

Seat No.

Total No. of Pages : 28

M Sc. Entrance Examination, 2024**Zoology****Subject Code : 58719**

Day and Date : Monday, 29-07-2024**Total Marks : 100****Time : 02.30 pm to 04.00 pm**

Instructions :

- 1) All questions are compulsory.
 - 2) Each question carries 1 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.
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1. Trypanosoma belongs to super class
 - a) Mastigophora
 - b) Opalinata
 - c) Sarcodina
 - d) both b and c
2. are bilaterally symmetrical animals
 - a) Platyhelminthes
 - b) Protozoans
 - c) Coelenterata
 - d) sensation

3. Gastrozooids are used for purpose
- a) Protection
 - b) Feeding
 - c) Excretion
 - d) Poriferans
4. The early cell types which were formed on earth, were.....
- a) Aerobic, autotrophic
 - b) Anaerobic, autotrophie
 - c) Anaerobic, heterotrophic
 - d) Aerobic, heterotrophic
5. The experimental proof for theory of chemical evolution was given by.....
- a) Stanley Miller
 - b) Darwin
 - c) Lamark
 - d) Mendel
6. Plague is caused by bacteria
- a) Clostridium perfringens
 - b) Mycobacteria
 - c) Yersinia pestis
 - d) Yersinia aldovae

7. In the life cycle of plague, is the role of humans
- a) Primary host
 - b) Secondary reservoir
 - c) Primary transmission vector
 - d) Accidental intruder in rat flea cycle
8. Two dominant genes in a complementary interaction are.....
- a) Allelic genes
 - b) Located on different chromosomes
 - c) Non-allelic genes
 - d) none of the above
9. When two or more genes or characters are inherited together for a number of generations then linkage is called as
- a) Incomplete linkage
 - b) Complete Linkage
 - c) Dominant linkage
 - d) Recessive linkage
- 10 Blood group is universal recipient.
- a) A
 - b) B
 - c) AB
 - d) O

11. Which of the following is NOT a characteristic feature of bony fish (Osteichthyes)?
- a) Presence of operculum
 - b) Bony skeleton
 - c) Cartilaginous fins
 - d) Swim bladder for buoyancy control
12. Which type of venom primarily affects the nervous system?
- a) Neurotoxic
 - b) Hemotoxic
 - c) Cytotoxic
 - d) Myotoxic
13. β oxidation takes place in
- a. Cytosol
 - b. Mitochondria
 - c. Ribosomes
 - d. Nucleus
14. Koshland proposed. model of enzyme action.
- A. Fluid mosaic model
 - b. Induced fit model
 - c. Lock and key model
 - d. Reflective index model

15. is responsible for stimulating the development and maintenance of the uterine lining during the menstrual cycle.
- a. Estrogen
 - b. Progesterone
 - c. Follicle-stimulating hormone (FSH)
 - d. Luteinizing hormone (L.H)
16. is assisted reproductive technology involves the transfer of fertilized embryos into the uterus.
- a. Intrauterine Transfer (IUT)
 - b. Zygote Intrafallopian Tube Transfer (ZIFT)
 - c. Gamete Intrafallopian Transfer (GIFT)
 - d. Intracytoplasmic Sperm Injection (ICSI)
17. is the step in the process of in vitro fertilization (IVF) involves the removal of eggs from the ovaries.
- a. Ovarian stimulation.
 - b. Egg retrieval
 - c. Sperm retrieval
 - d. Fertilization
18. The term includes both host and parasite
- a. Parasitism
 - b. Dermatology
 - c. Sology
 - d. Phylogeny

19. Kadaknath poultry bird is generally reared for
- a. Meat purpose
 - b. Egg purpose
 - c. Both for meat and egg purpose
 - d. None of these
20. An organism which provides shelter and nourishment for parasite.
- a. Parasite
 - b. Virus
 - c. Animal
 - d. Host
21. is the primary function of sweat gland.
- a) Thermoregulation
 - b) Excretion
 - c) Production of Vitamin D
 - d) none of the above
22. Dentition in Scoliodon is
- a) Heterodont and diphyodont
 - b) Heterodont and polyphyodont
 - c) Homodont and diphyodont
 - d) Homodont and polyphyodont
23. is called Adam's apple in man
- a) Cartilage in trachea
 - b) Thyroid cartilage in Larynx
 - c) Cartilage in lungs
 - d) epiglottis

24. Venous heart is present in OR... In the concurrent system rice and fish are cultured
- a) Mammals.....OR... Alternately
 - b) reptiles.....OR....At same time
 - c) fishes.....OR... Simultaneously
 - d) birds.....OR.... All the above.
25. In our body involuntary actions are controlled by
- a) Medulla oblongata
 - b) Medulla in Forebrain
 - c) Medulla in Spinal Cord
 - d) Medulla in Midbrain
26. Sense of smell is under the control of part of brain.
- a) Olfactory lobes
 - b) Cerebral hemispheres
 - c) Diencephalon
 - d) Optic lobes
27. Functional unit of kidney is ..OR.... The marine animals tolerating narrow range of salinity are known as
- a) Hilum.....OR....Eurythermal
 - b) Neuron.....OR....Stenothermal
 - c) Nephron.....OR.... Stenohaline
 - d) Medulla.....OR.....Euryhaline

28. Acetabulum cavity is present in
- a) Pelvic girdle
 - b) Pectoral girdle
 - c) Pygostyle
 - d) Typical vertebra
29. is the first vertebra of Cervical region.
- a) Atlas
 - b) Axis
 - c) Typical
 - d) Free thoracic vertebra
30. is the name given to the hypothetical primitive kidney of ancestral verterbrates.....OR..... Trash fish meal mixed with rice bran and vitamin, forms an excellent feed in.....
- a) Pronephros.....OR....apiculture
 - b) Mesonephros.....OR....sericulture
 - c) Metanephros.....OR....agriculture
 - d) Archinephros.....OR....aquaculture
31. Sanger sequencing method is used for sequencing of
- a) DNA
 - b) RNA
 - c) Protein
 - d) RNA-DNA hybrid
32. DNA unwinding is done by
- a) Ligase
 - b) Helicase
 - c) Topoisomerase
 - d) Hexonuclease

33. is the function of enzyme involved in base excision repair.
- a) Addition of correct base
 - b) Removal of incorrect base
 - c) Addition of correct nucleotide
 - d) Removal of phosphodiester bond
34. The Okazaki fragments are present on strandOR..... product and is an excellent poultry and animal feed. highly nutritive
- a) Template.....OR....Fish manure
 - b) leading.....OR....Fish guano
 - c) Lagging.....OR.... Fish meal
 - d) All the above.....OR....fish body oil
35. The sequence of the structural genes in lac operon are.....
- a) lacA-lac-lacY
 - b) lacZ-lacA-lacY
 - c) lacZ-lacY-lacA
 - d) lacA-lacY-lacZ
- 36 A codon contains nucleotides.
- a) 1
 - b) 2
 - c) 3
 - d) 4

37. DNA replication is always takes place from OR oil ensure good growth of bone and teeth.
- a) 5'-3'.....OR....fish liver oil
 - b) 3'-5'.....OR....fish body oil
 - c) 5'-5'.....OR.... both a and b
 - d) 3'-3'.....OR....none of these
38. Translation occurs in.....
- a) Nucleus
 - b) Cytoplasm
 - c) Nucleolus
 - d) Lysosome
39. In splicing.....are removed to form mature mRNA.....OR..... manufacture of laundry soap. is used in
- a) Exon.....OR....Fish liver oil
 - b) Intron.....OR....Fish body oil
 - c) Primers.....OR....Fish meal
 - d) Sequence.....OR....Fish manure
40. Restriction enzyme is known as
- a) Molecular Scissor
 - b) Molecular Knife
 - c) Molecular cutter
 - d) All the above

41. Plasmids replicate independently due to the presence of an. OR.... Superior quality of fish meal is known as
- a) Origin of replication.....OR....Fish flour
 - b) Vector.....OR....Fish glue
 - c) Markers.....OR... Fish manure
 - d) Polylinker site.....OR....Fish ham
42. Which of the following is/are the method of transfection for making transgenic animals?
- a) Transfer of DNA
 - b) Transfer of whole individual chromosomes/ fragment
 - c) Transfer of whole nuclei
 - d) All of the above
43. The first vaccine developed from animal cell culture was forOR.... The foul smelling of fish is due to oxidation of
- a) Hepatitis-B.....OR....carbohydrates
 - b) Somatostatin.....OR....proteins
 - c) Polio.....OR....lipids
 - d) Small pox. OR....none of these

44. When data is classified according to the region like nation, states, districts, cities and villages is called
- a) Quantitative classification
 - b) Qualitative classification
 - c) Chronological classification
 - d) Geographical classification
45. What is somatic Cell Nuclear Transfer?
- a) Two nucleuses of the donor and the recipient are fused together to form 2N nucleus
 - b) The nucleus of the egg cell is fused with the enucleated somatic cell
 - c) The enucleated egg cell is fused with nucleus of the somatic cell
 - d) Enucleated somatic and egg cell are fused together
46. Genetically engineered golden rice is rich inOR..... Cod liver oil is extracted from.....
- a) Vitamin A and nicotinic acid.....OR....bony fish
 - b) B-Carotene, vitamin A and folic acid.....OR....cartiliginious fish
 - c) B-carotene and iron.....OR....both a and b
 - d) Vitamin A and niacin,..... OR....none of these

47. The following are methods of sterilization EXCEPT
- a) Dry heat sterilization
 - b) Autoclaving
 - c) Sterilization by filters
 - d) Laminar airflow
48. Cryopreservation is done at temperature ...OR... Smoking is a technique in
- a) -140 C.....OR....crop harvesting
 - b) -196-C.....OR....fish preservation
 - c) -120C.....OR.....mushroom cultivation
 - d) -180-C.....OR....preservation of wines
49. The observation which occurs most frequently in a sample is the.....
- a) Median
 - b) Mean deviation
 - c) Standard deviation
 - d) Mode
50. Which of the following are methods under measures of dispersion?.....OR... Isinglass is employed in.....
- a) Standard deviation.....OR... preparation of wines
 - b) Mean deviation.....OR....distillation of wines
 - c) Range.....OR....preservation of wines
 - d) All of the above.....OR....clearing of wines

51. Transgenic mice are being developed for use in testing the safety of Vaccines before They are used on.....
 - a) Pigs
 - b) Cattle
 - c) Monkeys
 - d) Humans
52. When glucose level falls below the normal value, then the condition is called as.....OR..... is used in dressing of leather and tanning of skin.
 - a) Hypoglycemia.... OR....Fish body oil
 - b) Ketosis....OR....Fish manure
 - c) Glycogenesis.....OR....Fish liver oil
 - d) Hyperglycemia.....OR....Fish meal
53. Parafollicular cells of Thyroid gland secretes hormone.
 - a) Estrogen
 - b) Insulin
 - c) Progesterone
 - d) Thyrocalcitonin.
54. The study of Freshwater habitat is called as disease is also known asOR.... Epizootic ulcerative
 - a) Histology.....OR....bacterial disease
 - b) Limnology.....OR....cancer
 - c) Parasitology OR....lung disease
 - d) Physiology.....OR.... fungal disease

55. The deepest lake in world is Lake in Siberia.
- a) Baikal b) Superior
- c) Hauroko d) Quesnel
56. In the process of nitrification, the oxidation of Ammonium is done by gram negative bacteria, such as..... Which helps in conversion of ammonia to nitrites.OR.... Itch disease effects
- a) Pseudomonas.....OR... kidney
- b) Paracoccus... OR. lungs
- c) Nitrosomonas.....OR....skin
- d) Thiobacillus.....OR....fins
57. The profundal zone of deep lake is the region where sunlight does not penetrate the water. which is also called as
- a) Photic zone b) Aphotic zone
- c) Limnetic zone d) Euphotic zone
58.disease occurs due to excessive secretion of Thyroxine hormone.
...OR....Ulcer disease is caused by
- a) Tetany.....OR....mycobacterium
- b) Grave's disease OR....Haemophilus piscium.
- c) Myxodema.....OR... mycobacterium
- d) Cretinism..... OR Pseudomonas punctate

63. In chick, during embryonic development, brain is formed from.
germinal layer.OR.... Vibrio bacteria are the causative agents of
- a) ectoderm.....OR....vibriosis
 - b) mesoderm.....OR....eye rot
 - c) endoderm.....OR....fin rot
 - d) blastomere.....OR....argulus
64. Extraembryonic membrane Chorion is developed from.....
- a) somatopleurone
 - b) somatopleurone
 - c) allantois
 - d) seroamnion
65. In sperm acrosome enzyme present that dissolve the egg membrane
..... OR..... The fish byproduct obtained from air bladder is
- a) Lysins.....OR.... Isinglass
 - b) Pepsin.....OR.... Fish manure
 - c) Lipase.....OR....Fish Pickle
 - d) Amylases. OR... Fish meal
66. According to distribution of Yolk, frog egg is type of the egg.
- a) Isolecithal
 - b) Telolecithal
 - c) Centrolecithal
 - d) Polylecithal

67. In Holoblastic cleavage.....
- a. Cleavage furrows passing through entire egg.
 - b. Cleavage furrows passing through half egg.
 - c. Cleavage furrows passing through only cytoplasm.
 - d. Cleavage furrows passing through only Yolk.
68. Tadpole of frog is.....OR.... Important mineral present in fishmeal is.....
- a) Herbivorous.....OR.... Phosphorous
 - b) Carnivorous..... OR Arsenic
 - c) Omnivorous.....OR....iron
 - d) Scavenger.....OR.... Cadmium
69. Function of the egg chalazae membrane is.....
- a) Nourishment of Embryo
 - b) maintains the viscosity of albumen
 - c) Provide strength to the egg
 - d) Maintain Yolk at central position
70. Primitive streak is formed at.....hr stage of embryonic development of chick.....OR..... bend is used by fisherman to join two large ropes.
- a. 15.....OR.... Sheet
 - b) 16.....OR.... Double
 - c) 17.....OR....Hawser
 - d) 18.....OR.... Fisherman

71. of the following is not an example of innate immunity.
- a) Muscle lining of alimentary canal
 - b) Maternal antibodies crossed through placenta
 - c) Phagocytic cells
 - d) Lysozyme
72. Epitope is a
- a) Region of an antibody binds to the antigen.
 - b) Region of antigen for which specific antibodies are produced
 - c) Variable region on f antibody
 - d) Constant region of an antibody
73. Type antibody can cross the placental barrier.OR... White spot disease is
- a) IgG.....OR....parasitic
 - b) IgM.....OR....bacterial
 - c) IgD.....OR....both a and b
 - d) IgF.....OR.... None of above
74. is not a cell of the immune system.
- a) Kupffer cells
 - b) Microglial cells
 - c) Goblet cells
 - d) Mesangial cells

75.are the properties of a potent antigen.
- a) self/nonself protein with molecular weight less than 10 KD
 - b) nonself protein with molecular weight more than 10 KD
 - c) self/ nonself protein with molecular weight more than 10 KD
 - d) nonself protein with molecular weight less than 10 KD
76. The immune response developed by vaccination isOR.... The sisal raw material used for making webbing and ropes is extracted from
- a) Artificial active...OR... abaca
 - b) Artificial passive.....OR... agave
 - c) Acquired active.....OR....flax.
 - d) Acquired passive.....OR....coconut
77. Act as B cell receptor.
- a) IgG and monomeric IgM
 - b) IgD and Monomeric IgM
 - c) IgD and IgE
 - d) IgG and IgD
78. cells are the professional antigen presenting cells.
- a) Macrophages
 - b) Dendritic cells.
 - c) Neutrophils
 - d) B lymphocytes

79. Mature T cell with CD8 marker areOR.... is inferior quality of fish meal.
- a) Cytotoxic T cells.....OR.... Fish manure
 - b) Regulatory T cells.....OR... Fish flour
 - c) Helper T cells.....OR.... Fish glue
 - d) Repressor T cells.....OR.... Fish ham
80.is the fresh water species of prawn
- a) Macrobrachium rosenburgi
 - b) Panaeus idicus
 - c) Metapeeus monoceros
 - d) Purupenaeopsis stylifera
81. An exotic breed of cattle is.....
- a) Ongole
 - b) Sindhi
 - c) Jersey
 - d) Sahiwal
82. Which of the following is used for induced breeding in fishes?
- a) MOET
 - b) ART
 - c) Hypophysation
 - d) Artificial insemination
83. Artificial insemination involves
- a) Super ovulation
 - b) Egg collection
 - c) Semen collection
 - d) Embryo collection

84. *Apis dorsata* is used to refer to OR....Fish bones are used to prepare.....
- a. little bee...OR... Fish meal
 - b. indian bee.....OR... Fish glue
 - c. European bee.. OR.... Fish pickle
 - d. Rock bee.....OR.... Fish manure
85. In the artificial insemination in cattle the semen is deposit in.....
- a) Vagina
 - b) External OS
 - c) Body of uterus
 - d) Vestibule
86. Cultivation of fishes in artificially prepared ponds or water bodies is called.OR....Fish preservation method extensively practiced in India is.....
- a. Aquaculture.....OR... Canning
 - b. Pisciculture...OR.... Drying
 - c. Vermiculture...OR... Salting
 - d. Agriculture.....OR....Smoking
87. Polyculture is also known as:
- a. Sericulture
 - b. Composite fish culture
 - c. Monoculture
 - d. Monosex culture

88. What does pollen consist of mainly?
- a. Protein
 - b. Fat
 - c. Carbohydrates
 - d. None of these
89. What is the name of the milk sugar found only in milk?.....OR....Gill rot is also called as
- a. SucroseOR....Cryptobiosis
 - b. Galactose...OR....Costiasis
 - c. Lactose.....OR....branchiomycoses
 - d. Fructose.....OR....Myxobolosis
90. The pearl bed which produces best quality is known as
- a. Lingha pearl
 - b. Muktapthal
 - c. Kusum
 - d. None of the above.
91. Which of the following is not a mosquito-borne illness?OR... Tuberculosis in fish is caused by.....
- a) Lyme disease.....OR... Mycobacterium
 - b) West Nile virus.....OR... Pseudomonas punctata
 - c) West Nile virus..... OR....Chondroccus columnaris
 - d) Zika virus....OR. Aeromona salmonicida

92. The motile zygote of Plasmodium is found in
- a) human liver
 - b) human RBCs
 - c) salivary glands of female Anopheles
 - d) the gut of female Anopheles
93. Which of the following is not a vector-borne disease?.....OR.... Fin and Tail Rot disease is caused by
- a) Yellow fever.....OR... Chondroccus columnaris
 - b) Dengue fever.....OR....myobacteria
 - c) Viral fever.....OR....Aeromonas salmonicid
 - d) Malaria.....OR....none of these
94. Sporozoites of the malarial parasites are found in
- a) the saliva of female Anopheles mosquito, which is freshly moulted
 - b) the saliva of infected female Anopheles mosquito
 - c) RBCs of an infected human
 - d) the spleen of an infected human

95. Which teeth helps the tongue to swallow food?OR... Furunculosis disease is caused by.....
 - a) Molars.....OR...Aeromonas salmonicida
 - b) Canine..... OR... mycobacteria
 - c) Premolars..... OR... both a and
 - d) Incisors.OR. none of these
96. The papillae present on the margins of the tongue
 - a) Fungiform
 - b) Filiform
 - c) Vallate
 - d) Foliate
97. What is the scientific name of the common housefly?
 - a) Stomoxys calcitrans
 - b) Siphonalia zittzovae
 - c) Brachydiplax denticauda
 - d) Musca domestica
98. Plague is caused by which bacteria?OR..... is the causative agent of dropsy disease.
 - a) Clostridium.....OR... Chondrocytes columnaris
 - b) Mycobacteria...OR... Aeromonas salmonicida
 - c) Yersinia Pestis.....OR... Pseudomonas punctata
 - d) None of the above.....OR.... none of these

99. Pancreas is a..... gland.

a) Heterocrine

b) Endocrine

c) Exocrine

d) Hormone

100. Which among the following is structural and functional unit of a kidney?

a) Nephron

b) Neuron

c) Urethra

d) Henle's loop

◆◆◆

ROUGH WORK

