CHAPTER 13- STATISTICS

 (a) Sum of observations/Total number of observations (b) Total number of observations/Sum of observations (c) Sum of observations +Total number of observations (d) None of the above Answer: (a) Sum of observations/Total number of observations 2. If the mean of frequency distribution is 7.5 and ∑fi xi = 120 + 3k, ∑fi = 30, then k is equal to: (a) 40 (b) 35 (c) 50 (d) 45 Answer: (b) 35 3. The median of first seven prime numbers is: (a) 3 (b) 5 (c) 7 (d) 11 Answer: (c) 7 4. The mean of the data: 4, 10, 5, 9, 12 is; (a) 8 (b) 10 (c) 9 (d) 15 Answer: (a) 8
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Answer: (a) 8
5. The median of the data 13, 15, 16, 17, 19, 20 is:
(a) 30/2 (b) 31/2 (c) 33/2 (d) 35/2
Answer: (c) 33/2
6. If the mean of first n natural numbers is 3n/5, then the value of n is:
(a) 3 (b) 4 (c) 5 (d) 6
Answer: (c) 5
7. The mean of first five whole numbers is:
(a) 2 (b) 3 (c) 4 (d) 5
Answer: (a) 2

(a) 1	(b) 2	(c) 3	(d) 4			
Answer: (d)	4					
9. The class i	nterval of a	given observa	tion is 10 to 15	, then the class	mark for this	interval will b
(a) 11.5	(b)	12.5	(c) 12	(d) 14		
Answer: (b)	12.5					
10. If the sun	n of frequen	cies is 24, ther	n the value of x	in the observa	tion: x, 5,6,1,2	, will be;
(a) 4	(b)	6	(c) 8	(d) 10		
Answer: (d)	10					
11. The mear	n of followin	ng distribution	is:			
Xi	11		14	17	20	
Fi	3		6	9	7	
(a) 15.6	(b)	17 (c)	14.8	(d) 16.4		
Answer: (d)	16.4					
12. Construc	tion of a cur	nulative freque	ency table is us	eful in determi	ning the	
(a) mean	(b) median	(c) mode	(d) all the a	bove three me	asures	
Answer: (b)	median					
13. While co	mputing me	an of grouped	data, we assum	e that the freque	uencies are	
(a) centred at	the class m	arks of the cla	sses (o) evenly distri	buted over all	the classes
(c) centred at	the upper li	mits of the cla	asses (d) centred at the	e lower limits	of the classes
Answer: (a)	centred at th	e class marks	of the classes			
14. Consider	the following	ng frequency d	istribution of th	ne heights of 60	0 students of a	class:
Height (in cm)	150 – 155	155 – 160	160 – 165	165 – 170	170 – 175	175 – 180
	15	13	10	8	9	5
Number of students						
					<u> </u>	_
students	he lower lim	nit of the moda	l class and upp	er limit of the	median class is	S

15. Consider the following frequency distribution:

Class	0-5	6 – 11	12 – 17	18 – 23	24 – 29
Frequency	13	10	15	8	11

The upper limit of the median class is

(a) 17

(b) 17.5

(c) 18

(d) 18.5

Answer: (b) 17.5

16. The times, in seconds, taken by 150 athletes to run a 110 m hurdle race are tabulated below:

Class	13.8-14	14-14.2	14.2-14.4	14.4-14.6	14.6-14.8	14.8-15
Frequency	2	4	5	71	48	20

The number of athletes who completed the race in less then 14.6 seconds is

(a) 11

(b) 71

(c) 82

(d) 130

Answer: (c) 82

17. Consider the following distribution:

Marks obtained Number of students

More than or equal to 0	63
More than or equal to 10	58
More than or equal to 20	55
More than or equal to 30	51
More than or equal to 40	48
More than or equal to 50	42

the frequency of the class 30-40 is

(a) 3

(b) 4

(c) 48

(d) 51

Answer: (a) 3

18. The empirical relationship between the three measures of central tendency is

(a) 3 Median = Mode + 2 Mean

(b) 2 Median = Mode + 2 Mean

(c) 3 Median = Mode + Mean

(d) 3 Median = Mode - 2 Mean

Answer: (a) 3 Median = Mode + 2 Mean

19. The _____ of a class is the frequency obtained by adding the frequencies of all the classes preceding the given class.

(a) Class mark

(b) Class height

(c) Average frequency

(d) Cumulative frequency

Answer: (d) Cumulative frequency

20. The me	thod used to	find the me	ean of a given	data is (are	e):		
(a) direct m	nethod (b) assumed	mean method	(c) step o	deviation me	thod	(d) all the above
Answer: (d) all the abo	ve					
21. For wha	at value of x	the mode of	of the following	ng data is 8	3:		
4, 5, 6, 8,	5, 4, 8, 5, 6,	x, 8					
(a) 5	(b)	6	(c) 8		(d) 4		
Answer. (c)) 8						
22. The nui	mbers are ar	ranged in as	scending order	. If their m	nedian is 25,	then x =?	
5, 7, 10, 12	2x-8, 2x+1	0, 35, 41, 4	2, 50				
(a) 10	(b)	11	(c) 12		(d) 9		
Answer (c)	12						
23. If the va	alue of mear	n and mode	are respective	ly 30 and 1	15, then med	ian =?	
(a) 22.5	(b)	24.5	(c) 25		(d) 26		
Answer. (c)	25						
24. For the	following d	istribution.					
Marks		0-10	10-2	20	20-30	30-40	40-50
No. of stud	ents	3	9		13	10	5
the number	of students	who got ma	arks less than .	30 is			
(a) 13	(t) 25	(c) 10)	(d) 12		
Answer. (b)) 25						
25. If the m	nedian of the	distribution	n is 28.5, find	the value o	of x.		
Class	0-10	10-20	20-30	30-40	40-50	50-60	Total
Interval							
	1	-		 			
Frequency	5	X	20	15	7	5	60
Frequency (a) 8	5 (b) 10	(c) 4	20 (d) 9	15	7	5	60

26. For the following distribution

Class interval	0-5	5-10	10-15	15-20	20-25
frequency	10	15	12	20	9

the sum of lower limit and upper limit of model class

- (a) 20
- (b) 15
- (c) 30
- (d) 35

Answer. (d) 35

27. For the following distribution

Class	0-5	5-10	10-15	15-20	20-25
Frequency	10	15	12	20	9

The sum of lower limits of median class and modal class is:

- (a) 15
- (b) 25
- (c) 30
- (d) 35

Answer: (b) 25

28. If 35 is removed from the data 30, 34, 35, 36, 37, 38, 39, 40 then the median increases by:

- (a)2
- (b) 1.5
- (c) 1
- (d) 0.5

Answer: (d) 0.5

29. For one term, absentee record of students is given below. If mean is 15.5, then the missing frequencies x and y are:

Number of days	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	TOTAL
Total Number of students	15	16	X	8	у	8	6	4	70

- (a) x = 4 and y = 3
- (b) x = 7 and y = 7 (c) x = 3 and y = 4 (d) x = 7 and y = 6

Answer: (d) x = 7 and y = 6

- 30. If each observation increases by 2, then the mean of observations:
- (a) decrease by 2
- (b) increase by 2
- (c) remain same
- (d) none of these

Answer: (b) increase by 2