Falcon **MYMENSINGH GIRLS' CADET COLLEGE**
YEAR FINAL EXAMINATION - 2025
CLASS: XI
MULTIPLE CHOICE QUESTIONS
STATISTICS
FIRST PAPER
[According to the Syllabus of 2026]
TIME – 25 minutes
FULL MARKS – 25

Subject Code: | 1 | 2 | 9 |

Set: Ka

[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. **Which one represents an infinite population?**
   (a) Books in a library
   (b) Fish in the Pacific Ocean
   (c) Members of a sports club
   (d) Mobile phones in a city

2. **Which cannot be performed using Univariate data?**
   (a) Central tendency
   (b) Dispersion
   (c) Skewness
   (d) Regression

3. **Given $\sum_{i=1}^{10} a_i^2 = 40$ and $\sum_{i=1}^{10} a_i = 20$, find the value of $2\sum_{i=1}^{10} a_i^2 - 3\sum_{i=1}^{10} a_i + 60$.**
   (a) 70
   (b) 100
   (c) 80
   (d) 50

4. **What is the raw material of research?**
   (a) Data
   (b) Theory
   (c) Graph
   (d) Mean

   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

5. **How many trees have radius between 10 and 30?**
   (a) 30
   (b) 15
   (c) 36
   (d) 21

6. **How many trees have radius at least 20?**
   (a) 44
   (b) 45
   (c) 24
   (d) 21

7. **What percent of trees have radius between 20 and 40?**
   (a) 44%
   (b) 56%
   (c) 46%
   (d) 53%

8. **Which of the following is an example of secondary data?**
   i. Data obtained from a published journal
   ii. Data collected by a government agency and used by a researcher
   iii. Data gathered directly through interviews
   Which one is correct?
   (a) i and ii
   (b) ii and iii
   (c) i and iii
   (d) i, ii and iii

9. **Which is not a measure of central tendency?**
   (a) Arithmetic mean
   (b) Mode
   (c) Range
   (d) Quadratic mean

10. **A good measure of central tendency -**
    i. is loosly defined
    ii. takes into consideration all values
    iii. easily understandable
    Which one is correct?
    (a) i and ii
    (b) i and iii
    (c) ii and iii
    (d) i, ii and iii

Answer the next three questions as per the following information.

42 44 59 64 70 72 74 91 94 are 9 values.

11. **What is the median?**
    (a) 64   (b) 70   (c) 72   (d) 71

12. **What is the first quartile?**
    (a) 42.4   (b) 44.7   (c) 51.5   (d) 64.2

13. **Above which value lie 60% observations?**
    (a) 70.4   (b) 72.0   (c) 74.6   (d) 66.4

14. **What is the minimum possible value of standard deviation?**
    (a) ∞ (b) -1   (c) 0   (d) 1

15. **Which measure is unit-free?**
    (a) Range   (b) Mean deviation
    (c) Standard deviation   (d) Coefficient of variation

16. **The moments around the origin are called –**
    (a) Central moments   (b) Raw moments   (c) First raw moment   (d) Measures of dispersion

17. **Standard deviation —**

    i. depends on all values
    ii. is not affected by outliers
    iii. can be analyzed algebraically

    Which one is correct?
    (a) i and ii   (b) i and iii   (c) ii and iii   (d) i, ii and iii

18. **First moment around zero is –**
    (a) 0   (b) 1   (c) -1   (d) Arithmetic Mean

19. **Which might have a negative value?**
    (a) μ_4 (b) μ_3 (c) μ_2' (d) μ_2

20. **In a postively-skewed distribution–**

    i. Frequencies of higher values are lower
    ii. Frequencies of low values are higher
    iii. Frequencies of higher values are higher

    Which one is correct?

21. **What is the formula of IQR?**
    (a) $IQR = Q_3 + Q_1$ (b) $IQR = Q_3 - Q_1$ (c) $IQR = 2Q_3 - Q_1$ (d) $IQR = \frac{Q_3 - Q_1}{2}$

22. **The lowest possible value of the correlation coefficient —**
    (a) 1   (b) 0   (c) $-\infty$ (d) -1

23. **Karl Pearson's method of determining the strength of correlation is not applicable for —**
    (a) Qualitative variable   (b) Quantitative variable   (c) Discrete variable   (d) Continuous variable

24. **Two variables having changes in same direction at same rates display —**
    (a) Perfect negative correlation   (b) Partial positive correlation
    (c) Perfect positive correlation   (d) Partial negative correlation

25. **Which organization typically publishes non-official statistics in the field of health?**
    (a) UNICEF   (b) World Health Organization (WHO)
    (c) World Bank   (d) United Nations (UN)

— Abdullah Al Mahmud —