

**Physiology [Honours]
[CBCS]**

**B.Sc. Fifth Semester End Examination-2023
(Regular & Supplementary Paper)
PAPER-DSE1T**

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

*Candidates are required to give their answers in their own words as
far as practicable*

Illustrate the answers wherever necessary

Group A

1. Answer any FIVE questions of the following: 5x2= 10
- a) Define continuous variable with two examples. 2
 - b) What do you mean by standard error of mean? What is probability of sampling? 1+1
 - c) What is alternative hypothesis?
 - d) Write two applications of bar diagram.
 - e) What is percentile rank?
 - f) What is central tendency?
 - g) How could you differentiate in between one tail and two tail 't' test?
 - h) Define standard score and z-score.

(2)

Group B

2. Answer any FOUR questions of the following: $4 \times 5 = 20$
- a) What is qualitative data? Give an examples. Write down the characteristics of sample. $1+2+2$
- b) Write down the applications of statistic in physiology. What do you mean by 'variable'? $4+1$
- c) Mention the differences between bar diagram and histogram. Define frequency polygon. $3+2$
- d) Compare normal distribution and 't' distribution. 5
- e) Define 'Null Hypothesis'. What is degree of freedom' (df)? $3+2$
- f) Compute the geometric mean of the following pH values –
8.0, 8.3, 7.1, 8.2, 7.6, 7.7, 7.9, 8.0, 7.4, 8.2, 8.4, 8.1, 7.8, 7.9, 7.6.
 5

Group C

3. Answer any ONE question of the following: $1 \times 10 = 10$
- a) i) Arrange the following body weight (kg) data in a simple frequency table and compute their SD.
60, 62, 55, 57, 61, 58, 60, 61, 62, 59, 67, 48, 54, 65, 52, 63.
- ii) Write down two necessities of randomization during sampling. $(4+4)+2$
- b) How 't' test is performed for estimating the significance of difference between sample means

(3)

Find whether or not their is a significant difference between the mean wing length score (mm) of the following two groups of butterflies sampled from jungle habitat and urban habitat respectively –

Group – A: 4.9, 5.2, 4.7, 5.3, 3.9, 5.4, 4.5, 4.9, 4.8, 5.0, 4.2, 4.8.

Group – B: 3.1, 3.7, 3.6, 4.0, 3.3, 3.4, 3.3, 3.2, 3.0, 3.4.
