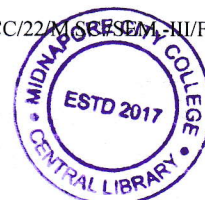**PG (CBCS)**
M.Sc. Semester- III Examination, 2023
FOOD SCIENCE AND NUTRITION
PAPER: FSN 302
(STATISTICS, COMPUTER APPLICATION AND RESEARCH METHODOLOGY)
Full Marks: 40   **Time: 2 Hours**

The figures in the right-hand margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

A. Answer any **FOUR** of the following questions: 4×2=8

1. Write any two criteria of an ideal researcher.
2. Define Artificial Intelligence.
3. How to assess nutritional status by Median ± 1SD and Median ±2SD?
4. Differentiate between questionnaire and interview in survey method?
5. Define Hypothesis with different types.
6. Differentiate between Paired and unpaired t-test with example.

GROUP-B

B. Answer any **FOUR** of the following questions: 4×4=16

7. Sample data set for body weight (kg) of adult female are 52, 56, 60, 65, 58. Population means (μ) is 55. Calculate computed 't' for one sample t test.
8. Differentiate between system and application software with examples.
9. What do you mean by catch memory and its different types?
10. Write the steps of simple random sampling.
11. Write the different types of research with examples.
12. Calculate computed z-value, when Sample mean=50Kg, Population mean=55kg and SE=2.553 and justify the nutritional status on your result.

GROUP-C

C. Answer any **TWO** of the following questions: 2×8=16

13. "Experimental research in qualitative and quantitative"-Explain.   8
14. To find whether or not there are significance differences between mean Hb% of the following two groups of adolescent girls supplement with iron tablets.

Group	Hb%(g/dl)
Group 1 (X1)	8.1, 9.6, 11.2, 12.7, 10.9
Group 2 (X2)	8.0, 9.1, 7.6, 10.3, 8.8

Critical $F_{0.05}(1,8)$=5.32,
Critical $F_{0.05}(1,9)$=5.12,
Critical $F_{0.05}(1,10)$=4.96,

P.T.O.

15. Write the assumptions of product moment correlation of coefficient.
Compute Spearman Correlation of coefficient of the following body weight
(Kg) & body length (cm) of the 07 babies.   3+5

Sl no of Babies	1	2	3	4	5	6	7
Body length (cm) (X)	55	80	95	85	75	95	94
Body weight (kg) (Y)	5.5	9.5	9.5	6.5	4.5	6.5	4.5

16. Write any two types of probability sampling. Why is non probability sampling
not accepted in experimental research? What are the human values considered
in researchers should follow in research?   3+2+3

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