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P.G. Entrance (Faculty Science) Examination, May - 2023**M.Sc. ZOOLOGY****Sub. Code : 58719****Day and Date : Monday, 08 - 05 - 2023****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) Sol gel theory refers to _____
A) Respiration
B) Locomotion
C) Excretion
D) Reproduction

- 2) Medusa stage is absent in _____
A) Hydrozoa
B) Scyphozoa
C) Anthozoa
D) Demospongia

- 3) Natural selection theory of evolution was proposed by _____
A) Lamarck
B) Darwin
C) Hugo de Vries
D) Mendel

- 4) The early cell types which were formed on earth, were _____.
A) Aerobic, autotrophic
B) Anaerobic, autotrophic
C) Anaerobic, heterotrophic
D) Aerobic, heterotrophic

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- 12) While biting of snake, opening of mouth takes place by contraction of _____.
- A) Temporalis muscles B) Digastrics muscles
C) Sphenopterygoid muscles D) Masseter muscles
- 13) Where does oxygen difufuse take place in fishes?
- A) Gill arch B) Operculum
C) Gill lamellae D) Gill comb
- 14) The enzyme arginase is found only in the _____ cells.
- A) liver B) kidney
C) heart D) brain
- 15) Lock and Key Hypothesis was put forward by _____.
- A) Edward Buchner B) F.W. Kuhne
C) James Sumner D) Emil Fischer
- 16) Corpus luteum produces _____.
- A) Leutinizing hormone B) Progesterone
C) Luteotropic hormone D) Inhibin
- 17) _____ is permanent method of contraception for relatively long period.
- A) Foam tablets B) Diaphragm
C) Cervical Caps D) Copper T
- 18) Ovulation can be evaluated by _____
- A) Basal body temperature charting B) Basal metabolic rate charting
C) Colour dropler D) Urine analysis

- 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? _____ OR _____
The cast net is also called as _____
A) AUG _____ OR _____ Ghagriajal
B) GUG _____ OR _____ Kharrajaj
C) UAG _____ OR _____ Helajal
D) AGG _____ OR _____ Khorsulajal
- 38) Name the drug which inhibits the initiation step of translation.
A) Cyclohexamine
B) Tetracycline
C) Ricin
D) Streptomycin
- 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 _____
Nursery ponds are used to rear _____.
A) 1 _____ OR _____ Fingerlings
B) 2 _____ OR _____ Adult fish
C) 3 _____ OR _____ Fry
D) 4 _____ OR _____ Hatchling
- 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

- 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 _____.
- A) Undifferentiated inner cell mass of embryo
 - B) Differentiated inner cell mass of embryo
 - C) Undifferentiated trophoblast cells
 - D) Differentiated trophoblast cells
- 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 _____ 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'

- 53) Profundal zone is also called as _____ OR _____. The marine animals tolerating wide range of salinity are known as _____.
- A) Aphotic zone _____ OR _____ Euryhaline
B) Photic zone _____ OR _____ Stenohaline
C) Littoral zone _____ OR _____ Eurythermal
D) Limnetic zone _____ OR _____ Stenothermal
- 54) At the bottom of the water body _____ zone is located.
- 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) _____ are small, shallow and standing water bodies.
- A) Lakes
B) Rivers
C) Rivulets
D) Ponds
- 57) _____ 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
- 58) _____ 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

- 59) _____ 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
- 60) _____ is a physical parameter of the water.
- A) Temperature
 B) O₂
 C) CO₂
 D) Hardness
- 61) 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
- 62) Which gland plays important role in metamorphosis of frog's tadpole?
- A) thymus
 B) adrenal
 C) pancrease
 D) thyroid
- 63) 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

- 64) The Structure which remains unchanged during the metamorphosis of frog tadpole is _____.
- A) heart B) lung
C) intestine D) nervous system
- 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 _____ 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
- 67) Cleavage in Frog is _____
- A) Holoblastic and equal
B) Holoblastic and unequal
C) Meroblastic and unequal
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 _____ The main salinity-causing ion in sea is _____
- A) Senescent _____ OR _____ sodium
B) Adolescent _____ OR _____ sulphate
C) Infancy _____ OR _____ phosphate
D) Neonatal _____ OR _____ chloride.
- 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.
_____ OR _____ 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
- 73) _____ 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

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 _____

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

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 _____ 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

- 78) 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
- 79) 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
- 80) _____ is the pentameric antibody.
- A) IgG
 - B) IgM
 - C) IgA
 - D) IgE
- 81) _____ 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) *Parapenaepsis stylifera* _____ OR _____ zoogeography
- 82) _____ is the largest sized honey bee found in India
- A) *Apis indica*
 - B) *Apis dorsata*
 - C) *Apis mellifera*
 - D) *Apis florae*
- 83) Induced breeding technique is used in _____.
- A) Capture fishery
 - B) Marine fishery
 - C) Culture fishery
 - D) Inland fishery

- 84) 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
- 85) 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
- 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 |

- 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 _____ 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
- 97) Presence of Payer's patches is the characteristic of _____.
 A) Oesophagous 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 _____
 The standard Secchi disk is _____ in shape.
 A) Liver _____ OR _____ Oval
 B) Lungs _____ OR _____ Rectangular
 C) Heart _____ OR _____ Triangular
 D) Brain _____ OR _____ Circular
- 100) 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



Rough Work

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