

ATAL BIHARI VAJPAYEE VISHWAVIDYALAYA BILASPUR (C.G.)

Pre Ph. D. Course work Examination 2019-20

BOTANY

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' carrying equal marks

Section - A

1. Answer the following questions in brief.

2 X 10 = 20

- i. What do you mean by Melbourne code? Point out its important features.
- ii. What is buffering agent? Write its importance citing an example.
- iii. Define the Molarity? How do you make a 5M molar solution of NaCl?
- iv. What is magnification? How do you calculate magnification of light microscope?
- v. What is Microtome? Point out its application.
- vi. Briefly comment on BG 11 media with its importance.
- vii. What do you mean by Growth regulators? Point out its significance.
- viii. What do you understand by Weed Indices and Weed index?
- ix. Write the Beer-Lamberts Law and its importance
- x. What do you mean by Radioisotope? Write its application.

Section - B

12 X 5 = 60

UNIT – I

2. What is the principle of ICBN? Briefly discuss its major rules, recommendation and valid publication .

3. Give a concise account of physico-chemical properties and analysis of water.

UNIT – II

4. What is Chromatography? Discuss the principle, protocol and applications of TLC.

5. Comment on the application of - (i) Centrifugation (ii) Electrophoresis (iii) Colony counter

UNIT – III

6. What do you mean by Continuous culture? Write a brief account of the Isolation and culture of Bacteria from air.

7. What is Micrometry? Write its techniques and application of Micrometry in research.

UNIT – IV

8. What do you mean by Ethno-botany? Discuss scope and status of ethno-botanical studies in Chhattisgarh.

9. Write a brief account of the role of microbes in the production of alcohol and antibiotics.

UNIT – V

10. What is Micro propagation? How you established a model laboratory for micro propagation.

11. Write a critical account of the application of Biotechnology in agriculture and crop improvement.

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