M.M.: 20   **Time: 30 min**

General Instructions:

(i) There are 10 questions in this paper. Each question carry 2 marks.

(ii) All questions are compulsory.

1.   Find the difference of the areas of a sector of angle 120° and its corresponding major sector of a circle of radius $21cm$.

2.   Find the area of the sector of a circle of radius $5cm$, if the corresponding arc length is $3.5cm$.

3.   The minute hand of a clock is $10cm$ long. Find the area of the face of the clock described by the minute hand between 9 A.M. and 9.35 A.M.

4.   The perimeter of a sector of a circle of radius $5.2cm$ is $16.4cm$. Find the area of the sector.

5.   The length of the minute hand of a clock is $14cm$. Find the area swept by the minute hand in 5 minutes.

6.   In a circle of radius $21cm$, an arc subtends an angle of 60° at the centre. Find (i) the length of the arc (ii) area of the sector formed by the arc. (Use $\pi = 22/7$)

7.   The length of minute hand of a clock is $5cm$. Find the area swept by the minute hand during the time period 6:05 and and 6:40 am.

8.   A chord AB of a circle of radius $15cm$ makes an angle of 60° at the centre of the circle. Find the area of the major and minor segments. (Take $\pi = 3.14, \sqrt{3} = 1.73$)

9.   A car has two wipers which do not overlap. Each wiper has a blade of length 25 cm sweeping through an angle of 115°. Find the total area cleaned at each sweep of the blades.

10.   A chord of a circle of radius $10cm$ subtends a right angle at the centre. Find:

(i)   area of the minor sector   (ii)   area of the minor segment

(iii) area of the major sector   (iv)   area of the major segment (Use $\pi = 3.14$)