FORM 2
CHAPTER 12

Summative Practice

Section A

1 $\dfrac{4 + 5 + 4 + 12 + 10 + x + 6}{7} = 7$

$41 + x = 49$

$x = 8$

Answer: **C**

2 Total set of data with 5 numbers = 20(5)
$= 100$

Total set of data with 4 numbers = 11(4)
$= 44$

Mean $= \dfrac{100 + 44}{9} = 16$

Answer: **C**

3 Mean $= \dfrac{0(3) + 1(4) + 2(1) + 3y + 4(2)}{3 + 4 + 1 + y + 2} = 2$

$4 + 2 + 3y + 8 = 2(10 + y)$

$14 + 3y = 20 + 2y$

$y = 6$

Therefore, mode = 3

Answer: **D**

4 Position of median $= \dfrac{30}{2} = $ ke-15

Median = 40 – 49

Answer: **B**

5 Mode = 3

$2x > 6$

$x > 3$

Therefore, $x = 4$

Answer: **D**

6 Mean $= 6$

$\dfrac{2 + 3 + 5 + 11 + 3 + 10 + 11 + 2 + x + y}{10} = 6$

$47 + x + y = 60$

$x + y = 13$

Mode = 3 → $x = 3, y = 10$ or $x = 10, y = 3$

Answer: **B**

7 Median $= \left(\dfrac{27 + 1}{2}\right)$ th

$= 14^{\text{th}}$ data

Median = size 6

Answer: **C**

8 Answer: **C**

9 79, 85, 85, 88, 90, 95 → median = 86.5, mode = 85
23, 79, 85, 85, 88, 90, 95 → median = 85, mode = 85
Mean and median will change.
Answer: **A**

10 Mean $= \dfrac{152(6) + 157(10) + 162(19) + 167(22) + 172(11) + 177(7)}{75}$

$= \dfrac{12\,365}{75}$

$= 164.87$ g

Answer: **B**

Section B

1 (a) 2.3, 2.9, 2.9, 3.2, 3.3, 3.3, 5.4, 5.8

Mode = 2.9, 2.3

Median $= \dfrac{3.2 + 3.3}{2}$

$= 3.25$ cm

(b) 1, 3, 5, 6, 7, 12

Median $= \dfrac{5 + 6}{2}$

$= 5.5$

Section C

1 (a)

Marks	Frequency
60 – 64	6
65 – 69	8
70 – 74	5
75 – 79	5
80 – 84	1

(b) (i) Modal class = 65 – 69

(ii) Median = 13th data

$= 65 – 69$

(iii) Mean $= \dfrac{62(6) + 67(8) + 72(5) + 77(5) + 82(1)}{25}$

$= 69.4$

(c) (i) Mean = 81 – 5 = 76

Mode = 75 – 5 = 70

Median = 80 – 5 = 75

(ii) Mean $= \left(\dfrac{81}{2}\right) + 3 = 43.5$

Mode $= \left(\dfrac{75}{2}\right) + 3 = 40.5$

Median $= \left(\dfrac{80}{2}\right) + 3 = 43$