

(6 pages)

Reg. No. :

Code No. : 7897

Sub. Code : PBOM 34

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2019.

Third Semester

Botany – Core

RESEARCH METHODOLOGY,
BIOINSTRUMENTATION AND BIOLOGICAL
TECHNIQUES

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. The direct observation and the result of an experiment in the _____ source of Information.
- (a) primary
 - (b) secondary
 - (c) tertiary
 - (d) none of the above

2. A brief summary of the papers in journals are indexed in _____.
- (a) journals
 - (b) abstracts
 - (c) indexes
 - (d) monographs
3. The one dimensional diagram is _____.
- (a) Bar diagram
 - (b) Histogram
 - (c) Pictogram
 - (d) Cartogram
4. The most frequently occurring number in a series is called as
- (a) mean
 - (b) median
 - (c) mode
 - (d) standard deviation
5. The mercury lamp is used as a light source in _____.
- (a) Electron microscope
 - (b) Compound microscope
 - (c) Fluorescence microscope
 - (d) Phase contrast microscope
6. The tissues are embedded in _____ for section cutting.
- (a) Paraffin
 - (b) Formic acid
 - (c) Gelatin
 - (d) Chromic acid

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7. The spectroscopes are generate to ———.
- (a) UV-rays
 - (b) Infrared rays
 - (c) Radiowaves
 - (d) All the above
8. ——— is very potent is measuring the components of smoke and atmospheric gaseous pollutants.
- (a) Column chromatography
 - (b) TLC
 - (c) GLC
 - (d) Ion Exchange chromatography
9. The emulsion used for the autoradiography consists of
- (a) Silver chloride
 - (b) Silver nitrate
 - (c) Silver halide
 - (d) Silver oxide
10. Geiger-Muller counter is used for the detection of
- (a) heavy metals (b) atoms
 - (c) radioactivity (d) pH

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Comment on the editing and proof correction.

Or

- (b) How to prepare the Index card?

12. (a) Explain the classification of data.

Or

- (b) Give an account on student 't' test.

13. (a) Write notes on principles and working mechanism of Fluorescence microscope.

Or

- (b) How will you prepare the serial sections? Explain.

14. (a) Explain the principles and applications of AAS.

Or

- (b) Give an account on principles and applications of GC.



15. (a) Write notes on principles and uses of Liquid Scintillation counter.

Or

- (b) Comment on the principles and applications of Radio Immune Assay.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the methods of sources of information with suitable examples.

Or

- (b) Give a detailed account on use of computer in the preparation of oral presentation.

17. (a) Explain in detail about the probability analysis.

Or

- (b) Discuss the ANOVA.

18. (a) Write an essay on principles and applications of Transmission Electron Microscope.

Or

- (b) Describe the types of fixation technique in microtome section.

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19. (a) Explain in detail about the principles and applications of Ultracentrifuge.

Or

- (b) Give a detailed account on principles and applications of Thin layer chromatography.

20. (a) Describe the principles and applications of Agarose gel electrophoresis.

Or

- (b) Discuss the methods of Nanodrugs delivery.

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