

THE UNIVERSITY OF BURDWAN
B. Sc. 5th Sem (Honours) Examination, 2020 (CBCS)

SUBJECT: PHYSIOLOGY

Paper – DSE 1A (Biological Statistics)

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. Examinees are instructed to submit the scanned copies/photographs of their answer scripts within 30 minutes after the completion of examination. Answer all questions as instructed

F.M = 40

Time: 2 Hrs.

Answer any **eight** questions of the following.

5X8= 40

1. State the significance of statistical calculations in scientific study. (5)
 2. Describe the various classes of variables with examples. (5)
 3. What are the different methods of sampling? (5)
 4. What do you mean by frequency distribution? Briefly describe its different classes with suitable examples. (5)
 5. What are the measures of central values? Why are they called so? In any asymmetric distribution which statistics serves as the most reliable central value and why? (5)
 6. Explain the terms 'variance' and 'standard deviation'? Why are they called statistics of dispersion? (5)
 7. Define 'Kurtosis' and mention its different forms. (5)
 8. What is meant by 'sampling error'? State why it cannot be calculated directly and accurately in most of the cases? (5)
 9. What do you mean by standard error of mean? What is its significance? (5)
 10. Compute mean, variance and SD of body heights (cm) in the following distribution.
Class intervals : 156-160 161-165 166-170 171-175 176-180
Frequencies : 4 14 25 11 6
(5)
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SUBJECT: PHYSIOLOGY

Paper DSE 1 B (MICROBIOLOGY AND IMMUNOLOGY)

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Answer any **eight** questions: **8x5=40**

1. Write in brief on sterilization. (5)
2. Describe the bacterial growth curve. (5)
3. Write a short note on the lytic cycle of bacteriophage. (5)
4. What are meant by bacteriocidal and bacteriostatic agents? Name any two pathogenic bacteria. (5)
5. Describe briefly the gram staining procedure. Give any two examples of gram positive bacteria. (5)
6. What do you mean by acquired immunity? Discuss primary immune response in brief. (5)
7. What is humoral immunity? State the role of T_H cells in it. (5)
8. What is adjuvant? Mention its significance in brief. (5)
9. Write a short note on ELISA. (5)
10. Describe the importance of immunization. (5)