

Seat No.	
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M.Phil/Ph.D. Entrance (Special Drive) Examination, May - 2019
BOTANY

Day and Date : Tuesday, 21 - 05 - 2019**Total Marks : 100****Time : 10.00 a.m. to 12.00 noon**

- 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. Hypothesis is a _____
 - A) statement
 - B) explanation
 - C) declarative sentence form
 - D) all the above

2. Opposite of null hypothesis is _____
 - A) alternative
 - B) trial
 - C) testing
 - D) none of the above

3. The degree of challenge to the hypothesis will depend on the _____
- A) type of problem
 - B) importance
 - C) significance
 - D) all the above
4. Mode is _____
- A) most frequent value
 - B) least frequent value
 - C) middle value
 - D) non of the above
5. Median is _____
- A) central value
 - B) Central tendency
 - C) Positional average
 - D) Central position
6. The positional average is _____
- A) mean
 - B) mode
 - C) median
 - D) harmonic mean
7. Mode can be located graphically with the help of _____
- A) Line diagram
 - B) Bar
 - C) Histogram
 - D) Pie diagram

8. Following is the quickest way to measure central tendency_____
- A) mean
 - B) mode
 - C) median
 - D) average
9. Electron microscope is useful to study_____
- A) 3D view
 - B) surface view
 - C) ultra structure
 - D) all the above
10. Examination of viruses and ultra features can be studied well by using _____microscope.
- A) phase contrast
 - B) fluorescent 50
 - C) bright field
 - D) electron
11. Validity of research can be improved by _____
- A) eliminating extraneous factors
 - B) taking true representative sample
 - C) both the above measures
 - D) none of the above
12. Copying someone else's work is _____
- A) plagiarism
 - B) cut paste
 - C) repetition
 - D) steal

- 13.** Primary data can be collected through _____
- A) personal interview
 - B) questionnaires
 - C) schedules
 - D) all the above
- 14.** Hypothesis testing is a _____ step procedure.
- A) two
 - B) three
 - C) four
 - D) many
- 15.** Normal distribution curve is also called as _____
- A) continuous variable
 - B) Gaussian distribution
 - C) Probability
 - D) none of the above
- 16.** Normal distribution forms a symmetrical _____ curve.
- A) normal
 - B) skewed
 - C) bell shaped
 - D) concave
- 17.** The most widely used parametric tests are _____ and _____
- A) t
 - B) chi-square
 - C) z
 - D) a & b
- 18.** A green coloured solution absorbs _____ radiations from the electromagnetic spectrum
- A) red
 - B) infrared
 - C) UV
 - D) all the above

19. Following dispersing device provides a line spectrum of the radiation passing through it.
- A) glass filter
B) prism
C) diffraction grating
D) monochromator
20. _____are considered as physical hazard in biochemical laboratory.
- A) fire and gas cylinder
B) ionising radiations and picric acid
C) ultrasonic beams and aerosols
D) body fluid and strong alkali
21. Electron microscopes use _____lenses to control the path of electrons.
- A) electromagnetic
B) electrostatic
C) glass
D) a & b
22. British scientist _____first described fluorescence in 1852.
- A) stokes
B) Hertz
C) Weichert
D) Ruska
23. Compound light microscope was invented by _____
- A) Robert Hook
B) Van Leeuwenhoek
C) Zacharias Janseen
D) Erust Abbe
24. Which one of the following is a measure of precision?
- A) Std. deviation
B) C.V.
C) Variance
D) all of above
25. Experimental error may be of _____kinds.
- A) Two
B) Three
C) Four
D) ∞

26. The term _____ indicates death of cells, tissues or organs.
- A) hypoplasia
 - B) hyperplasia
 - C) shot hole
 - D) necrosis
27. Drying of plant organs indicates _____ symptom.
- A) vein clearing
 - B) curling
 - C) rot
 - D) die-back
28. In _____ pathway, formation of organic acids temporarily and specially separated.
- A) C₂
 - B) C₄
 - C) C₃
 - D) CAM
29. In aerobic respiration, _____ and _____ molecules of ATP produced in glycolysis and citric acid cycle respectively.
- A) 1,1
 - B) 2,2
 - C) 3,3
 - D) 4,4
30. Fungi growing on bark of trees are called _____
- A) Saxicolous
 - B) Corticolous
 - C) Terricouls
 - D) Xylophyllus

M/P ENT – 03

31. Basidiospores are formed by dikaryophase on _____
- A) Ascus
 - B) Basidium
 - C) Paraphysis
 - D) Aecidium
32. The shikimic acid pathway converts carbohydrate precursors to _____
- A) aliphatic amino acids
 - B) aromatic amino acids
 - C) vitamins
 - D) proteins
33. _____ made outstanding contribution to knowledge of disease cycle of cereal rust in India.
- A) Butler
 - B) Bisby
 - C) Cunningham
 - D) K.C. Mehta
34. National forest policy aims at bringing _____ of geographical area under forest cover.
- A) 15%
 - B) 33%
 - C) 75%
 - D) 90%
35. Stomata are present in the sporophyte of _____
- A) *Riccia*
 - B) *Anthoceros*
 - C) *Marchantia*
 - D) *Targionia*

- 36.** Lenticels are involved in _____
- A) Transpiration
 - B) Gaseous exchange
 - C) Food transport
 - D) Photosynthesis
- 37.** The concept of binomial nomenclature was first introduced by _____
- A) Van Rheeede
 - B) Carolous Linnaeus
 - C) Augustin pyramus de candolle
 - D) Caspar Bauhin
- 38.** Duplicates of holotypes are called _____
- A) Mesotypes
 - B) Meotypes
 - C) Syntypes
 - D) Isotypes
- 39.** Taxon is
- A) Unit of classification
 - B) Species
 - C) Highest rank in classification
 - D) Group of closely related organisms

46. In prokaryotic organism _____ is without membrane.
- A) chloroplast
 - B) mitochondria
 - C) nucleus
 - D) liposome
47. Danielli and Dawson model of plasma membrane exhibits _____ permeability.
- A) selective
 - B) non-selective
 - C) relative
 - D) non-relative
48. _____ is used in the industrial production of citric acid
- A) *Candida sp.*
 - B) *Aspergillus sp.*
 - C) *Streptococcus sp.*
 - D) *Acetobacter sp.*
49. Mitotic division of cell is a _____ 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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