

Seat No.	
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M.Phil/Ph.D. Entrance Examination, September - 2019

BOTANY

Research Methodology (Paper - I)

Day and Date : Wednesday, 18 - 09 - 2019

Total Marks : 100

Time : 04.00 p.m. to 06.00 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Each question carries 2 marks.
 - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Use black ball point pen only for marking the circle. Do not make any stray mark on the OMR Answer sheet.
 - 5) Follow the instructions given on OMR sheet.
 - 6) Rough work shall be done on the sheet provided at the end of question paper.
 - 7) Only non programmable calculators are allowed.

1. Data are facts obtained from_____.

- A) reading
- B) observation
- C) counting
- D) all the above

2. The source of illumination for electron microscope is _____.

- A) high speed electrons
- B) light
- C) x-rays
- D) all the above

3. A questionnaire is a method of _____.
- A) data collection
 - B) tool
 - C) process
 - D) A & B
4. ATCC stands for _____ to obtain bacterial culture.
- A) African Total Culture Collection
 - B) American Type Culture Collection
 - C) Asian Tomato Culture Collection
 - D) Asian Total Culture Collection
5. The main objective of medium preparation is to culture the _____ *in vitro*.
- A) cell
 - B) tissue
 - C) organ
 - D) all the above
6. Somatic embryogenesis which occurs directly in absence of callus production is called as _____.
- A) indirect embryogenesis
 - B) direct embryogenesis
 - C) proliferation
 - D) embryogenic cells

12. Generalized conclusion on the basis of a sample is technically known as _____
- A) statistical, inference of external validity of the research
 - B) data analysis and interpretation
 - C) parameter inference
 - D) all the above
13. CMI is related with _____
- A) Bryophyta
 - B) Algae
 - C) Pteridophytes
 - D) Fungi
14. A researcher divides the population into PG graduation and 10+2 students using random digit table. He select some of the them from each. This is technically called_____.
- A) stratified sampling
 - B) stratified random sampling
 - C) representative sampling
 - D) none of the above
15. _____% of formalin is used for preservation of specimens.
- A) 1%
 - B) 10%
 - C) 50%
 - D) 100%
16. _____is used as the prime ingredient of gel in protein electrophoresis.
- A) SDS
 - B) Polyacrylamide
 - C) Bis
 - D) Ammonium persulphate
17. Conventional columns used for HPLC are generally made up of _____.
- A) Brass
 - B) Platinum
 - C) S.S.
 - D) Glass

- 35.** _____ theory is also called as polar oscillation theory or shifting of poles.
- A) Continental Drift theory
 - B) Land-Bridge theory
 - C) Age and Area theory
 - D) Pendulum theory
- 36.** The term _____ means 'a particular taxon with very restricted distribution'.
- A) endemic
 - B) low risk
 - C) threatened
 - D) critically endangered
- 37.** The plant material preserved in liquid nitrogen in _____ technique.
- A) ediacaran
 - B) skeletonizing
 - C) cryopreservation
 - D) biotechnology
- 38.** In Mass Spectrometry (MS), the molecules in a test sample are converted to _____ ions.
- A) Liquid
 - B) Gaseous
 - C) Semisolid
 - D) None of the above

44. Calvin cycle starts with the carboxylation of _____
A) Ribulose-1,5-biphosphate
B) 3-phosphoglycerate
C) Glyceraldehyde-3 phosphate
D) Dihydroxyacetone-3-phosphate
45. Which of the following is not the phase of taxonomy?
A) Systematic Phase
B) Pioneer Phase
C) Old Phase
D) Biosystematic Phase
46. Who gave the term Phylum?
A) Cuvier
B) Haeckel
C) Theophrastus
D) Linnaeus
47. RNA processing is _____
A) the same as transcription
B) the rejection of old, worn-out RNA
C) an event that occurs after RNA is transcribed
D) both B and C, but not A
48. If the sequence of bases in DNA is TAGC, then the sequence of bases in RNA will be _____
A) ATCG
B) TACG
C) CGAT
D) AUCG
49. Mitotic division of a cell is _____process.
A) continuous
B) discontinuous
C) phase wise
D) none of the above
50. Source of metabolic energy is used in the form of _____
A) GTP
B) ADP
C) ATP
D) AMP



Rough Work

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