

SYLHET CADET COLLEGE

FIRST TERM-END EXAMINATION - 2023

CLASS: XI

MULTIPLE CHOICE QUESTIONS

STATISTICS FIRST PAPER

TIME – 20 minutes

FULL MARKS – 20

Set	:A
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Subject Code:	1	2	9
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[N.B. – Answer all the questions. Each question carries **ONE** mark. Block fully, with a black ball- point pen, the circle of the letter that stands for the correct/best answer in the “Answer sheet” for the Multiple Choice Questions Examination.]

Candidates are asked not to leave any mark or spot on the question paper.

1. If $x_1 = 2, x_2 = 3, x_3 = 5, x_4 = 7$ and $y_1 = 3, y_2 = 4, y_3 = 5, y_4 = 8; \sum_{i=2}^4 x_i y_i = ?$
- (a) 14 (b) 201 (c) 93 (d) 109
2. If $\sum_{i=1}^{20} x_i^2 = 20$ and $\sum_{i=1}^{20} x_i = 30$, what is the value of $\sum_{i=1}^{20} x_i^2 + \sum_{i=1}^{20} x_i + 100$?
- (a) 130 (b) 200 (c) 250 (d) 150
3. A subset of a population is called–
- (a) Constant (b) Variable (c) Sample (d) Scale

Answer the next 2 question based on the following information.

A farmer collects growth (in cm) of 10 plants in a month and finds that $\sum x_i = 7$ and $\sum x_i^2 = 15$

4. What is the value of $\sum (x_i + 4)$?
- (a) 23 (b) 47 (c) 22 (d) 11
5. What is the value of $\sum (x_i - 4)^2$?
- (a) 23 (b) 135 (c) 484 (d) 119
6. Which formula is used to find angles for Pie Chart?
- (a) $\theta_i = \frac{f_i}{N} \times 100$ (b) $\theta_i = \frac{f_i}{100} \times 360$ (c) $\theta_i = \frac{f_i}{N} \times 360$ (d) $\theta_i = \frac{f_i}{N-1} \times 360$

Answer the next THREE questions based on the following information

Radius of 80 trees are recorded and this frequency distribution is constructed.

Radius (cm)	0-10	10-20	20-30	30-40
No. of Trees	20	15	21	24

7. How many trees have radius between 10 and 30?
- (a) 30 (b) 15 (c) 36 (d) 21
8. How many trees have radius at least 20?
- (a) 44 (b) 45 (c) 24 (d) 21
9. What percent of trees have radius between 20 and 40?
- (a) 44% (b) 56% (c) 46% (d) 53%
10. Which of the following is a continuous variable?
- (a) Number of goals (b) Natural number
(c) Summation of Fibonacci series (d) Success rate
11. How many sources of data are there?
- (a) 5 (b) 4 (c) 3 (d) 2
12. What is the raw material of research?
- (a) Data (b) Theory (c) Graph (d) Mean
13. Data obtained through direct observation is called–
- (a) Primary data (b) Secondary data (c) Original Data (d) Informal data
14. How many measure of central tendency are there?
- (a) 2 (b) 3 (c) 4 (d) 5

15. In presence of negative values, which measure is not usable?
 (a) Arithmetic Mean (b) Geometric Mean (c) Quadratic Mean (d) Harmonic Mean
16. For grouped data, which formula is correct for Arithmetic Mean?
 (a) $\bar{X} = \frac{\sum f_i x_i}{\sum f_i}$ (b) $\bar{X} = \frac{\sum x_i}{N}$ (c) $\bar{X} = \frac{\sum f_i x_i}{n}$ (d) $\bar{X} = \frac{\sum f_i}{N}$
17. A rate is defined as $R = \frac{c}{d}$; c and d are arbitrary numbers. If d is constant, which mean is used?
 (a) Arithmetic Mean (b) Geometric Mean
 (c) Harmonic Mean (d) Weighted Geometric Mean
18. Which is the representation of Harmonic Mean?
 (a) Mean of Reciprocal (b) Reciprocal of Mean
 (c) Reciprocal of Mean of Reciprocal (d) None of the above
19. Which data set is suitable for Geometric Mean?
 (a) 1, -1, 2, 4, 6, 7 (b) 1, 2, 4, 8, 16, 32 (c) 0, 1, 2, 3, 4, 6 (d) 1, 1, 2, 3, 4, 4, 5
20. Inappropriate for algebraic analysis—
 i. Median
 ii. Mode
 iii. Geometric Mean
 Which one is true?
 (a) i (b) ii (c) i & ii (d) ii & iii

“The purpose of computing is insight, not numbers.”— Richard Hamming

Answer Key

1. (c) 93

2. (d) 150

3. (c) Sample

4. (b) 47

5. (d) 119

6. (c) $\theta_i = \frac{f_i}{N} \times 360$

7. (c) 36
8. (b) 45

9. (a) 44%

10. (d) Success rate

11. (d) 2

12. (a) Data

13. (a) Primary data

14. (d) 5
15. (b) Geometric Mean

16. (a) $\bar{X} = \frac{\sum f_i x_i}{\sum f_i}$

17. (a) Arithmetic Mean

18. (c) Reciprocal of Mean of Reciprocal

19. (b) 1, 2, 4, 8, 16, 32

20. (c) i & ii