

Seat No.

Total No. of Pages : 12

Ph.D. Entrance Examination 2025**ZOOLOGY****Subject Code: 58793**

Day and Date : Tuesday, 09/09/2025**Total Marks : 100****Time : 01.00 pm to 03.00 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) Follow the instructions given on OMR sheet.
 - 5) Rough work shall be done on the sheet provided at the end of question paper.
-

1. Preliminary data collection is a part of the
 - a. Basic research
 - b. Applied research
 - c. Exploratory research
 - d. Descriptive research
2. What is correct about fundamental research?
 - a. A research which involves finding a solution for an immediate problem facing a society
 - b. A research concerned with generalizations and with the formulation of a theory.
 - c. A research involving surveys and fact-finding enquiries of different kinds.
 - d. None of these

3. Why is it important for researcher to review literature?
 - a. it shows how much time has been spent on a given topic.
 - b. it helps the details of work done in given topic earlier.
 - c. it identifies like-minded researchers
 - d. it is traditional
4. Random sampling is helpful as it is
 - a. not accurate
 - b. Free from personal biases
 - c. An economical method of data collection
 - d. it is based on bias
5. A hypothesis is
 - a. a methodical evaluation of research evidence
 - b. a statement which serves as the basis for further investigation.
 - C. a statement describing the aims of an investigation.
 - d. All of these.
6. Quantitative research has been criticized because
 - a. The measurement process suggests a spurious and artificial sense of accuracy
 - b. The reliance on instruments and procedures makes it high in ecological validity
 - c. It underestimates the similarities between objects in the natural and social worlds
 - d. It overestimates the similarities between objects in the natural and social worlds

7. Plagiarism can be defined as
- a. representing another person's work as of your own
 - b. citing other person's work by giving due credit to the original author
 - c. using other person's method by giving citation
 - d. supporting our work by illustrating work of others
8. Find the next value in the series 0, 3, 8, 15, 24, 35, 48, ?
- a. 51
 - b. 55
 - c. 63
 - d. 65
9. Which of the following is not a primary purpose of research?
- a. To achieve new insights and come up with novel findings
 - b. To hypothesize the causes of some phenomena
 - c. To gain familiarity with the new natural phenomenon
 - d. To get a degree and recognition
10. What effect does increase in the sample size have upon sampling error?
- a. It reduces the sampling error
 - b. It increases the sampling error
 - c. it has no effect on the sampling error
 - d. None of the above
11. The rabbit population in A community increases by 25% per year while in B community increases at 50% per year respectively. If the present population of A and B are equal, the ratio of number of rabbits in B to A after two years will be?
- a. 1.44
 - b. 1.72
 - c. 1.90
 - d. 1.25

12. The Individual with an IQ is considered as exceptionally smart.
- a. Below 40
 - b. 50
 - c. 60 to 80
 - d. 130 and above
13. What effect does increase in the sample size have upon sampling error?
- a. It reduces the sampling error
 - b. It increases the sampling error
 - c. it has no effect on the sampling error
 - d. None of the above
14. Quality of measurement procedure that provides repeatability and accuracy is called as
- a. validity
 - b. reproducibility
 - c. reliability
 - d. authenticity
15. In an experimental research, the primary aim is to identify the effect produced by the
- a. Dependent variable
 - b. Extraneous variable
 - c. Independent variable
 - d. Confounding variable
16. The appropriate analytical technique is determined by.....
- a. The research design
 - b. Nature of the data collected
 - c. Nature of the hypothesis
 - d. nature of research design and data collected.

17. Which research paradigm is most concerned about generalizing its findings?
- a. Quantitative research
 - b. Qualitative research
 - c. Mixed-methods research
 - d. All of these
18. An appropriate research design involves which of the following factors?
- a. the objective of the problem to be studied
 - b. the means of obtaining information
 - c. the nature of the problem to be studied
 - d. All factors mentioned here are essential.
19. In the pyruvate dehydrogenase multienzyme complex E2 is
- a. Pyruvate decarboxylase
 - b. Thiamin diphosphate
 - c. Dihydrolipoamide dehydrogenase
 - d. Dihydrolipoamide acetyl transferase
20. The group that receives the treatment of a proven molecule for comparison, is called as
- a. Experimental group
 - b. Positive Control group
 - c. Treatment group
 - d. Independent group
21. In spectroscopy 100% value of T (Transmission) represents..... substance
- a. Opaque
 - b. Transperent
 - c. Preferative
 - d. Analytical

22. In spectoflurometer primary cell is between.....
- a. Source and the cell
 - b. Cell and detector
 - c. source and detector
 - d. next to detector
23. Agarose gels are used for the electrophoresis of
- a. Proteins
 - b. Nucleic acids
 - c. Both Proteins & Nucleic acids
 - d. lipids
24. The dimension of Electrophoresis gel is typically 8.5 cm x 5 cm with a thickness of mm
- a. 0.5-1
 - b. 1-2
 - c. 2-3
 - d. 3-4
25. Minimum resolution of electron microscope is
- a. 0.2 mm
 - b. 20 nm
 - c. 100 nm
 - d. 0.2 nm
26. Unit of evolution is
- a. Population
 - b. Species
 - c. Individuals
 - d. Sub-species
27. Which of the following suffix is used for species-group names based on a geographical name:
- a. ensis
 - b. orum
 - c. arum
 - d. sensu lato
28. Insecticidal properties of the DDT was determined for the first time by
- a. Paul Muller
 - b. O'Ziedler
 - c. Gerhard Schadder
 - d. O' Brino

29. The transition area between two adjacent communities/ biomes is called
- a. Ecad
 - b. keystone
 - c. Edge effect
 - d. Ecotone
30. is the central portion of the cell nucleus and is composed of ribosomal RNA, proteins and DNA.
- a. Mitochondria
 - b. Golgi apparatus
 - c. RER
 - d. Nucleolus
31. The peroxisome is an organelle found in most eukaryotes that is crucial for metabolism.
- a. Protein
 - b. Lipid
 - c. Carbohydrates
 - d. all of these
32. In an autoclave, usually 15 min. sterilization is conducted at
- a. temperature 145°C and pressure 10 lb
 - b. temperature 121°C and pressure 15 lb
 - c. temperature 150°C and pressure 10 lb
 - d. temperature 60°C and pressure 15 lb
33. The Insects that cause curling of leaves and sooty mold in plants are
- a. Defoliators
 - b. Borers
 - c. Miners
 - d. Sucking Pests

34. When 0.1M NaOH is added to an equimolar mixture of weak acid and its conjugate base, the pH of the solution
- a. will remain unaltered
 - b. will increase to 14
 - c. not show drastic change in the pH as compared to unbuffered solution
 - d. will decrease
35. Muscardine is..... disease of silkworm
- a. Viral
 - b. Fungal
 - c. Bacterial
 - d. Protozoan
36. Immunoprecipitation occurs only when
- a. Antibody excess
 - b. Antigen excess
 - c. Insoluble antigen-antibody lattice is formed at equivalence point
 - d. Antigen less
37. occur due to nonpolar side chains of a biomolecule,
- a. Hydrogen bonds
 - b. Hydrophobic interactions
 - c. covalent bonds
 - d. van der Waals forces of attraction.
38. Histologically Stellate Reticuloendothelial cells are present in
- a. Sublingual gland
 - b. Salivary Gland
 - c. Liver
 - d. parotid gland

39. The Karl Pearson's correlation measures
- a. the degree of linear relationship and direction.
 - b. the degree to which the relationship is consistently one directional.
 - c. the degree of the relationship without regard to the form of the relationship.
 - d. the degree of curvilinear relationship.
40. is the initiation codon
- 1. UUU
 - b. AUG
 - c. UAA
 - d. UGG
41. The alpha subunit of G protein is inactivated due to
- a. hydrolysis of GTP by intrinsic GTPase activity of the alpha subunit.
 - b. replacement of GDP by GTP
 - c. hydrolysis of ATP
 - d. detachment of ligand from the receptor.
42. Type I hypersensitivity reaction is induced by certain type of antigens referred as
- a. allergens
 - b. microbes
 - c. parasites
 - d. all of the above
43. is an occasionally dividing cell.
- a. embryonic cell
 - b. fibroblast
 - c. neuron
 - d. bone marrow cell
44. Organic cofactors are bound to
- a. enzyme
 - b. substrate
 - d. intermediate of the reaction
 - c. product

45. The poisonous compound cyanogenic glucoside is present in
- a. Raw cassava
 - b. peanut
 - c. Cabbage
 - d. cotton seed meal
46. Which of the following is not a surgical manipulation of In Vitro Fertilization (IVF)?
- a. Assisted Zona latching
 - b. cytoplasmic transfer
 - c. Intra Cytoplasmic Sperm injection
 - d. Incubation of sperms together with secondary oocytes
47. Horizontal gene transfer in bacteria mediated by bacteriophages is termed as
- a. conjugation
 - b. transduction
 - c. transformation
 - d. transfection
48. Which of the following tests is employed to test the sterility of the serum?
- a. loopful serum is streaked on suitable culture media to see bacterial and fungal growth if any.
 - b. to culture the cells in serum supplemented medium and observe the death of cells due to infection.
 - c. to culture the cells in serum supplemented medium and observe the growth of bacteria/fungi if any.
 - d. to autoclave the serum and incubate with suitable culture medium.

49. Selection of Hybridoma is carried out using medium.
- a. HAT
 - b. M199
 - c. DMEM
 - d. RPMI
50. A host that harbours a parasite in which it undergoes sexual method of reproduction is host
- a. Definitive
 - b. Intermediate
 - c. Paratenic
 - d. Reservoir

◆◆◆

-- ROUGH WORK --