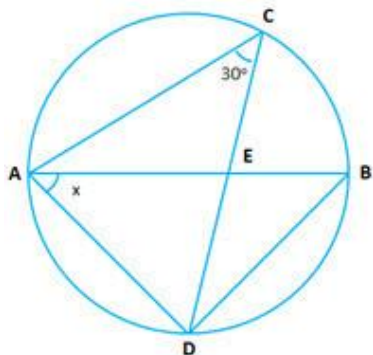**Marking Scheme:** *Three questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question 1:

a. In the given circle with diameter AB, find the value of x.

ii. The radius of the circle is 13 cm and the length of one of its chords is 10 cm. Find the distance of the chord from the centre.
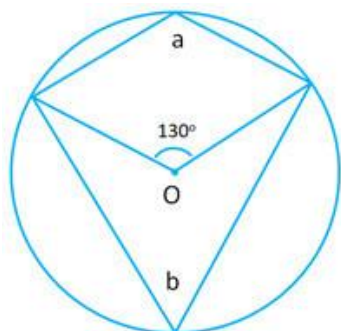
b. If the median of 11, 12, 14, 18, x + 2 , x + 4, 30, 32, 35, 41 is 24, find the value of x.

c. The marks obtained by a set of students in an examination are given below:

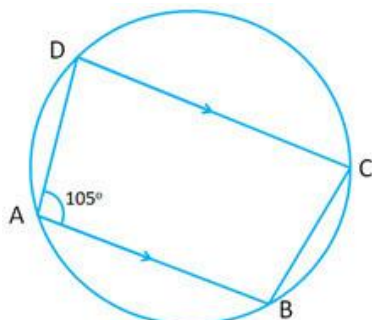| Marks	5	10	15	20	25	30
No. of students	6	4	6	12	x	4

Given that the mean marks of the set is 18, calculate the value of x.

Question 2:

a. In each of the following figures, O is the centre of the circle. Find the values of a and b.

b. In the figure given below, find (i) ∠BCD (ii) ∠ADC (iii) ∠ABC.

c. Given below are the weekly wages of 200 workers in a factory:

Weekly wages in rupees	Number of workers
80 – 100	20
100 – 120	30
120 – 140	20
140 – 160	40
160 – 180	10

Calculate the mean weekly wages of the workers by step-deviation method.

Question 3:

a. Draw a histogram and hence estimate the mode for the following frequency distribution:

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Frequency	2	8	10	5	4	3

b. Calculate the median of: 152, 155, 160, 144, 145, 148, 147, 149, 150

c. Find the mean weight of 50 girls from the following table.

Weight in kg	40	42	34	36	46
No. of girls	6	6	15	14	7