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**ENT - 41**

**Total No. of Pages : 16**

**Shivaji University, Kolhapur**

**Entrance 2023-24**

**M. Sc. Zoology**

**Sub. Code : 58719**

**Day and Date : Tuesday, 08-08-2023**

**Total Marks : 100**

**Time : 10.30 a.m. To 12.00 noon**

**1. Haploid set of the chromosome is called .....**

- a) Proteome
- b) Genomics
- c) Genome
- d) Genes

**2. The early cell types which were formed on earth, were...**

- a) Aerobic, autotrophic
- b) Anaerobic, autotrophic
- c) Anaerobic, heterotrophic
- d) Aerobic, heterotrophic

**3. The condensed DNA is called as....**

- a) Euchromatin
- b) Heterochromatin
- c) Non-sense DNA
- d) Both b & c

**4. Natural selection theory of evolution was proposed by...**

- a) Lamark
- b) Darwin
- c) Mendel
- d) Hugo de Vries

**5. Golgi apparatus is often associated with.....**

- a) Mitochondria
- b) RER
- c) Lysosome
- d) None of these

**6. Sol gel theory refers to.....**

- a) Respiration
- b) Locomotion
- c) Excretion
- d) Reproduction

**7. Body is asymmetrical in...**

- a) Calcaria
- b) Demospongia
- c) Hexactinellida
- d) Demospongia

**8. Nucleosome does not contain.....protein.**

- a) H<sub>1</sub>
- b) H2A
- c) H3d
- d) H5

**9. The term Genetics was first coined by ..... in 1905.**

- A) William Bateson.
- b) Mendel
- c) Darwin
- d) Robert Hook

**10. .... is permanent method of contraception for relatively long period.**

- a) Foam tablets
- b) Diaphragm
- c) Cervical Caps
- d) Copper T

**11. A process of oxidation is stopped by enzymes of fatty acid synthesis.**

- a) acetyl CoA
- b) malonyl CoA
- c) acetyl CoA ACP transacylase
- d) B ketoacyl ACP

**12. A scrotum contains .....**

- a) Seminal Vesicles
- b) Prostate gland
- c) Testis
- d) Kidneys

**13. Leydig's cells secrete ..... hormone.**

- a) Progesterone
- b) Estrogen
- c) Testosterone
- d) Luteotrophic hormone

**14. Basic two symptoms of typhoid fever are.....**

- a) Fever and Spot
- b) Constipation, Dizziness
- c) Weakness, Abdominal pain
- d) Gastrointestinal perforation

**15. The term.....include both host and parasite.**

- a) Parasitism
- b) Dermatology
- c) Ecology
- d) Phylogeny

**16. Lock and Key Hypothesis was put forward by .....**

- a) Edward Buchner
- b) F.W. Kuhne
- c) James Sumner
- d) Emil Fischer

**17. .... is a chronic sexually transmitted disease.**

- a) Typhoid
- b) Headache
- c) Syphilis
- d) Dysentery

**18. In the male has one X chromosome less.**

- a) Cockroach
- b) Fowl
- c) Drosophila
- d) Worker honeybee

**19. Which of the following is distinguishing character of Mammals?**

- a) Body Hairs
- b) External Ear Pinna
- c) Mammary Glands
- d) All of the above

**20. Where does oxygen diffuse take place in fishes ?**

- a) Gill arch
- b) Operculum
- c) Gill lamellae
- d) Gill comb

**21. The valve located between the left auricle and left ventricle is called**

- a) mitral valve
- b) Eustachian
- c) thebesian
- d) tricuspid valve

**22. The duct of Parotid gland is known as .....**

- a) Bartholins duct
- b) Wilson's duct
- c) Stensen's duct
- d) Wharton's duct

**23. .... is the first vertebra of Cervical region.**

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

- 24. In protein synthesis, translocation is initiated with the movement of.....OR.....  
The study of freshwater is known as...**
- a) dipeptidyl tRNA from A-site to P-site.....OR.....Limnology
  - b) tRNA from A-site to P-site.....OR.....Ecology
  - c) tRNA from P-site to E-site.....OR.....Geology
  - d) tRNA from P-site to the A-site .....OR.....Cytology
- 25. What is the size of the prokaryotic ribosome?**
- a) 80S
  - b) 70S
  - c) 40S
  - d) 60S
- 26. Name the inhibitor which blocks translation in both prokaryotes as well as eukaryotes?**
- a) Chlorophenicol
  - b) Tetracycline
  - c) Puromycin
  - d) Streptomycin
- 27. Which of the following is not true to the nature of the genetic code?**
- a) Codon is triplet
  - b) Codons are commaless
  - c) Codons are overlapping
  - d) Codons are universal
- 28. Which position of a codon is said to wobble?**
- a) Third
  - b) Second
  - c) First
  - d) Fourth
- 29.. Which of the following is considered as a start codon?.....OR.....The cast net is also called as.....**
- a) AUG.....OR..... Ghagria jal
  - b) GUG.....OR.....Kharra jal
  - c) UAG.....OR..... Hela jal
  - d) AGG.....OR.....Khorsula jal
- 30. Name the drug which inhibits the initiation step of translation.**
- a) Cyclohexamine
  - b) Tetracycline
  - c) Ricin
  - d) Streptomycin

**31. Genetically engineered golden rice is rich in .....**

- a) Vitamin A and nicotinic acid
- b) B-Carotene, vitamin A and folic acid
- c) B-carotene and iron
- d) Vitamin A and niacin

**32) ..... is prepared by inoculating directly from the tissue of an organism to culture media.....OR.....The surface layer of the lake is known as.....**

- a) Cell lines.....OR..... Hypolimnion
- b) Secondary cell culture.....OR.....Metalimnion
- c) Primary cell culture.....OR.....Epilimnion
- d) Transformed cell culture.....OR.....Thermocline

**33. A codon contains how many nucleotides?.....OR..... Nursery ponds are used to rear.....**

- a) 1.....OR.....Fingerlings
- b) 2.....OR.....Adult fish
- c) 3...OR....Fry
- d) 4.....OR...Hatchling

**34) Transplantation of living cells, tissues or organs from one species to another is ...**

- a) Autograft
- b) Xenograft
- c) Allograft
- d) Syngeneic graft

**35) To calculate the median, all the items of a series have to be arranged in a/an ...is cultivable Indian major carp.....**

- a) Descending order.....OR..... Tilapia moosambica
- b) Ascending order.....OR..... Chinese carp
- c) Ascending or descending order.....OR..... Cirrhina mrigala
- d) None of the above.....OR....Cyprinus carpio

**36) Standard deviation is the square of.....**

- a) Mode
- b) Variance
- c) Standard error
- d) Correlation

**37. ....glands are having the ducts through which their secretions are deposited into the proper region of the body.**

- a) Endocrine
- b) Exocrine
- c) Thyroid
- d) None of the above

**38. ....glands are without ducts which deposit their secretions directly in to the blood.....OR.....Size of rearing pond is.....**

- a) Exocrine...OR...50'x50'x4'
- b) Salivary...OR...8'x4'x2'
- c) Endocrine...OR...90'x30'x4'
- d) None of above...OR...300'x80'x6'

**39. Profundal zone is also called as.....**

- a) Aphotic zone.....OR.....Euryhaline
- b) Photic zone. ....OR..... Stenohaline
- c) Littoral zone.....OR.....Eurythermal
- d) Limnetic zone.....OR.....Stenothermal

**40. ....are small, shallow and standing water bodies.**

- a) Lakes
- b) Rivers
- c) Rivulets
- d) Ponds

**41. .... is the study of water based ecosystems.....OR..... The ideal topography of the fish farm site is a gently.....terrain of wide valley.**

- a) Terrestrial ecology.....OR....Deep
- b) Grassland ecology.....OR....Shallow
- c) Desert ecology...OR...Steep
- d) Aquatic ecology...OR...Sloping

**42. Plasma cells are .....**

- A) Effector cells of B lymphocyte lineage
- B) Effector cells of T lymphocyte lineage
- C) Memory cells
- D) Natural killer cells

**43. .... of the following is not an example of innate immunity. .... is the subdivision of deep sea system**

- A) Skin and secretion of sebaceous gland.....OR.....Oceanic zone
- B) Mucous, lysozyme, HCl in gastric juice secretion.....OR.....Neritic zone
- C) IgG transferred to the foetus through the placenta...OR....Abyssal zone
- D) Phagocytosis and inflammation.....OR..... Littoral zone

**44) Portion of placenta contributed by the embryo in human is the .....**

- a) Chorion
- b) Yolk sac
- c) Amnion
- d) Allantois

**45) Which gland plays important role in metamorphosis of frog's tadpole?**

- a) thymus
- b) adrenal
- c) pancrease
- d) thyroid

**46) Relative to the primitive streak and Henson's node, somite formation in the chick embryo occurs.....OR..... There is virtually total darkness in .... zone.**

- a) Anterior to Henson's node, after the primitive steak has retracted past that point.....OR..... Bathypelagic
- b) Posterior to Henson's node, as cells from the lateral portions of the epiblast move in through the primitive streak to become mesoderm.  
.....OR.....Pelagic
- c) Adjacent to Henson's node, as the primitive streak migrates toward the anterior of the embryo.....OR.....Mesopelagic
- d) Somite formation occurs simultaneously along the axis, after Henson's node has fully retracted.....OR.....Epipelagic

**47. T cells recognizing self antigen-MHC complex are subjected to apoptosis in .....**

- a) Lymph node
- B) Spleen
- C) Bone Marrow
- D) Thymus

**48. .... is the fresh water species of prawn.....OR.....Study of physico-chemical aspects of sea is called.**

- a) Macrobrachium rosenburgi.....OR.....oceanography
- b) Panaeus idicus...OR.....geology
- c) Metapeeus monoceros ..OR.....geography
- d) Parapenopsis stylifera OR zoogeography

**49. Hybridoma for the production of monoclonal antibodies is formed by the fusion of..... And...**

- A) Antibody-producing B cell and T cell
- B) Antibody-producing B cell and Plasma cell
- C) Antibody-producing B cell and stem cell
- D) Antibody-producing B cell and Myeloma cell

**50. Arrange the following from highest antigenicity to lowest antigenicity.**

- A) Carbohydrates < Protein < Lipid
- B) Lipid < Carbohydrate < Protein
- C) Protein < Carbohydrate < Lipid
- D) Protein < Lipid < Carbohydrate

**51. .... is the pentameric antibody.**

- A) IgG
- B) IgM
- C) IgA
- D) IgE

**52) DNA is microinfected into the fertilized egg.....OR.....Minimata disease occurs due to release of.....**

- a) After the fusion of male and female nuclei...OR...Human organic waste in water
- b) Before the fusion of male and female nuclei.....OR..... Mercury into fishing water
- c) At the time of fusion of male and female nuclei...OR...Oil spills into
- d) Any time, it can be infected.....OR..... None of the above sea



**53) For a histogram based on a frequency distribution with unequal class intervals, the frequency of a class should be proportional to...**

- a) The height of the rectangle
- b) The area of the rectangle
- c) The width of the rectangle
- d) The perimeter of the rectangle

**54. At the bottom of the water body.....zone is located.....OR marine animals tolerating wide range of salinity are known as**

- a) Photic
- b) Aphotic
- c) Benthic
- d) Littoral

**55. .... is the running water system which includes rivers, streams, springs etc.**

- a) Lentic habitat
- b) Lotic habitat
- c) Semilotic habitat
- d) None of the above

**56) .....is the application of somatic cell nuclear transfer technology**

- a) Production of bio-larvicides
- b) Reproductive cloning of animal
- c) Manufacture of biodegradable plastics
- d) Production of organisms free of diseases

**57) Embryonic stem cells are derived from.....**

- a) Undifferentiated inner cell mass of embryo
- b) Differentiated inner cell mass of embryo
- c) Undifferentiated trophoblast cells
- d) Differentiated trophoblast cells

**58) If the value of correlation coefficient is positive, then the points in a scatter diagram tend to cluster .....**

- a) From lower left corner to lower right corner
- b) From lower left corner to upper right corner
- c) From lower right corner to upper left corner
- d) From lower right corner to upper right corner

- 59. ....is the standing water system which includes ponds, lakes and big reservoirs.**
- a) Lentic habitat
  - b) Lotic habitat
  - c) Semilotic habitat
  - d) None of the above
- 60. ....is a characteristic of stream hill fishes.....OR.....The surface feature of fish farm site is called as.....**
- a) Bulky body.....OR.....Physiology
  - b) Very big body.....OR... Hydrography
  - c) Streamline body...OR... Topography
  - d) None of the above.....OR.....Geology
- 61. .... is a physical parameter of the water.**
- a) Temperature
  - b) O<sub>2</sub>
  - c) CO<sub>2</sub>
  - d) Hardness
- 62) In highly telolecithal egg the usual type of cleavage is .....OR.....Zone of Sea lies over continental shelf is .....**
- a) equal holoblastic.....OR.....Disphotic zone
  - b) unequal holoblastic.....OR..... Oceanic zone
  - c) discoildal meroblastic.....OR.....Neritic zone
  - d) superficial meroblastic.....OR.....Aphotic zone
- 63) The Structure which remains unchanged during the metamorphosis of frog tadpole is**
- a) heart
  - b) lung
  - c) intestine
  - d) nervous system
- 64) Which part of the egg lies close to the animal pole .....**
- a) centriole
  - b) mitochondria
  - c) Nucleus
  - d) cytoplasm

- 65) Conversion of messages carried by mRNA into amino acid sequences is called.....OR..... A water body, with the addition of sewage, urban runoff, faces etc. become.....**
- Replication.....OR.....Dystrophic
  - DNA repair.....OR.....Monomicti
  - Translation...OR...Eutrophic
  - Transcription...OR...Oligotrophic
- 66. During submergence in aquatic turtles the accessory respiratory organ is.....OR... In fishes bladder having a pneumatic duct is called as. ..air baldder.**
- skin.....OR.....Physoclistous
  - Gill.....OR.....Physogaseous
  - cloacal bursae.....OR.....Physostomous
  - air sacs.....OR.....None of the above
- 67. The crop present in birds is a modification of.....**
- Pharynx
  - Oesophagus
  - Stomach
  - Intestine
- 68. The kidney of adult elasmobranch fish such as scoliodon is of..... type.....OR...Accessory respiratory organ in..... ..is air sac.**
- pronephrous.....OR.....Clarius
  - metanephrous.....OR.....Anabas
  - opisthonephrous.....OR..... Saccobranchus
  - archinephros.....OR..... None of these
- 69. Comparatively longest intestine is found in..... .OR..... In fishes, spawning phase usually commences between.....**
- herbivorous.....OR.....April to June
  - carnivorous.....OR.....August to September
  - omnivorous.....OR..... January to March
  - insectivorous. ..OR.....October to December

**70. ....are the dermal derivatives of the integument.....OR.....Dipnoi are also called as.....**

- a) Glands.....OR.....Bony fishes
- b) Scales.....OR.....Lung fishes
- c) Both a & b.....OR..... Primitive fishes
- d) None of these. ..OR..... None of these

**71. .... types of scales are present only in Cartilaginous fishes.**

- a) Placoid
- b) Cosmoid
- c) Cycloid
- d) Ctenoid

**72) .....is a connective tissue of nervous system.**

- a) adipose
- b) areolar
- c) neuroglia
- d) cartilage

**73. This elongation factor is known as translocase**

- a) EFG
- b) EF2
- c) both (a) and (b)
- d) EF-Tu and EF-

**74) In chick development, the cell movement during gastrulation is called.....OR.....Pelagic region of sea is further divided horizontally into. zone.**

- a) invagination.....OR..... Euphotic
- b) involution.....OR.....Disphotic
- c) ingression.....OR...Neritic & oceanic
- d) epiboly.....OR.....Aphotic

**75. Worker bee is a .....**

- a) Sterile female
- b) Sterile male
- c) Fertile female
- d) Fertile male

**76. In the artificial insemination in cattle the semen is deposit in .....**

- a) Vagina
- b) External OS
- c) Body of uterus
- d) Vestibule

**77. Artificial insemination involves .....**

- a) Super ovulation
- b) Egg collection
- c) Semen collection
- d) Embryo collection

**78. An exotic breed of cattle is .....OR.....In deep sea system the zone that extend to depth of 4000-6000 meters is called.....**

- a) Ongole.....OR..... Hadal zone
- b) Sindhi.....OR.....Bathyal zone
- c) Jersey.....OR..... Abyssal
- d) Sahiwal.....OR.....none of the above

**79. "Blue Revolution" is related with the following**

- a) Silk production
- b) Fish production
- c) Milk production
- d) Oil seed production

**80. .... is the largest sized honey bee found in India**

- a) Apis indica
- b) Apis dorsata
- c) Apis mellifera
- d) Apis florae

**81. Induced breeding technique is used in .....**

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

**82) Viral encephalitis affects on.....organ.....OR..... The standard Secchi disk is ..... in shape.**

- a) Liver.....OR.....Oval
- b) Lungs .....OR.....Reactangular
- c) Heart .....OR.....Triangular
- d) Brain.....OR.....Circular

**83) Chikungunya is.....disease.....OR.....Beta-oxidation of fattyacids occurs in...**

- a) Bacterial ..OR.....Peroxisome, mitochondria and ER
- b) Viral.....OR.....Mitochondria
- c) Protozoan.....OR.....Peroxisome and mitochondria
- d) Fungal.....OR.....Peroxisome

**84) Endocrine unit of pancreas is.....**

- a) Pancreatic acini
- b) Islets of Langerhans
- c) Von Ebner glands
- d) Centroacinar cells

**85. Which of the following is used for induced breeding in fishes?**

**.....OR..... To estimate the degree of transparency of water sample, simple & standard instrument used is .....**

- a) MOET.....OR.....Reversing Thermometer.
- b) ART.....OR..... Water sampling bottle
- c) Hypophysation.....OR.....Secchi disk
- d) Artificial insemination.....OR.....Grab

**86) The Dengue Virus is transmitted by.....**

- a) Aedes sp.
- b) Culex sp.
- c) Anopheles sp.
- d) Armiger sp.

**87) Wuchereria bancrofti cause a disease.....**

- a) Filariasis
- b) Maleira
- c) Yellow fever
- d) Kala azar

**88) House fly transmits.....disease**

- a) Yellow fever
- b) Dengue
- c) Cholera
- d) Elephantiasis

**89) Which of the following is not a mosquito borne disease? instrument is used to sample sediment from the water.....**

- a) Malaria.....OR...Thermometer
- b) Dengue fever.....OR.....Secchi disk
- c) Yellow fever...OR... Water sampler bottle
- d) Viral fever...OR... Grab

**90) *Lismania donovani* cause.....disease**

- a) Kala azhar
- b) Diarrhea
- c) Cholera
- d) Jaundice

**91) Cleavage in Frog is.....**

- a) Holoblastic and equal
- b) Holoblastic and unequal
- c) Meroblastic and unequal
- d) Meroblastic and equal

**92) The process in which the three germ layers form is called:**

- a) fertilization
- b) cleavage
- c) gastrulation
- d) organogenesis

**93) The period immediately after birth to four weeks of age is called ....OR..... The main salinity-causing ion in sea is.....**

- a) Senescent.....OR..... sodium
- b) Adolescent.....OR.....sulphate
- c) Infancy.....OR.....phosphate
- d) Neonatal .OR..... chloride

**94. .... is the thymus-dependent area of a lymph node.....OR..... All water beyond edge of continental shelf is included in..... zone.**

- A. Cortex .....OR..... neretic
- B. Paracortex.....OR.....oceanic
- C. Medulla.....OR..... pelagic
- D. Both A and B.....OR.....benthic

**95. Match the following**

- i. Histocytes
  - ii, Kupffer cells
  - iii Mesangial cells
  - iv. Microglial cells
  - a. Brain
  - b. Connective tissue
  - c. Liver
  - d. Kidney
- A. i-c, ii-b, iii-a, iv-d  
B. i-b, ii-c, iii-d, iv-a  
C. i-d, ii-c, iii-b, iv-d  
D. i-d, ii-c, iii-b, iv-a

**96. .... produce a large number of antibodies which are released freely in circulation.....OR..... Inter tidal zone of benthic region is also known as.....**

- A. B cells.....OR.....sub littoral zone
- B. T cells.....OR.....subtidal zone
- C. Plasma cells.....OR..... eulittoral zone
- D. Natural killer cells.....OR.....supra littoral zone

**97. Long form of MHC is.....**

- A. Major histocompatibility complex
- B. Molecular histochemistry
- C. Major histochemical complex
- D. Micro histocompatibility complex

**98. Scientific name of Pearl oyster is.....OR..... Mackerel is commonly known as .....**

- a) Pinctada vulgaris...OR...Bangda
- b) Apis dorsata.....OR.....Saranga
- c) Bombax mori.....OR..... Paplet
- d) Periplaneta americana.....OR.....Bombil

**99) ..... ..is the layer of stomach wall contains gastric glands.....OR.....Essential fatty acids are.....**

- a) Serosa.....OR..... Arachidonic acid
- b) Muscularis.....OR.....Linoleic acid
- c) Sub-mucosa .....OR.....Linolenic acid.
- d) Mucosa.....OR.....All the above

**100) Presence of Payer's patches is the characteristic of.**

- a) Oesophagous
- b) Intestine
- c) Rectum
- d) Stomach