

Seat No.	
---------------------	--

M.Phil./Ph.D. Entrance Examination, July - 2022**BOTANY****Day and Date : Saturday, 16- 07 - 2022****Total Marks : 100****Time : 2.00 p.m. to 4.00 pm**

- Instructions :**
- 1) All questions are compulsory.
 - 2) Each question carries 2 mark.
 - 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) Descriptive research includes_____.
 - A) Solution for immediate problems of society.
 - B) Surveys and fact finding enquiries of different kind.
 - C) Quantitative measurements of some characters.
 - D) Abstract idea
- 2) Generally there are ____ characteristics of Research hypothesis.
 - A) 8
 - B) 6
 - C) 7
 - D) 3
- 3) The null hypothesis is generally symbolized as
 - A) H0
 - B) H1
 - C) H2
 - D) H3
- 4) How to judge the depth of any research?
 - A) By research title
 - B) By research duration
 - C) By research objectives
 - D) By total expenditure on research

P.T.O.

- 5) Which of the following is one of the informal experimental design?
- A) Completely Randomized design
 - B) Randomized block design
 - C) Latin square design
 - D) Before and after without control design
- 6) Gathering knowledge for knowledge's sake is termed as ____.
- A) Fundamental Research
 - B) Applied research
 - C) Quantitative research
 - D) Qualitative research
- 7) These are _____ most popular and important measures of central tendency.
- A) Four
 - B) Five
 - C) Three
 - D) Six
- 8) Which of the following formula is used to obtain median of dataset where 'n' is odd?
- A) $n/2$
 - B) $n+1/2$
 - C) $n+2/2$
 - D) $n-1/2$
- 9) Data Analysis is a process of
- A) Inspecting data
 - B) Cleaning data
 - C) Transforming data
 - D) All of the above
- 10) Range _____
- A) Highest value of an item in a series-Lowest value or an item in a series.
 - B) Medium value of an item in a series-Lowest value or an item in a series.
 - C) Last value of an item in a series-First value or an item. in a series.
 - D) None of these
- 11) The standard deviation is ____.
- A) The square root of the variance
 - B) A measure of variability
 - C) An approximate indicator of how numbers vary from the mean
 - D) All of the above

- 12) Which of the following name_____ is related with ANOVA.
A) R.A. Fisher B) J. D. Kothari
C) C.R. Kothari D) G. B. Giles
- 13) Which of the following is the good quality of research?
A) Watching habit B) Reading habit
C) Writing habit D) Curiosity
- 14) Generally logical reasoning is classified into_____.
A) Two B) Three
C) Four D) Six
- 15) Generally there are _____types of questions in logical reasoning.
A) Five B) Two
C) Four D) Six
- 16) Which of the following name is related with French-Binet Simon intelligence test?
A) Lewis Terman B) de Candolle
C) Bessey D) Linnaeus
- 17) What is Bibliometry?
A) Function of Library Network
B) Information Management Service
C) Information Management Tool
D) Library Service
- 18) Generally_____addition, subtraction, multiplication and division are called basic math operations.
A) Digging B) Throwing
C) Counting D) Writing
- 19) Which of the following name is related to with the definition of Plagiarism?
A) Kothari B) Redman
C) Seboyar D) Merriam Webster

M/P ENT - 28

- 20) Which part of the compound microscope helps in gathering and focusing light rays on the specimen to be viewed?
 - A) Eyepiece lens
 - B) Objective lens
 - C) Condenser lens
 - D) Magnifying lens
- 21) Magnification of a microscope is calculated by_____formula
 - A) $m=e/f \times l$
 - B) $m=1/f \times e$
 - C) $m=f \times e/l$
 - D) $m=1 \times f \times e$
- 22) Which of the following name is related with development of high power objective of microscope?
 - A) Scully
 - B) Tswett
 - C) J.J. Lister
 - D) Zaccharios Janssen
- 23) The phase of bacterial growth during which bacteria shows Exponential growth curve is called_____.
 - A) Lag phase
 - B) Log phase
 - C) Stationary phase
 - D) Decline phase
- 24) The botanical name of white button mushroom is _____.
 - A) *Morchella Crassipes*
 - B) *Amanita muscaria*
 - C) *Agaricus brunnescens*
 - D) *Armillaria bulbosa*
- 25) The standard size of herbarium sheet is_____.
 - A) 42×42 cm
 - B) 28×42 cm
 - C) 28×26 cm
 - D) 28×28 cm
- 26) The magnification power of electron microscope is_____.
 - A) 100x
 - B) 1000x
 - C) 10000x
 - D) 100000x
- 27) Spitzenkorper is present in_____.
 - A) Fungi
 - B) Algae
 - C) Bryophytes
 - D) Pteridophytes
- 28) The botanical name of Red bread mold is _____.
 - A) *Monosporascus cannonballus*
 - B) *Daldinia concentric*
 - C) *Rosellinia diathrausta*
 - D) *Neurospora sitophila*

M/P ENT - 28

- 29) Presence of _____ on the stem is a characteristic feature of gymnosperms.
- A) Pulvinous leaf base
 - B) Irregular nodes
 - C) Stem scars
 - D) Leaf scars
- 30) Bisporangiate cones occur in _____.
- A) Ginkgo
 - B) Ephedra
 - C) Cycas
 - D) Pinus
- 31) _____ are also known as microconsumers.
- A) Primary consumers
 - B) Secondary consumers
 - C) Tertiary consumers
 - D) Decomposers
- 32) _____ is a large geographical area of distinctive plant and animal groups, which are adapted to that particular environment.
- A) Genome
 - B) Forest
 - C) Biome
 - D) Tundra
- 33) _____ is the synthetic medium used to culture fungi.
- A) Czapek-Dox Agar
 - B) Potato-dextrose agar
 - C) Malt extract peptone dextrose agar
 - D) Martin-Rose Bengal Streptomycin agar
- 34) The laminar air flow works on the principle of application of _____.
- A) High-Efficiency Particulate Air filters
 - B) Cellulose acetate filters
 - C) Cellulose nitrate filters
 - D) Asbestos filters
- 35) A specimen that is cited in the protologue but that is neither the holotype nor an isotype is called _____.
- A) lectotype
 - B) neotype
 - C) paratype
 - D) epitype
- 36) Amborellaceae are confined to the main island, Grande Terre, of _____.
- A) New Caledonia
 - B) New Zealand
 - C) New South Wales
 - D) New Jersey

- 37) K.C.Mehta worked on_____.
A) Rust fungi
B) Mycorrhiza
C) Myxomycetes
D) Labyrthulemyctes
- 38) Head smut of Jawar is caused by_____.
A) *Sphacelotheca cruenta*
B) *Sphacelotheca roiliana*
C) *Sphacelotheca sorghi*
D) *Sphacelotheca ehrenhogi*
- 39) _____is absent in dicot stem.
A) Hypodermis
B) Xylem vessels
C) Cuticle
D) Bundle Sheath
- 40) The last layer of cortex is wavy band made up of compact barrel shaped parenchyma. The band is called as _____.
A) Phelloderm
B) Ventogen
C) Starch sheath
D) Caulogen
- 41) Size of chloroplast genome is _____kbp.
A) 50-100
B) 300-700
C) 120-160
D) 85-90
- 42) The nucleotide sequences that code for amino acids are called as _____.
A) Exons
B) Introns
C) Replicons
D) Mutons
- 43) Range is the _____between the lowest and the highest values present in the observations included in sample.
A) Addition
B) Difference
C) Variance
D) Standard error
- 44) Variability present among different genotypes of a species is known as_____.
A) Environmental diversity
B) Characteristic diversity
C) Phenotypic diversity
D) Genetic diversity

- 45) Which of the following statement is INCORRECT about cloning vector?
- A) It must have an origin of replication
 - B) It must possess a unique restriction site for RE enzymes.
 - C) It must possess some marker gene such that it can be used for later identification of recombinant cell
 - D) It must be large size
- 46) _____ does not require ATP to cut DNA at restriction site itself.
- A) Type I restriction endonuclease
 - B) Type II restriction endonuclease
 - C) Type III restriction endonuclease
 - D) Type IV restriction endonuclease
- 47) Most common ratio of the photosystems II to I under normal condition is about _____.
- A) 1:1
 - B) 1.5 :1
 - C) 1:1.5
 - D) 2:1
- 48) Find out the correct sequence of energy gradient from high to low during transfer of radiant energy to the reaction centre.
- A) Carotenoids - Chlorophyll a - Chlorophyll b - P680
 - B) Carotenoids - Chlorophyll b - Chlorophyll a - P680
 - C) Chlorophyll a - Chlorophyll b - P680 - Carotenoids
 - D) Chlorophyll b - P680 - Carotenoids - Chlorophyll a
- 49) A large well-known species that is one of the “charismatic megafauna” is called
- A) Indicator species
 - B) Keystone species
 - C) Umbrella species
 - D) Flagship species
- 50) The technique that involves freezing purified DNA, eggs, sperm, embryos so that genetic diversity can be maintained in the breeding programs is_____.
- A) Cross fostering
 - B) Genomer resource bank
 - C) Artificial insemination
 - D) Artificial incubation



Rough Work