

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

Day and Date : Thursday, 19 - 09 - 2019

Total Marks : 100

Time : 4.00 p.m. to 6.00 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) A short summary of technical report is called as:  
A) article  
B) research abstract  
C) publication  
D) guide
- 2) Questions which seek information is called as:  
A) factual question  
B) opinion questions  
C) hypothetical question  
D) marginal question
- 3) A member of population is called as:  
A) element  
B) census  
C) sample  
D) group
- 4) Assessing numbers or symbols to the categories or response are called:  
A) editing  
B) coding  
C) transcription  
D) tabulation
- 5) Which of the following search engine is exclusively meant for scientific information?  
A) Google  
B) Yahoo  
C) Scirus  
D) Altavista

- 6) Information is:
- A) raw data
  - B) processed data
  - C) input data
  - D) organized data
- 7) Information analysis and critical evaluation is made in:
- A) survey
  - B) action research
  - C) analytical research
  - D) pilot study
- 8) Research is nothing but the \_\_\_\_\_
- A) working in a scientific way to search for the truth of any problem
  - B) finding solution to any problem
  - C) searching again and again
  - D) none of the above
- 9) What is the aim of research in education?
- A) To help in personal growth of an individual
  - B) To increase job opportunities of the individual
  - C) To increase social status of the individual
  - D) To help the candidate to become an eminent educationist
- 10) A researcher is said to be committed the Type I error when \_\_\_\_\_
- A) When he accepts a Null hypothesis which is actually false
  - B) Both, the Null and Alternative hypothesis is rejected
  - C) When he rejects a Null hypothesis which is actually true
  - D) None of the above
- 11) Action Research is \_\_\_\_\_
- A) an applied research
  - B) a quantitative research
  - C) a survey research
  - D) a population research
- 12) \_\_\_\_\_ refers to scientific study and research that seeks to solve practical problems.
- A) Applied research
  - B) Basic research
  - C) Exploratory research
  - D) None of the above

- 13) Which research refers to the Preliminary data collection?  
A) Basic research  
B) Applied research  
C) Descriptive research  
D) Exploratory research
- 14) When planning your literature search, you need to:  
A) Have clearly defined research questions and objectives  
B) Define the parameters of your search  
C) Generate key words and search terms  
D) All the above
- 15) In any type of research, A researcher would be said to be good, if he is \_\_\_\_\_ in his scientific views.  
A) Accurate  
B) Confused  
C) Imaginary  
D) Dependent
- 16) \_\_\_\_\_ proved important feature of research, in carrying out the research in scientific way.  
A) Must collect information with a positive spirit  
B) ability to utilize his time properly in a balanced manner  
C) should be conceptually clear  
D) All the above
- 17) Regarding the conclusions, scientists must be \_\_\_\_\_ to the approval or disapproval of society.  
A) Pathetic  
B) apathetic  
C) Pitiful  
D) Moving
- 18) In the scientific work, researcher must have \_\_\_\_\_  
A) votary of truth  
B) balanced manner  
C) sensitive to difficulties  
D) all the above
- 19) Conclusions in the field of scientific inquiry researcher must have \_\_\_\_\_  
A) Ability to tread the unknown frontier  
B) Power of thinking beyond box  
C) Can break down a complex situation into manageable bits  
D) All the above

- 20) In the logical research finding \_\_\_\_\_ method is used.
- A) Pseudo postulations
  - B) Conceptual Operating method
  - C) Hypothetico-deductive method
  - D) Raven Paradox method
- 21) The most commonly used radioisotope for radiolabeling antibodies is \_\_\_\_\_
- A)  $^{14}\text{N}$
  - B)  $^{125}\text{I}$
  - C)  $^{126}\text{I}$
  - D)  $^{14}\text{C}$
- 22) In single radial diffusion, concentration of antigen is equal to \_\_\_\_\_
- A) Precipitin ring diameter
  - B) Square of precipitin ring diameter
  - C) Log of Precipitin ring diameter
  - D) Square of Log of Precipitin ring diameter
- 23) In the equation  $T=I/I_0$ , 100% value of T represents \_\_\_\_\_.
- A) Totally transparent substance
  - B) Transparent substance
  - C) Opaque substance
  - D) Totally opaque substance
- 24) Uzi fly, *Exorista bombycis*, a major pest of *Bombyx mori* belongs to order \_\_\_\_\_.
- A) Hemiptera
  - B) Isoptera
  - C) Diptera
  - D) Lepidoptera
- 25) Tukra disease is caused by insect \_\_\_\_\_
- A) Jassid
  - B) Thrips
  - C) Mealy bug
  - D) None of the above
- 26) Bihar hairy caterpillar cause the damage by \_\_\_\_\_
- A) Sucking cell sap
  - B) Defoliating
  - C) Leaf mining
  - D) Boring stem

## M/P ENT - 28

- 27) Insecticidal properties of the DDT was determined for the first time by \_\_\_\_\_  
A) Paul Muller  
B) O' Zeidler  
C) Gerhard Schrader  
D) O' Brino
- 28) Reduction in visibility is due to the presence of \_\_\_\_\_ in ambient air.  
A) Sox  
B) PM  
C) NOx  
D) HC
- 29) One of the following is not water borne infection of human.  
A) Cholera  
B) Typhoid  
C) Dysentery  
D) Bubonic plague
- 30) In the body metabolism, Insulin hormone functions for \_\_\_\_\_  
A) Gluconeogenesis  
B) Glycogenesis  
C) Glycogenolysis  
D) All the above
- 31) In the process of egestion normal brown colour to the faeces is due to \_\_\_\_\_  
A) Bile  
B) Biliverdin  
C) Bilirubin  
D) Urobilinogen
- 32) Biologically \_\_\_\_\_ is antihemorrhagic Vitamin.  
A) Vit. A  
B) Vit. B  
C) Vit. K  
D) Vit. E
- 33) Study of biological diversity and its origin is called as:  
A) Biodiversity  
B) Biosystematics  
C) Taxonomy  
D) Classification
- 34) \_\_\_\_\_ refers to the arrangement of the species into a natural system of lower and higher categories.  
A) Alpha taxonomy  
B) Beta taxonomy  
C) Gamma taxonomy  
D) Delta taxonomy
- 35) The most important morphological approach in taxonomy is  
A) genitalia  
B) color  
C) size  
D) length

## M/P ENT - 28

- 36) Reaction that depends on concentration of only one reactant is termed as \_\_\_\_\_.  
A) zero order reaction                      B) first order reaction  
C) second order reaction                    D) higher order reaction
- 37) Gibbs free energy content of the system depends on \_\_\_\_\_.  
A) entropy                                      B) enthalpy  
C) absolute temperature                    D) all of these
- 38) A locus on the long arm of 7<sup>th</sup> chromosome at second region, in the first band and third sub-band is represented as \_\_\_\_\_.  
A) 7q21.3                                      B) 7p21.3  
C) 7q2.13                                      D) 7p2.13
- 39) Which one of the following genes concerned with sex determination are located on short arm of the X chromosome?  
A) sry                                              B) sox9  
C) dax1                                            D) none of the above
- 40) The nuclear envelope is the lipid bilayer membrane, an inner nuclear membrane, and an outer nuclear membrane, the outer membrane is continuous with the membrane of \_\_\_\_\_.  
A) Golgi apparatus                            B) Endoplasmic reticulum  
C) Cytoskeleton                                D) Vesicle
- 41) Nuclear pore complexes allow the transport of small molecules of less than \_\_\_\_\_ kDA by passive diffusion  
A) 10-20                                          B) 20-40  
C) 30-60                                          D) 40-80
- 42) In biology, histones are highly conserved proteins found in eukaryotic cell nuclei that package the DNA into structural units called \_\_\_\_\_.  
A) Nucleosomes                                B) Proteasome  
C) Peroxisomes                                D) Endosomes

## M/P ENT - 28

- 43) The development of the delayed type hypersensitivity (DTH) responses begins with an initial sensitization phase of \_\_\_\_ weeks after primary contact with an antigen.
- A) 4-5  
B) 3-4  
C) 2-3  
D) 1-2
- 44) Antibodies to the A,B and O antigens called isohemagglutinins are usually of the \_\_\_\_ class
- A) IgE  
B) IgA  
C) IgM  
D) IgD
- 45) An organic cofactor of pyridoxal phosphate is carrier of \_\_\_\_\_
- A) amino acid  
B) hydrogen  
C) carbon dioxide  
D) none of the above
- 46) Immobilized enzymes are attached to \_\_\_\_ support for use and reuse.
- A) soluble  
B) insoluble  
C) A and B  
D) none of the above
- 47) An enzyme exhibit more than one catalytic activity is called \_\_\_\_\_
- A) isoenzyme  
B) holoenzyme  
C) multienzyme  
D) apoenzyme
- 48) \_\_\_\_ visits its host for a short period to obtain the food
- A) *Wuchereria bancrofti*  
B) *Taenia solium*  
C) *Fasciola hepatica*  
D) *Aedes aegypti*
- 49) A filarial nematode causative agent of river blindness transmitted by \_\_\_\_
- A) house fly  
B) black fly  
C) sand fly  
D) tse-tse fly
- 50) Chagas disease is transmitted by
- A) triatomine bug  
B) tse-tse fly  
C) sand fly  
D) mosquito



**Rough Work**