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| Seat No. | |
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ENT - 22

Total No. of Pages : 24

PG ENTRANCE EXAMINATION, 2024

ZOOLOGY

Subject Code : 58719

Day and Date : Saturday, 18-05-2024

Total Marks : 100

Time : 3.30 p.m. to 5.00 p.m.

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.

1. Diastema is found in

- a) Man
- (b) Rat
- c) Both
- (d) None of the above

2. Malaria is transmitted exclusively through the bites of.....mosquitoes

- a) Male Culex
- b) Female Aedes
- c) Female Anopheles
- d) Male Aedes

3. Consider the following statements about Chikungunya disease

1. It is a bacterial disease transmitted to humans by the mosquitoes
2. At present, there is no vaccine to treat/prevent Chikungunya disease

Which of the above statement is/are correct?

- | | |
|-----------------|--------------------|
| a) 1 only | b) 2 only |
| c) Both 1 and 2 | d) Neither 1 nor 2 |

4. Radial symmetry is observed in

- | | |
|-----------------|--------------------|
| a) Protista | b) Porifera |
| c) Coelenterata | d) Platyhelminthes |

5. Ampulla are observed in

- | | |
|--------------------------|-----------------|
| a) Water vascular system | b) Nephridia |
| c) Gills | d) Green glands |

6.is also called as suicidal body.

- a) Mitochondria
- b) Golgi Complex
- c) Endoplasmic Reticulum
- d) Lysosomes

7. The dinosaurs ruled the earth during..... period

- | | |
|-------------|-------------|
| a) Devonian | b) Cambrian |
| c) Permian | d) Jurassic |

- 8) Frequency of crossing over would be higher if
- a) Two genes are located closely
 - b) Two genes are far apart on a chromosome
 - c) Two genes are not located on the same chromosome
 - d) none of the above
- 9) Protenor type of sex determination is also called as
- a) XX-XY Type
 - b) XX-X0 Type
 - c) XY-X0 Type
 - d) ZZ-XW Type
- 10). The contraceptive method involving the surgical blocking or sealing of the fallopian tubes is called -----.
- a) Tubal ligation
 - b) Vasectomy
 - c) Condms
 - d) Diaphragm
- 11) Typhodot is
- a) Effective medicine for typhoid fever
 - b) Diagnostic test for typhoid fever
 - c) Vaccine for typhoid fever
 - d) Anti biotic against typhoid
- 12)is mulberry silkworm.
- a) Antheraeae mylitta
 - b) Antheraea assamensis
 - c) Bombyx mori
 - d) Samia ricini

13) An organism which provides shelter and nourishment for parasite.

- a) Parasite
- b) Virus
- c) Animal
- d) Host

14. Which class of amphibians includes frogs and toads?

- a) Anura
- b) Urodela
- c) Gymnophiona
- d) Caudata

15. What is the primary function of the venom glands in venomous snakes?

- a) Aid in digestion of prey
- b) Enhance vision
- c) Produce saliva for lubrication
- d) Produce and store venom for defense

16) Which process shares the same pathway as glycolysis but in opposite direction?

- a) Glycogenesis
- b) Gluconeogenesis
- c) Glycogenolysis
- d) HMP-shunt

17. Which of the following is NOT a general characteristic of Protochordata?

- a) Notochord present in some stage of life
- b) Dorsal hollow nerve cord
- c) Post-anal tail present
- d) Exoskeleton made of chitin

18) Which of the following is the non-protein component of the enzyme?

- a) Cofactor
- b) Activator
- c) Coenzyme
- d) All of these

19) secretes a fluid rich in fructose and other substances to nourish and activate sperm.

- a) Epididymis
- b) Cowper's gland
- c) Seminal vesicle
- d) Prostate gland

20) The toxic material involved in formation of urea is

- a) CO₂
- b) Ammonia
- c) Uric acid
- d) All of the above

21. Eustachian tube connects

- a) Pharynx with middle ear
- b) Middle ear with external ear
- c) Middle ear with external ear
- d) External ear with internal ear

22. Functional unit of kidney isOR..... Scoliodon is included in Class.....

- a) hilum.....OR....Osteichthyes
- b) neuron.....OR....Dipnoi
- c) nephron OR....Chondrichthyes
- d) medulla.....OR.... None of these

23. is the first vertebra of Cervical region.

- a) Atlas
- b) Axis
- c) Typical
- d) Free thoracic vertebra

24. Gills axis without gill filaments is termed as

- a) holobranch
- b) hemibranch
- c) pleurobranch
- d) abranch

25. DNA replication is always takes place from

- a) 5' - 3'
- b) 3' - 5'
- c) 5' - 5'
- d) 3' - 3'

26. Shine-Dalgarno sequence is present in theORis commonly

called as Saw fish.

- a) hnRNA.....OR....Cyprinus
- b) mRNA.....OR.... Pristis
- c) tRNA.....OR....Scoliodon
- d) siRNA.....OR....Labeo

27 Translation occurs in.....

- a) Nucleus
- b) Cytoplasm
- c) Nucleolus
- d) Lysosome

28. Horn, Nails & hairs are mainly composed of

- a) Cutin
- b) Elastin
- c) Keratin
- d) Collagen

29. Dentition in Scoliodon isOR.... The standard Secchi disk isin shape.

- a) Heterodont and diphyodont.....OR....Rectangular
- b) Heterodont and polyphyodont.....OR.... Triangular
- c) Homodont and diphyodontOR....Oval
- d) Homodont and polyphyodont.....OR....Circular

30. In birds, hurriedly swallowed dry and hard food grains are stored, moistened and softened in

- a) Oesophagus
- b) Crop
- c) Proventriculus
- d) Ventriculus.

31. In birds special sound producing box is called OR is commonly called as Electric Ray fish.

- a) Pessulus.....OR....Pristis
- b) Syrinx.....OR.... Torpedo
- c) larynx.....OR....Chimaera
- d) vocal cord.....OR....Scoliodon

32 The basic number of aortic arches are

- a)10
- b) 6
- c) 8
- d) 5

33. In our body involuntary actions are controlled by

- a) Medulla oblongata
- b) Medulla in Forebrain
- c) Medulla in Spinal Cord
- d) Medulla in Midbrain

34.enzymes is used in PCR technique....OR.... is commonly known as Rat fish.

- a) Taq polymerase....OR....Chimaera
- b) RNA polymerase-1....OR....Scoliodon
- c) RNA polymerase -II....OR....Torpedo
- d) RNA polymerase -III....OR....Pristis

35 Restriction endonuclease produce.....cuts.

- a) External
- b) Internal
- c) Internal and external
- d) At one end

36 Plasmids replicate independently due to the presence of an.....

- a) Origin of replication
- b) Vector
- c) Markers
- d) Polylinker site

37. Embryonic stem cells are derived from the of the blastocyst.....OR....
Polypterus is included in class
- a) Inner cell mass.....OR.... Osteichthyes
 - b) Ectoderm.....OR....Chondrichthyes
 - c) Blastocoel.....OR....Dipnoi
 - d) Mesoderm.....OR.... None of these
- 38) The introduction of the nucleus from a cell into an enucleated egg cell is called as
- a) Gene transfer
 - b) Nuclear transfer
 - c) Cell transfer
 - d) Genome transfer
- 39) The concept of nuclear transfer was first conceived by
- a) Hans Spemann
 - b) Darwin
 - c) Mendel
 - d) Sewall Wright
- 40) In pharmaceutical industry, mass culturing of cells can be achieved by usingOR....Fishes possess vision.
- a) Test tube baby.....OR....Binocular
 - b) Bioreactor.....OR.... Monocular
 - c) Autoclave.....OR.... Trinocular
 - d) Electrophoresis.....OR....Mosaic

41) What is somatic Cell Nuclear Transfer?

- a) Two nucleuses of 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

42) Genetically engineered golden rice is rich inOR....Chiton is an example of class

- a) Vitamin A and nicotinic acid.....OR... Aplacophora.
- b) B-Carotene, vitamin A and folic acidOR....Polyplacophora
- c) B-carotene and iron.....OR....Monoplacophora
- d) Vitamin A and niacin.....OR....Scapopoda

43) The ability of single cells to divide and produce all differentiated cells in the entity.....

- a) Totipotency
- b) Multipotent
- c) Pluripotent
- d) Unipotent

44)is the name given to the hypothetical primitive kidney of ancestral verterbrates.

- a) Pronephros
- b) Mesonephros
- c) Metanephros
- d) Archinephros

45. Sanger sequencing method is used for sequencing ofOR....Octopus belongs to class
- a) DNA.....OR....Cephalopoda
 - b) RNA.....OR....Scapopoda
 - c) Protein.....OR....Gastropoda
 - d) RNA-DNA hybrid.....OR.... Pelecypoda
46. The heat shock step is used in method of DNA transformation.
- a) Electroporation
 - b) Calcium chloride
 - c) Electrophoresis
 - d) None of these
47. 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
48. The initiation codon isOR.....Cephalothorax is the fusion of
- a) AUG....OR....Head & thorax
 - b) UAA.....OR....Head & abdomen
 - c) UAG....OR....Aabomen & thorax
 - d) UGA.....OR....None of these

49. The operon hypothesis was discovered by

- a) Watson and Crick
- b) Mendel
- c) Jacob and Monod
- d) Niren berg

50) Which of the following are methods under measures of dispersion?

.....OR....Prawn belongs to sub class

- a) Standard deviation.....OR.... Ostracoda
- b) Mean deviation.....OR....Copepoda
- c) Range.....OR....Brachiopoda
- d) All of the above.....OR....Malacostraca

51) The correlation for the values of two variables moving in the same direction is

- a) Perfect positive
- b) Negative
- c) Positive
- d) No correlation.

52) Transgenic mice are being developed for use in testing the safety of Vaccines before they are used on ORis commonly called as Cuttle fish.

- a) PigsOR....Chimaera
- b) Cattle.....OR....Torpedo
- c) Monkeys.....OR....Scoliodon
- d) Humans.....OR....Sepia

53) When glucose level falls below the normal value, then the condition is called as.

- a) Hypoglycemia
- b) Ketosis
- c) Glycogenesis
- d) Hyperglycemia

54). Following is the peptide hormone.....OR... Paddy farming is also known as

- a) Estrogen.....OR.... Wheat farming
- b) Insulin.....OR....Rice farming
- c) Progesterone.....OR....Maize farming
- d) Testosterone.....OR....Jawar farming

55. The deepest lake in world is Lake in Siberia.

- a) Baikal
- b) Superior
- c) Hauroko
- d) Quesnel

56. Ais standing water body which lacks the continuity with sea water.OR....Beta-oxidation of fattyacids occurs in

- a) River.....OR... Peroxisome
- b) Lake.....OR....Mitochondria
- c) Estuary.....OR.... Peroxisome and mitochondria
- d) Glacier.....OR.... Peroxisom, mitochondria and ER

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. Coral reef is produced by Coelenterates belonging to Class.....OR..... is an example of unsaturated fatty acids.
- a) Agnatha.....OR....Linoleic or Octadecatrienoic
b) Cestoda.....OR.... Palmitic or hexadecanoic
c) Anthozoa.....OR.... Lauric or Dodecanoic
d) InsectaOR....Myristic or tetradecanoic
59. After removal of the Parathyroid glands, the blood calcium level falls and causes neuromuscular irritability, which is called as
- a) Tetany b) Mexodema
c) Cretinism d) Glycosuria
60. According to the amount of Yolk, egg of amphioxus is the example of.....
- a) alecithal b) microlecithal
c) telolecithal d) megalecithal
61. In chick, during embryonic development, brain is formed from.. ...germinal layer.
- a) ectoderm b) mesoderm
c) endoderm d) blastomere

62. Migration and rearrangement of cells during embryonic development occur in..... OR.... The tide formed on full moon and new moon day is known as..... tide

- a) Epiboly.....OR....Neap.
- b) EmbolyOR....Ebb tide
- c) Evagination.....OR....lood
- d) Gastrulation.....OR....Spring

63. Single primary spermatocyte produces.....sperm

- a) 3
- b) 4
- c) 5
- d) 6

64. according to distribution of Yolk, frog egg is..... type of the egg.....OR....Crab is included in Class

- a) Isolecithal.....OR....Chondrichthyes
- b) TelolecithalOR.... Crustacea
- c) Centrolecithal.....OR....Pelecepoda
- d) PolylecithalOR.... Dipnoi

65. Tadpole of frog is.....

- a) Herbivorous
- b) Carnivorous
- c) Omnivorous
- d) Scavenger

66. Primitive streak is formed at.....hr stage of embryonic development of chick.

- a) 15
- b) 16
- c) 17
- d) 18

67. During the development of chick 1st Pair of somite formed at.....hr stage.....OR.... The rock dwelling animals are having highly developed organs for

- a) 18.....OR.... excretion
- b) 19.....OR....digestion
- c) 20.....OR....locomotion
- d) 21.....OR....attachment

68. is not a cell of the immune system.

- a. Kupffer cells
- b. Microglial cells
- c. Goblet cells
- d. Mesangial cells

69. CD4 cells recognize

- a. Antigen presented with MIC class I
- b. Antigen presented with MHC class II
- c. Virus infected cells
- d. Cancer cells

70. Induced breeding technique is used in

- a) Capture fishery
- b) Marine fishery
- c) Culture fishery
- d) Inland fishery

71. Which teeth helps the tongue to swallow food?...OR... Duringtide, sea water level recedes
- a) Incisors.....OR....flood b) Canine.....OR....Spring
c) Premolars OR....Neap d) Molars.....OR....Ebb
72. The papillae present on the margins of the tongue
- a) Fungiform b) Filiform
c) Vallate d) Foliate
73. Yellow fever is transmitted by.....OR.....Zone of Sea lies over continental shelf is
- a) Anopheles.....OR.... Oceanic zone
b) AedesOR....Neritic zone
c) Housefly.....OR....Aphotic zone
d) Tse-tse fly..OR. Disphotic zone
74. Plague is caused by which bacteria?
- a) Clostridium b) Mycobacteria
c) Yersinia Pestis d) None of the above
75. cells are involved in cell mediated immunity.....OR.... There is virtually total darkness in..... zone.
- a) T cells.....OR....Bathypelagic
b) B cells.....OR....Epipelagic
c) NK cells.....OR.... Mesopelagic
d) Plasma cells.....OR....Pelagic

76. Lymphoid progenitor cells is differentiates into

- a) B cells
- b) T cells
- c) Dendritic cells
- d) Granulocytes

77. An organism which provides shelter and nourishment for parasite.

.....OR....Pomfret is commonly known as

- a) Parasite.....OR....Bangda
- b) Virus.....OR....Bombil
- c) Animal.....OR....Saranga
- d) Host.....OR....Paplet

78. Choriovitelline type of placenta is present in..... ..OR..... is the subdivision of deep sea system

- a) Marsupials.....OR....Abyssal zone
- b) Ungulates ..OR....Littoral zone
- c) Human.....OR.... Neritic zone
- d) Carnivorous.....OR.... Oceanic zone

79. is the upper layer of stratified lake which has temperature near 21-22° C and continuously stirred by wind.

- a) Hypolimnion
- b) Epilimnion
- c) Metalimnion
- d) Thermocline

- 80) Glucagone hormone is secreted by Cells of Islets of Langerhans, which shows hyper-glycaemic effect.....OR....Pelagic region of sea is further divided horizontally into zone
- a) Alpha.....OR....Neritic & oceanic
 - b) Beta.....OR.... Euphotic
 - c) Delta.....OR....Disphotic
 - d) A.....OR....Aphotic
- 81) zone is the area of shoreline between the low tide and high tides, which is stressful, biologically productive habitat.
- a) Hadal
 - b) Abysal
 - c) Intertidal
 - d) Pelagic
- 82) Endocrine glands are also called as glands.....OR....In deep sea system the zone that extend to depth of 200-4000 meters is called.....
- a) Exocrine.....OR....Hadal zone
 - b) Poisonous.....OR....Abyssal
 - c) Ductless.....OR.... Bathyal zone
 - d) Lacrymal.....OR....none of the above
- 83) 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

84) Epitope is aOR....Study of physico-chemical aspects of sea is called

- a. Region of an antibody binds to the antigen.....OR....geology
- b. Region of antigen for which specific antibodies are produced OR oceanography
- c. Variable region on l'antibody.....OR....zoogeography
- d. Constant region of an antibody.....OR....geography

85) Which of the following statements is true for IgM

- a. It can cross the placental barrier
- b. It is secreted to protect the mucosal surface
- c. It remains attached to the plasma membrane
- d. It is pentamers

86) is not an autoimmune disease.

- a) Rheumatoid arthritis
- b) Type I diabetes Mellitus
- c) ADIS
- d) Hashimoto syndrome

87) Type I hypersensitivity is mediated byOR.... Inter tidal zone of benthic region is also known as

- a) IgG.....OR....sub littoral zone
- b) IgM.....OR....supra littoral zone
- c) IgD.....OR....subtidal zone
- d) IgE.....OR....eulittoral zone

88..... cells are the professional antigen presenting cells.

- a) Macrophages
- b) Dendritic cells.
- c) Neutrophils
- d) B lymphocytes

89) is the fresh water species of prawn

- a) Macrobrachium rosenburgi
- b) Panaeus idicus
- c) Metapeeus monoceros
- d) Parapenaepsis stylifera

90) An exotic breed of cattle isOR..... The main salinity-causing ion in sea is

- a) Ongole.....OR....sulphate
- b) Sindhi.....OR....sodium
- c) Jersey.....OR....chloride
- d) Sahiwal.....OR....phosphate

91) Which among the following is vestigial in function?

- a) Duodenum
- b) Vermiform appendix
- c) Peyer's patch
- d) Plicae circulars

- 92) Which of the following is not a mosquito-borne illness?OR....In deep sea system the zone that extend to depth of 4000-6000 meters is called
- a) Lyme disease.....OR.... Abyssal
 - b) West Nile virus.....OR....Bathyal zone
 - c) West Nile virus.....OR....Hadal zone
 - d) Zika virus.....OR....none of the above
- 93) Which of the following is not a vector-borne disease?
- a) Yellow fever
 - b) Dengue fever
 - c) Viral fever
 - d) Malaria
- 94) In the artificial insemination in cattle the semen is deposit in
- a) Vagina
 - b) External OS
 - c) Body of uterus
 - d) Vestibule
- 95) Pearl mother layer is:
- a. Prismatic layer
 - b. Periostracum
 - c. Nacre
 - d. Mantle
- 96) What does pollen consist of mainly?.....OR.... To estimate the degree of transparency of water sample, simple & standard instrument used is.....
- a. Protein.....OR....Secchi disk
 - b. Fat.....OR....Reversing Thermometer.
 - c. Carbohydrates.....OR.... Water sampling bottle
 - d. None of these....OR....Grab

97) The pearl bed which produces best quality is known as

- a. Lingha pearl
- b. Muktaphal
- c. Kusum
- d. None of the above

98) The lightest body weighed goat is

- a. Beetal
- b. Barbari
- c. Jamnapari
- d. Toggenburg

99) Which of the following is an incorrectly matched pair of a disease and its associated vector?

- a) Leishmaniasis-Anopheles culifacies
- b) Dengue fever-Aedes aegypti
- c) Filariasis Culex pipiens
- d) Sleeping sickness-Glossina palpalis

100) The immune response developed by vaccination is

- a) Artificial active
- b) Artificial passive
- c) Acquired active
- d) Acquired passive



- Rough Work -

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