



K24P 3943

Reg. No. :

Name :

I Semester M.Sc. Degree (C.B.C.S.S. – OBE – Reg./Supple./Imp.)

Examination, October 2024

(2023 Admission Onwards)

Zoology/Zoology (Structure, Physiology, Development and Classification of Animals)

MSZNG01C02/MSZGY01C02 : BIOPHYSICS AND BIOSTATISTICS

Time : 3 Hours

Max. Marks : 60

PART – A

Answer **any five** of the following. **Each** question carries **3** marks :

1. Comment on flow cytometry.
2. Elaborate on X-ray crystallography.
3. Comment on the principle and applications of IR spectroscopy.
4. Explain surface plasmon resonance.
5. Write a short note on ANOVA.
6. Calculate the median for the age of the following eight students.

23, 19, 32, 25, 26, 22, 24, 20.

(5×3=15)

PART – B

Answer **any three** of the following. **Each** question carries **6** marks :

7. Write about the principle and instrumentation of MRI and PET scans.
8. Give a detailed account on Mass spectroscopy.

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9. Give a comparative account on confocal microscopy and NMR microscopy.
10. Define the laws of probability. Add a note on probability distribution.
11. Compare regression and correlation analysis.

(3×6=18)

PART – C

Answer **any three** of the following. **Each** question carries **9** marks :

12. Briefly explain the principles and working of different types of centrifuges.
13. Explain the different methods of radioactivity detection and measurement.
14. Write the basic principle of electrophoresis. Compare PAGE and high voltage electrophoresis.
15. Give an account on different types of random sampling methods.
16. Write an essay on statistical softwares with special emphasis on 'R'.

(3×9=27)