1   The marks obtained by 17 students in a mathematics test (out of100) are given below :

98, 82, 100, 100, 96, 65, 82, 76, 79, 90, 41, 64, 72, 68, 66, 48, 49.

The range of the data is :

(A) 59   (B) 54   (C) 90   (D) 100

2   The class-mark of the class 120-160 is :

(A) 130   (B) 135   (C) 140   (D) 145

3   In a frequency distribution, the mid value of a class is 10 and the width of the class is 6. The lower limit of the class is :

(A) 6   (B) 7   (C) 8   (D) 12

4   In the class intervals 10-20, 20-30, 30-40 , the number 30 is included in :

(A) 30-40   (B) 20-30   (C) both the intervals (D) none of these

ASSERTION- REASONING

5   DIRECTION : In each of the following questions,a statement of Assertion is given followed by acorresponding statement of Reason just below it.Of the statements, mark the correctanswer as

(a) Both assertion and reason are true andreason is the correct explanation of assertion.

(b) Both assertion and reason are true butreason is not the correct explanation of Assertion.

(c) Assertion is true but reason is false.
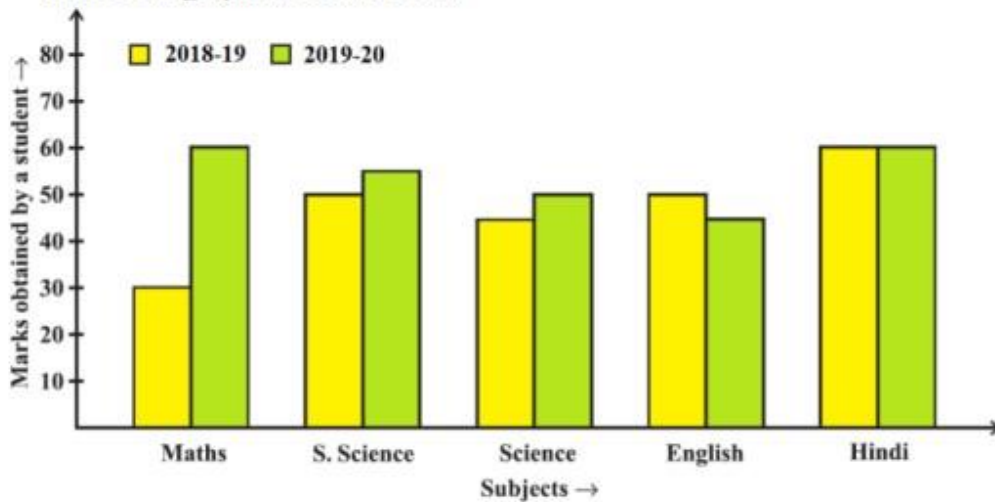
(d) Assertion is false but reason is true.

1. Assertion : If the class mark of a class interval (10- X) is 20 then upper limit X = 30

Reason : (Upper limit + Lower limit) = Class mark / 2

CASE STUDY PROBLEMS

6   The Class teacher of Class X preparing result analysis of a student. She compares the marks of a student obtained in Class IX (2018-19) and Class X (2019-20) using the

double bar graph as shown below

(I) In which subject has the performance improved the most?

    (a) Maths   (b) Social Science

    (c) Science   (d) English

(II) In which subject has the performance deteriorated?

    (a) Maths   (b) Social Science

    (c) Science   (d) English

(III) In which subject is the performance at par?

    (a) Hindi   (b) Maths

    (c) Science   (d) English

(IV) What is the difference in Maths Subject?

    (a) 5   (b) 30

    (c) 0   (d) 10

(V) What is the percentage of marks obtained by a student in Class X (2019-20)?

    (a) 60%   (b) 55%

    (c) 54%   (d) 65%

7   A Mathematics teacher asks students to collect the marks of Mathematics in Half yearly exam. She instructed to all the students to prepare frequency disctribution table using the data collected. Ram collected the following marks (out of 50) obtained in Mathematics by students of Class IX

21, 10, 30, 22, 33, 5, 37, 12, 25, 42, 15, 39, 26, 32, 18, 27, 28, 19, 29, 35, 31, 24, 36, 18, 38, 22, 44, 16, 24, 10, 27, 39, 28, 49, 29, 32, 23, 31, 21, 34, 22, 23, 36, 24, 36, 33, 47, 48, 50, 39, 20, 7, 16, 36, 45, 47, 30, 22, 20, 60,17.

Groups	Tally Marks	Frequency
0-10	||	2
10-20	�꽃	10
20-30	꽃 꽃 꽃 꽃 |	21
30-40	꽃 꽃 꽃 ||||	19
40-50	꽃 ||	7
50-60	|	1
	Total	60

(I)How many students scored more than 20 but less than 30?

(a) 20   (b) 21
(c) 22   (d) 23

(II)   How many students scored less than 20 marks?

(a) 10   (b) 11
                                                 (d) 14
(c) 12

        (III)   How many students scored more than 50% marks?

(a) 1   (b) 2
                                                 (d) 3
(c) 26

(IV)   What is the class size of the classes?

(a) 10   (b) 5
                                                 (d) 20
(c) 15

19 Prepare a frequency polygon for the given frequency table .

20 In the given Fig. , there is a histogram depicting daily wages of workers in a factory. Construct the frequency distribution table. (Along x- axis members age(years) and y- axis number of villages

Class interval	0-5	5-10	10-15	15-20	20-25
frequency	3	6	11	5	3