SUBJECT: MATHEMATICS CLASS: IX

MAX. MARKS: 80 DURATION: 3 HRS

General Instruction:

(i) All questions are compulsory.

(ii) This question paper contains 30 questions divided into four Sections A, B, C and D.

(iii) Section A comprises of 6 questions of 1 mark each. Section B comprises of 6 questions of 2 marks each. Section C comprises of 10 questions of 3 marks each and Section D comprises of 8 questions of 4 marks each.

(iv) There is no overall choice. However, an internal choice has been provided in two questions in 1 mark each, two questions in 2 marks each, four questions of 3 marks each and three questions of 4 marks each. You have to attempt only one of the alternatives in all such questions. (v) Use of Calculators is not permitted

SECTION - A Questions 1 to 6 carry 1 mark each.

Find the total surface area of a hemisphere of radius 10 cm. (Use π = 3.14)

Find the height of cone, if its slant height is 34 cm and base diameter is 32 cm.

- If the point (3, 4) lies on the graph of the equation 3y = ax + 7, find the value of a.
- 3. Simplify: $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$

OB

Find the value of $\sqrt{3^{-2}}$.

- 4. In a bag, there are 100 bulbs out of which 30 are defective ones. A bulb is taken out of the bag at random. Find the probability of the selected bulb to be a good one.
- 5. If its perimeter of an equilateral triangle is 180 cm, what will be its area?
- In the below figure. ∠ABC = 69°. ∠ACB = 31°. find ∠BDC.



SECTION – B

Questions 6 to 12 carry 2 marks each.

7. A river 3 m deep and 40 m wide is flowing at the rate of 2 km per hour. How much water will fall into the sea in a minute?

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