of a triangle divide it in to triangle of equal area (True/False)

SECTION - B

21. Find the value of the polynomial $5x–4x^2+3$ at

a) x = 0 b) x = 2

22. Write any two solution of the equation $\pi x + y = 9$.

23. If the base of a parallelogram is 8cm and its altitude is 5cm. then find its area ?

24. Write the co-efficient of x^2 in each of following

i) $2 – x^2 + x$ ii) $\sqrt{2}x – 1$

or

Find the product with out multiplying directly 107×93

25. The total surface area of a cube is $150cm^2$. Find the peri meter of any one of its faces ?

26. Find the ratio of total surface area of a sphere and a hemisphere of same radius ?

or

Find the curved surface area of a cone whose height is 12cm and base radius is 5cm ?

SECTION – C

27. Two coins are tossed simultaneously 500 times and we get

two heads	=	105 times
one heads	=	275 times
No heads	=	120 times

Find the probability of each of these events ?

28. Give the geometric representation of 2x+9=0 as an equation.

i) In one variable ii) in two variables

29. Construct a triangle ABC in which BC=8cm $\angle B=45^\circ$ and AB–AC=3.5cm.

30. Prove that equal chords of a circle subtend equal angles at the centre.

or

If the non parallel sides of a trapezium are equal. Prove that it is cyclic.

31. Draw the graph of following linear equation in two variables $x+y=4$

or

If $x=3k-2$ and $y=2k$ is a solution of equation $4x-7y+12=0$ then find the value of K.

32. ABCD is a rectangle and P, Q, R and S are mid points of the sides AB, BC, CD and DA respectively. Show that the quadrilateral PQRS is a rhombus.

or

In a triangle ABC, D, E and F are respectively mid points of sides AB, BC and AC. Show that Δ ABC is divided in to four congruent triangles by joining D, E and F.

33. Simplify the given expression $(5+\sqrt{7})(2+\sqrt{5})$

34. The sides of a triangle shaped sheet are 5cm, 12cm and 13cm. Find the cost of painting on the sheet at the rate of ₹ 30 per cm^2 ?

SECTION–D

35. Given below is the data of students who participated in different activities.

Activity	Sports	Meditation	Yoga	Wacking
No. of Girls	40	35	100	120

Draw the bar graph for the given date.

or

If $x+y+z=0$ show that

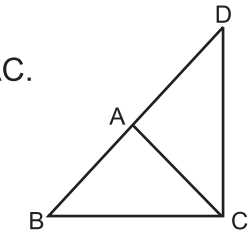
$x^3+y^3+z^3 = 3xyz$

37. Rationalise the denominator $\frac{5}{\sqrt{3}-\sqrt{5}}$

or

Express $0.\overline{3178}$ is the form of p/q where p and q are and $q \neq 0$.

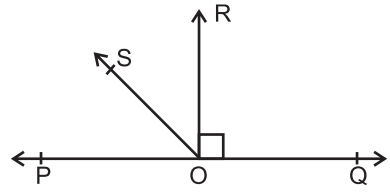
38. ΔABC is an isosceles triangle in which AB=AC. Side BA is produced to D such that AD=AB Show that $\angle BCD$ is a right angle.



or

Prove that
In a right angle triangle, the hypotenuse is the longest side.

39.



In the given figure POQ is a straight line . RO⊥PQ. SO is a ray from O then prove that $\angle ROS = ½ (\angle QOS - \angle POS)$

40. A godown measures 40m $\times$ 25m $\times$ 15m. Find the maximum number of wooden boxes each measuring 1.5m $\times$ 1.25m $\times$ 0.5m that can be stored the godown.

or

The value of right circular cone is 9856 cm^3. If the diameter of base is 20cm. Find

i) Slant height

ii) Height of the cone.

iii) Curved surface area of the cone.

SOLUTION
PRACTICE QUESTION PAPER - 3

1. c) 10/14
2. d) –5/2
3. a) linear
4. c) (–1, 1)
5. b) y = 2
6. c) 74°
7. a) 80°
8. b) 55°
9. c) $\Delta ABC \cong \Delta EDF$
10. d) 0.63
11. b) $3\pi r^2$
12. d) $54cm^2$
13. a) 38
14. b) 40°
15. d) 65°
16. x + y = 180°
17. Infinitely many
18. Semi circle
19. 5 or 9.9, 10.9, 11.9
20. True or False
21. i) 3 ii) –3
22. Any two solutions
23. $40cm^2$
24. –1, 0 or
    9951[using$(100+7)\times(100-7)$]
25. 20 cm
26. 4:3 or $204.28cm^2$
27. i) P (2 head) = 21/100
    ii) P (one head) = 11/20
    iii) P (no head) = 6/25
28. Correct representation,
    x= – 9/2
29. Correct construction
30. Correct proof or
    Correct proof
31. Correct graph for
    x+y=4 or k=2
32. correct proof
33. $10 + 5\sqrt{5} + 2\sqrt{7} + \sqrt{35}$
34. ₹ 900
35. Correct draw of bar graph
36. $0 \times [x^2+y^2+z^2-xy-yz-zx] = 0$
37. $-5/2(\sqrt{3}+\sqrt{5})$ or
    3175/9990
38. Correct proof
39. Correct proof
40. 16000
    or
    i) 50cm
    ii) 48cm
    iii) $2200cm^2$