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P.G. Entrance Examination, July - 2023**M.Sc. ZOOLOGY****Sub. Code : 58719****Day and Date : Tuesday, 18 - 07 - 2023****Total Marks : 100****Time : 10.30 a.m. to 12.00 Noon**

- 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) Dugesia belongs to class _____.
 - a) Cestoda
 - b) Turbellaria
 - c) Trematoda
 - d) Coelenterata

- 2) The roan colour cattle is an example of _____.
 - a) Co-dominance
 - b) Incomplete dominance
 - c) Multiple allele
 - d) Dominance

- 3) Body is asymmetrical in _____.
 - a) Calcaria
 - b) Demospongia
 - c) Hexactinellida
 - d) Arthropoda

- 4) The condensed DNA is called as _____.
 - a) Euchromatin
 - b) Heterochromatin
 - c) Non-sense DNA
 - d) Both b & c

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- 5) Presence of whole sets of chromosomes is called as _____.
- a) Haploids
 - b) Diploids
 - c) Triploids
 - d) Euploids
- 6) Golgi apparatus is often associated with _____.
- a) Mitochondria
 - b) RER
 - c) Lysosome
 - d) None of these
- 7) In the male has one X chromosome less.
- a) Cockroach
 - b) Fowl
 - c) Drosophila
 - d) Worker honeybee
- 8) The dinosaurs ruled the earth during _____ period.
- a) Jurassic
 - b) Devonian
 - c) Cambrian
 - d) Permian
- 9) Natural selection theory of evolution was proposed by _____.
- a) Lamark
 - b) Darwin
 - c) Hugo de Vries
 - d) Mendel
- 10) The term Genetics was first coined by _____ in 1905.
- a) William Bateson
 - b) Mendel
 - c) Darwin
 - d) Robert Hook
- 11) The process of glycolysis occurs in _____.
- a) cytosol
 - b) ribosomes
 - c) golgi complex
 - d) mitochondria.

- 12)** _____ is an organism which provides shelter and nourishment for parasite.
- | | |
|-------------|----------|
| a) Parasite | b) Host |
| c) Animal | d) Virus |
- 13)** 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 |
- 14)** In _____, 'parental care' is exhibited by the mother by coiling around the eggs and protecting them during development
- | | |
|----------------|------------------|
| a) Ichthyophis | b) Toad |
| c) Bull frog | d) Wrinkled frog |
- 15)** The enzyme arginase is found only in the _____ cells.
- | | |
|----------|-----------|
| a) liver | b) kidney |
| c) heart | d) brain |
- 16)** Jaws are absent in which of the following groups?
- | | |
|------------------|------------------|
| a) Gnathostomata | b) Agnatha |
| c) Tetrapoda | d) Protochordata |
- 17)** A scrotum contains _____.
- | | |
|---------------------|-------------------|
| a) Seminal Vesicles | b) Prostate gland |
| c) Testis | d) Kidneys |
- 18)** Leydig's cells secrete _____ hormone.
- | | |
|-----------------|-------------------------|
| a) Progesterone | b) Estrogen |
| c) Testosterone | d) Luteotrophic hormone |

- 19) _____ is a chronic sexually transmitted disease.
- a) Typhoid
 - b) Headache
 - c) Syphilis
 - d) Dysentery
- 20) Basic two symptoms of typhoid fever are _____.
- a) Fever and Spot
 - b) Constipation, Dizziness
 - c) Weakness, Abdominal pain
 - d) Gastrointestinal perforation
- 21) The crop present in birds is a modification of _____.
- a) Pharynx
 - b) Oesophagus
 - c) Stomach
 - d) Intestine
- 22) Comparatively longest intestine is found in _____.
- a) herbivorous OR Bathyal zone
 - b) carnivorous OR Abyssal
 - c) omnivorous OR Hadal zone
 - d) insectivorous OR none of the above
- 23) During submergence in aquatic turtles the accessory respiratory organ is _____.
- a) skin
 - b) gill
 - c) cloacal bursae
 - d) air sacs
- 24) The kidney of adult elasmobranch fish such as scoliodon is of _____ type.
- a) pronephrous
 - b) metanephrous
 - c) opisthonephrous
 - d) archinephros
- 25) The valve located between the left auricle and left ventricle is called
- a) mitral valve
 - b) eustachian
 - c) thebesian
 - d) tricuspid valve

- 26) _____ are the dermal derivatives of the integument.
- a) Glands
 - b) Scales
 - c) Both a & b
 - d) None of these
- 27) The duct of Parotid gland is known as _____.
- a) Bartholins duct
 - b) Wilson's duct
 - c) Stensen's duct
 - d) Wharton's duct
- 28) _____ is the first vertebra of Cervical region.
- a) Atlas
 - b) Axis
 - c) Typical
 - d) Free thoracic vertebra
- 29) _____ types of scales are present only in Cartilaginous fishes.
- a) Placoid
 - b) Cosmoid
 - c) Cycloid
 - d) Ctenoid
- 30) _____ is a connective tissue of nervous system OR Paddy farming is also known as _____
- a) adipose OR Maize farming
 - b) areolar OR Wheat farming
 - c) neuroglia OR Rice farming
 - d) cartilage OR Jawar farming
- 31) In protein synthesis, translocation is initiated with the movement of _____.
- a) dipeptidyl tRNA from A-site to P-site
 - b) tRNA from A-site to P-site
 - c) tRNA from P-site to E-site
 - d) tRNA from P-site to the A-site

- 32)** This elongation factor is known as translocase OR _____ is an example of unsaturated fatty acids.
- a) EFG OR Linoleic or Octadecatrienoic
 - b) EF2 OR Palmitic or hexadecanoic
 - c) both (a) and (b) OR Lauric or Dodecanoic
 - d) EF-Tu and EF- OR Myristic or tetradecanoic
- 33)** Conversion of messages carried by mRNA into amino acid sequences is called _____
- a) Replication
 - b) DNA repair
 - c) Translation
 - d) Transcription
- 34)** What is the size of the prokaryotic ribosome? OR The rock dwelling animals are having highly developed organs for _____.
- a) 80S OR digestion
 - b) 70S OR attachment
 - c) 40S OR excretion
 - d) 60S OR locomotion
- 35)** Name the inhibitor which blocks translation in both prokaryotes as well as eukaryotes?
- a) Chlorophenicol
 - b) Tetracycline
 - c) Puromycin
 - d) Streptomycin
- 36)** 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
- 37)** Which of the following is considered as a start codon? The tide formed on full moon and new moon day is known as _____ tide.
- a) AUG OR Spring
 - b) GUG OR Ebb
 - c) UAG OR flood
 - d) AGG OR Neap

- 38) Name the drug which inhibits the initiation step of translation OR _____ is an ideal protein supplement for human diet.
- a) Cyclohexamine OR Fish guano
 - b) Tetracycline OR Fish glue
 - c) Ricin OR Fish manure
 - d) Streptomycin OR Fish flour
- 39) Which position of a codon is said to wobble?
- a) Third
 - b) Second
 - c) First
 - d) Fourth
- 40) A codon contains how many nucleotides? OR Trash fish meal mixed with rice bran and vitamin, forms an excellent feed in _____
- a) 1 OR agriculture
 - b) 2 OR apiculture
 - c) 3 OR aquaculture
 - d) 4 OR sericulture
- 41) 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
- 42) Transplantation of living cells, tissues or organs from one species to another is OR _____ is inferior quality of fish meal.
- a) Autograft OR Fish flour
 - b) Xenograft OR Fish manure
 - c) Allograft OR Fish ham
 - d) Syngeneic graft OR Fish glue

- 43) _____ is prepared by inoculating directly from the tissue of an organism to culture media.
- a) Cell lines
 - b) Secondary cell culture
 - c) Primary cell culture
 - d) Transformed cell culture
- 44) To calculate the median, all the items of a series have to be arranged in a/an _____.
- a) Descending order
 - b) Ascending order
 - c) Ascending or descending order
 - d) None of the above
- 45) Standard deviation is the square of OR is used in manufacture of laundry soap.
- a) Mode OR Fish meal
 - b) Variance OR Fish body oil
 - c) Standard error OR Fish liver oil
 - d) Correlation OR Fish manure
- 46) DNA is microinfected into the fertilized egg OR _____ highly nutritive product and is an excellent poultry and animal feed.
- a) After the fusion of male and female nuclei OR Fish body oil
 - b) Before the fusion of male and female nuclei OR Fish meal
 - c) At the time of fusion of male and female nuclei OR Fish manure
 - d) Any time, it can be infected OR Fish guano
- 47) _____ 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

- 48)** 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
- 49)** Embryonic stem cells are derived from OR Superior quality of fish meal is known as _____.
- a) Undifferentiated inner cell mass of embryo OR Fish flour
b) Differentiated inner cell mass of embryo OR Fish manure
c) Undifferentiated trophoblast cells OR Fish glue
d) Differentiated trophoblast cells OR Fish ham
- 50)** 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
- 51)** _____ 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
- 52)** _____ glands are without ducts which deposit their secretions directly in to the blood OR Smoking is a technique in _____.
- a) Exocrine OR preservation of wines
b) Salivary OR crop harvesting
c) Endocrine OR fish preservation
d) None of above OR mashroom cultivation

- 53)** Profundal zone is also called as OR is the causative agent of dropsy disease.
- a) Aphotic zone OR *Pseudomonas punctata*
 - b) Photic zone OR *Chondroccus columnaris*
 - c) Littoral zone OR *Aeromona salmonicida*
 - d) Limnetic zone OR None of these
- 54)** At the bottom of the water body _____ zone is located OR
Vibrio bacteria are the causative agents of _____.
- a) Photic OR argulus
 - b) Aphotic OR fin rot
 - c) Benthic OR vibriosis
 - d) Littoral OR eye rot
- 55)** _____ is the running water system which includes rivers, streams, springs etc OR Columnaris disease is caused _____
- a) Lentic habitat OR Myxobacterium
 - b) Lotic habitat OR *Chondroccus columnaris*
 - c) Semilotic habitat OR Myobacteria
 - d) None of the above OR None of these
- 56)** _____ are small, shallow and standing water bodies OR
White spot disease is _____
- a) Lakes OR bacterial
 - b) Ponds OR parasitic
 - c) Rivulets OR fungal
 - d) Rivers OR both a and b
- 57)** _____ is the study of water based ecosystems
- a) Terrestrial ecology
 - b) Grassland ecology
 - c) Desert ecology
 - d) Aquatic ecology

- 58) _____ is the standing water system which includes ponds, lakes and big reservoirs OR The sisal raw material used for making webbing and ropes is extracted from _____.
- a) Lentic habitat OR abaca
 - b) Lotic habitat OR agave
 - c) Semilotic habitat OR flax
 - d) None of above OR coconut
- 59) _____ is a characteristic of stream hill fishes.
- a) Bulky body
 - b) Very big body
 - c) Streamline body
 - d) None of the above
- 60) _____ is a physical parameter of the water OR Argulus is a _____.
- a) Temperature OR fish louse
 - b) O₂ OR sheep louse
 - c) CO₂ OR bird louse
 - d) Hardness OR book louse
- 61) In highly telolecithal egg the usual type of cleavage is OR Important mineral present in fishmeal is _____.
- a) equal holoblastic OR Iron
 - b) unequal holoblastic OR Arsenic
 - c) discoildal meroblastic OR Phosphorous
 - d) superficial meroblastic OR Cadmium
- 62) Which gland plays important role in metamorphosis of frog's tadpole? OR Fish preservation method extensively practiced in India is ____.
- a) thymus OR Canning
 - b) adrenal OR Smoking
 - c) pancrease OR Salting
 - d) thyroid OR Drying

- 63)** Relative to the primitive streak and Henson's node, somite formation in the chick embryo occurs _____.
- a) Anterior to Henson's node, after the primitive streak has retracted past that point.
 - b) Posterior to Henson's node, as cells from the lateral portions of the epiblast move in through the primitive streak to become mesoderm.
 - c) Adjacent to Henson's node, as the primitive streak migrates toward the anterior of the embryo.
 - d) Somite formation occurs simultaneously along the axis, after Henson's node has fully retracted.
- 64)** The Structure which remains unchanged during the metamorphosis of frog tadpole is OR Epizootic ulcerative disease is also known as _____.
- a) heart OR lung disease
 - b) lung OR fungal disease
 - c) intestine OR bacterial disease
 - d) nervous system OR cancer
- 65)** Which part of the egg lies close to the animal pole _____.
- a) centriole
 - b) mitochondria
 - c) nucleus
 - d) cytoplasm
- 66)** In chick development, the cell movement during gastrulation is called _____.
- a) invagination
 - b) involution
 - c) ingression
 - d) epiboly
- 67)** Cleavage in Frog is _____.
- a) Holoblastic and equal
 - b) Holoblastic and unequal
 - c) Meroblastic and equal
 - d) Meroblastic and unequal

- 68)** The process in which the three germ layers form is called :
- a) fertilization
 - b) cleavage
 - c) gastrulation
 - d) organogenesis
- 69)** The period immediately after birth to four weeks of age is called OR Dermatomycoses is _____
- a) Senescent OR viral
 - b) Adolescent OR bacterial
 - c) Infancy OR parasitic
 - d) Neonatal OR fungal
- 70)** Portion of placenta contributed by the embryo in human is the _____.
- a) Chorion
 - b) Yolk sac
 - c) Amnion
 - d) Allantois
- 71)** Plasma cells are _____
- a) Effector cells of B lymphocyte lineage
 - b) Effector cells of T lymphocyte lineage
 - c) Memory cells
 - d) Natural killer cells
- 72)** _____ of the following is not an example of innate immunity.
- a) Skin and secretion of sebaceous gland
 - b) Mucous, lysozyme, HC1 in gastric juice secretion
 - c) IgG transferred to the foetus through the placenta
 - d) Phagocytosis and inflammation

73) _____ is the thymus-dependent area of a lymph node OR
Ulcer disease is caused by _____

- a) Cortex OR myxobacterium
- b) Paracortex OR *Haemophilus piscium*
- c) Medulla OR mycobacterium
- d) Both A and B OR *Pseudomonas punctata*

74) Match the following

- | | |
|---------------------------|---------------------------|
| i) Histocytes | a) Brain |
| ii) Kupffer cells | b) Connective tissue |
| iii) Mesangial cells | c) Liver |
| iv) Microglial cells | 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 |

75) Long form of MHC is OR Itch disease effects _____

- a) Major histocompatibility complex OR skin
- b) Molecular histochemistry OR fins
- c) Major histochemical complex OR Kidney
- d) Micro histocompatibility complex OR lungs

76) T cells recognizing self antigen-MHC complex are subjected to apoptosis in _____.

- a) Lymph node
- b) Spleen
- c) Bone Marrow
- d) Thymus

77) _____ produce a large number of antibodies which are released freely in circulation.

- a) B cells
- b) T cells
- c) Plasma cells
- d) Natural killer cells

- 78) Hybridoma for the production of monoclonal antibodies is formed by the fusion of _____ And _____.
- Antibody-producing B cell and T cell
 - Antibody-producing B cell and plasma cell
 - Antibody-producing B cell and stem cell
 - Antibody-producing B cell and myeloma cell
- 79) Arrange the following from highest antigenicity to lowest antigenicity.
- Carbohydrates < Protein < Lipid
 - Lipid < Carbohydrate < Protein
 - Protein < Carbohydrate < Lipid
 - Protein < Lipid < Carbohydrate
- 80) _____ is the pentameric antibody OR Bacterial gill disease are caused by _____
- IgG OR *Pseudomonas punctata*
 - IgM OR *Myxobacterium*
 - IgA OR *Mycobacterium*
 - IgE OR *Chondroccus columnaris*
- 81) _____ is the fresh water species of prawn.
- Macrobrachium rosenburgi*
 - Panaeus idicus*
 - Metapeeus monoceros*
 - Parapenaepsis stylifera*
- 82) _____ is the largest sized honey bee found in India.
- Apis indica*
 - Apis dorsata*
 - Apis mellifera*
 - Apis floreae*
- 83) Induced breeding technique is used in _____.
- Capture fishery
 - Marine fishery
 - Culture fishery
 - Inland fishery

- 84) Which of the following is used for induced breeding in fishes? OR Tuberculosis in fish is caused by _____
- a) MOET OR *Aeromonas salmonicida*
 - b) ART OR *Pseudomonas punctata*
 - c) Hypophysation OR *Mycobacterium*
 - d) Artificial insemination OR *Chondroccus columnaris*
- 85) Scientific name of Pearl oyster is _____.
- a) *Pinctada vulgaris*
 - b) *Apis dorsata*
 - c) *Bombax mori*
 - d) *Periplaneta Americana*
- 86) Worker bee is a _____.
- a) Sterile female
 - b) Sterile male
 - c) Fertile female
 - d) Fertile male
- 87) In the artificial insemination in cattle the semen is deposit in _____.
- a) Vagina
 - b) External OS
 - c) Body of uterus
 - d) Vestibule
- 88) Artificial insemination involves _____.
- a) Super ovulation
 - b) Egg collection
 - c) Semen collection
 - d) Embryo collection
- 89) An exotic breed of cattle is OR Fish bones are used to prepare _____.
- a) Ongole OR Fish meal
 - b) Sindhi OR Fish pickle
 - c) Jersey OR Fish manure
 - d) Sahiwal OR Fish glue

90) “Blue Revolution” is related with the following

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

91) The Dengue Virus is transmitted by _____.

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

92) *Wuchereria bancrofti* cause a disease OR The fish byproduct obtained from air bladder is _____.

- a) Filariasis OR Isinglass
- b) Maleira OR Fish Pickle
- c) Yellow fever OR Fish manure
- d) Kala azar OR Fish meal

93) House fly transmits _____ disease

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

94) Which of the following is not a mosquito borne disease?

- a) Malaria
- b) Dengue fever
- c) Yellow fever
- d) Viral fever

95) *Lismania donovani* cause disease

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

- 96) _____ is the layer of stomach wall contains gastric glands
OR Furunculosis disease is caused by _____
- a) Mucosa OR *Aeromonas salmonicida*
 - b) Muscularis OR mycobacteria
 - c) Sub-mucosa OR both a and b
 - d) Serosa OR none of these
- 97) Presence of Peyer's patches is the characteristic of _____.
- a) Oesophagus
 - b) Intestine
 - c) Rectum
 - d) Stomach
- 98) Endocrine unit of pancreas is _____.
- a) Pancreatic acini
 - b) Islets of Langerhans
 - c) Von Ebner glands
 - d) Centroacinar cells
- 99) Viral encephalitis affects on _____ organ OR Cod liver oil is extracted from _____.
- a) Brain OR cartilaginous fish
 - b) Lungs OR bony fish
 - c) Heart OR both a and b
 - d) Liver OR none of these
- 100) Chikungunya is _____ disease
- a) Bacterial
 - b) Viral
 - c) Protozoan
 - d) Fungal



Rough Work

Rough Work