

15P115

Name: .....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXTERNAL EXAMINATION FEB. 2016**  
(2015 Admission)

**CC15P ZO1 C02 – Biophysics and Biostatistics**  
(Zoology)

**Time: Three Hours**

**Maximum : 36 Weightage**

**Part A**

I. Answer the following:-

1. What is meant by resolving power?
2. What is Donnan potential?
3. Comment on electrosmosis.
4. Describe the construction of glass electrode of pH meter?
5. Write a note on the hearing mechanism in Bats?
6. What are nuclear medicines?
7. Define circular dichroism.
8. Explain the principle of PET.
9. What is freeze etching?
10. Differentiate between primary scintillator and secondary scintillator.
11. Two balls are drawn one after the other from a box containing 10 green and 5 black balls.  
Find the probability that both balls drawn are black.
12. Write a note on cumulative frequency curve.
13. What is quartile deviation?
14. Explain Kurtosis.

**(14 × 1= 14 weightage)**

**Part B**

II. Answer any *seven* of the following:-

15. Explain the effect of positive and negative G forces.
16. What is flowcytometry? Explain its working and application.
17. Discuss the principle and applications of mass spectrometry.
18. Write an account on the properties of colloids.
19. Explain the principle and applications of Laser.
20. Discuss the principle, working and applications of PAGE.
21. What is autoradiography? Explain its principle and applications.
22. Define correlation. Explain the method of its calculation. Mention its types and uses.

23. Give an account on parametric and non parametric tests.
24. Differentiate between correlation and regression analysis.

**(7 × 2 = 14 weightage)**

**Part C**

III. Answer any *two* of the following:-

25. What is chromatography? Explain the principle and procedure of gas chromatography & HPLC.
26. Describe the characteristics of sound. Explain the physical organization of ear and the method of sound transmission.
27. Define nanotechnology. Discuss its application in the field of health care and environmental management.
28. Discuss the measures of central tendency and measures of dispersion.

**(2 × 4 = 8 weightage)**

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