WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 5th Semester Examination, 2020, held in 2021

PHYADSE01T-PHYSIOLOGY (DSE1/2)

BIOLOGICAL STATISTICS

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.

Answer any *five* questions from the following $8\times5 = 40$

1. (a) What are variables?   2

   (b) Write the difference between continuous and discontinuous variables.   3

   (c) Explain quota sampling with an example.   3

2. (a) Distinguish between population and sample.   2

   (b) What do you mean by data?   2

   (c) Define parameter and statistic. Give examples.   2+2

3. (a) What is frequency distribution?   2

   (b) How is true lower and true upper point calculated? (Write the formula only)   2

   (c) How qualitative and quantitative data are diagrammatically expressed in biostatistics?   4

4. (a) Define mode. Write the relation between mean, median and mode.   2+2

   (b) What is z-score? What are its applications?   2+2

5. (a) What is standard deviation? What are its different properties?   2+2

   (b) What is standard error?   2

   (c) Write the sequential steps for calculation of standard deviation.   2

6. (a) Define degrees of freedom.   2

   (b) What is normal distribution? What are the different properties of normal distribution?   2+4

7. (a) Write the difference between null hypothesis and alternative hypothesis.   2

   (b) Write the difference between one-tail test and two-tail test.   2

   (c) What is t-test? Discuss its assumptions.   1+3

8. (a) Enumerate the difference between paired and unpaired t-test. 2

   (b) What is correlation? What are the properties of correlation? 2+2

   (c) Define probability. 2

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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