

ATAL BIHARI VAJPAYEE VISHWAVIDYALAYA BILASPUR (C.G.)

Pre Ph. D. Course work Examination 2019-20

ZOOLOGY

PAPER II: CW – 02 (TOOLS AND TECHNIQUES)

Model question paper

[Set – I]

Duration - 3.00 Hrs

Max. Marks - 80

Note: Section - A is Compulsory. Answer one question from each unit of Section - 'B'.

Section - A

Q. 1. Answer the following questions in brief.

2 X 10 = 20

- i. Who and when propounded the concept of biodiversity and hot spot?
- ii. What is JUCN red list?
- iii. Define primary and secondary productivity
- iv. What is biomass? How it is measured.
- v. What is chromatography? Who proposed the technique?
- vi. Write Lambert's and Beer's law.
- vii. What is camera lucida .
- viii. What is the Immunohistochemistry? .What is its use?
- ix. Rapid approximate method by Huson is used for what purpose.
- x. Write the name of various methods of insect pest control.

Section - B

12 X 5 = 60

UNIT – I

2. Describe different sampling and field methods used in study of Biodiversity.
3. What do you understand with Conservation of Biodiversity? Discuss it in Indian perspective.

UNIT – II

4. Discuss the methods of collection, preservation and identification of higher non chordates.
5. How Biomass and Gross Productivity is estimated. Give various methods.

UNIT – III

6. What is Electrophoresis? Discuss Paper and Gel Electrophoresis in detail.
7. Write an essay on applications of Chromatographic Techniques in Biology.

UNIT – IV

8. Write the principle of Phase Contrast Microscope and describe instrumentation and applications.
9. Describe In Situ Whole Mount staining techniques.

UNIT – V

10. What is Toxicology? Discuss the dose response relationship in organisms. How would you evaluate toxicity?
11. How the insecticide and pesticide residue affects plants and animals?

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