

**CHORDATES-I**

Under CBCS – Credit 4

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. Part of Herdmania embedded in sand is
 - a. Test
 - b. Foot
 - c. Tunic
 - d. a and c
2. Notochord occurs in the adult animal of
 - a. Osteichthyes
 - b. Chondrichthyes
 - c. Protochordata
 - d. Amphibian
3. Frog hibernate during
 - a. Winter
 - b. Spring
 - c. Summer
 - d. Autumn
4. The oil gland of Pigeon is called
 - a. parotid gland
 - b. Uropygial gland
 - c. Sweat gland
 - d. Maxillary gland
5. Photophores are otherwise called
 - a. Digestive organ
 - b. Luminescent organ
 - c. Respiratory organs
 - d. None of these
6. Chemical breakdown of food into small organic fragments for absorption by digestive epithelium is called
 - a. Digestion
 - b. Respiration
 - c. Circulation
 - d. All of these

7. Which part of the mammalian brain controls the muscles coordination?
 a. Cerebrum b. Cerebellum c. Corpus callosum d. Medulla
8. Muscles are:
 a. Thermoreceptor b. Mechanoreceptor
 c. Chemoreceptor d. Photoreceptor
9. The centrum of 8th vertebra of frog is
 a. Amphicoelium b. Procoelium c. Acoelium d. Opisthocoelium
10. Which animal is uricotelic?
 a. Bird b. Fish c. Frog d. Man

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. Define Cephalochordata.
 12. Comment on Herdmania.
 13. What is Metatheria?
 14. Write short notes on Crinata.
 15. Explain the functions of Integument.
 16. List out the role of RBC.
 17. State the components of Axial skeleton.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) . Explain the general characters of Amphioxus.

[OR]

- b). Illustrate the Retrogressive metamorphosis in Ascidian.

19. a). Write an account on Petromyzon.

[OR]

- b). Classify the Phylum vertebrata upto class level.

20. a). Discuss the comparative similarities of digestive system between Amphibian and Mammals.

[OR]

- b). Explain the respiratory system of birds.

21. a). General Characteristic features of Phylum Chordates and mention its Significance.

[OR]

- b). Briefly explain Structural similarities of Heart among vertebrates.

22. a). Explain General Characteristic features of Balanoglossus.

[OR]

- b). Discuss in detail the Morphological features of shark..

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. Describe the Affinities of Balanoglossus.
 24. With suitable sketches, explain the morphology of Frog.
 25. Write an essay about comparative Digestive system in vertebrates.
 26. Discuss the integument systems of vertebrate and its significance .
 27. Give detailed account on the morphological features of Calotes with suitable diagram.

YYYYY

**FOOD AND NUTRITION**

Under CBCS – Credit 2

Time: 2 Hours

Max. Marks: 75

SECTION – A**Answer ALL Questions :****(10 × 1 = 10)**

1. Which one is the cheapest source of energy in food?
a) Carbohydrate b) Protein c) Fat d) Vitamins
2. Which one is the basic unit of carbohydrate?
a) Glucose b) Amino acid c) Fatty acid d) Enzyme
3. Minerals do not include
a) Iodine b) calcium c) sodium d) Protein
4. In chicks, the embryonic mortality is caused by the deficiency of
a) Vitamin E b) Vitamin C c) Vitamin D d) Vitamin K
5. Deficiency of iodine leads to
a) anaemia b) tetany c) goitre d) fluorosis

6. Which disease is caused by the deficiency of vitamin A?

- a) Xerophthalmia b) Scurvy
- c) Beriberi d) Pellagra

7. Kwashiorkor is caused by the deficiency of

- a) Proteins b) carbohydrates c) Minerals d) Vitamins

8. The technique is used to preserve milk is

- a) Drying b) Salting c) Pasteurization d) Smoking

9. Which of the following is a food infection?

- a) Salmonellosis b) Botulism c) Malaria d) Marasmus

10. Which one of the following is common insect contaminating food?

- a) House fly b) Honeybee c) Grasshopper d) Mosquito

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

- 11. Expand and comment on FAO.
- 12. Expand RDA.
- 13. What are nutrients?
- 14. State the functions of lipids.
- 15. Give the biochemical name of vitamin C and its functions.
- 16. Comment on Obesity.
- 17. What is food spoilage?

SECTION – C

Answer ALL Questions :

(3 × 9 = 27)

18.a) Describe the physiological role of carbohydrates and proteins.

[OR]

b) Write short note on sources and physiological functions of Vitamin B complex.

19.a) Comment on the physiological importance of any two minerals.

[OR]

b) Narrate the sources and functions of vitamin C.

20.a) Explain the controlling measures for insects and rodents.

[OR]

b) Comment on RDA. How can it be used?

SECTION – D

Answer any TWO Questions :

(2 × 14 = 28)

- 21. Give an elaborate account on functions of food.
- 22. Write an essay on sources, functions and deficiency disorders of fat soluble Vitamins.
- 23. Describe the various food preservation techniques.
- 24. Critically comment on the disorders of malnutrition.

YYYYY

**DEVELOPMENTAL BIOLOGY**

Under CBCS – Credit 4

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. The cell which are destined to develop into gametes are called
 - a) Ectoderm
 - b) Primordial gem cells
 - c) Spermatozoa
 - d) Ooplasm
2. The sperm cell was first discovered by
 - a. Leeuwenhock
 - b. Golgi
 - c. Galen
 - d. William Harvey
3. The male hormone is produced in the testis by the cells of _____.
 - a. Sertoli cells
 - b. Epithelial cells
 - c. Spermatocytes
 - d. Leydig
4. The cavity of blastula is called
 - a. Blastoderm
 - b. Blastocoel
 - c. Coeloblastula
 - d. Gastrocoel
5. Gastrulation in Amphioxus occurs by a process of
 - a. Hyperboly
 - b. Hypoboly
 - c. Delamination
 - d. Invagination
6. The excretory organs of vertebrates are originated from _____ region of coelomic cavity
 - a. Distal
 - b. Lateral
 - c. Facial
 - d. Proximal
7. The hormone is responsible for pregnancy is
 - a. Estrogen
 - b. Ammonic
 - c. Progesterone
 - d. Pro estrogen

**PHYSIOLOGY**

Under CBCS – Credit 4

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. Deficiency of iodine leads to
 - a) anaemia
 - b) tetany
 - c) goitre
 - d) fluorosis
2. Which of the following is associated with absorption?
 - a) pancreas
 - b) small intestine
 - c) Gall bladder
 - d) liver
3. Chemically the blood clot is
 - a) Fibrin
 - b) Thrombin
 - c) Prothrombin
 - d) Fibrinogen
4. The RQ value for carbohydrates is
 - a) 5
 - b) 3
 - c) 7
 - d) 1
5. During osmosis, solvent moves through semi permeable membrane
 - a) From the region of higher free energy to lower free energy
 - b) From low free energy to high
 - c) From the region of higher solute concentration to the lower
 - d) All the above
6. Hibernation refers to
 - a) Winter dormancy
 - b) Summer dormancy
 - c) Suspension of development
 - d) Impairment



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST

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B.Sc. Zoology Degree (Semester) Examinations, April 2020
Part – IV : Skill Based Subject : Fourth Semester : Paper – I

CLINICAL LAB TECHNOLOGY

Under CBCS – Credit 2

Time: 2 Hours

Max. Marks: 75

SECTION – A

Answer ALL Questions :

(10 × 1 = 10)

1. pH of normal sperm is_____.
a. 7.2 to 8 b. 7 to 7.5 c. 8 to 9 d. 7.2 to 7.8
2. Which one of the following microscope is used to observe living cells and tissues?
a. Binocular b. Dark field c. Phase contrast d. Compound
3. CT scan is also known as_____.
a) CAT scan b) CBT scan c) CCT scan d) CDT scan
4. Expand WHO
a) World Health Organization b) World Health Office
c) World Health Observation d) World Health Organism
5. _____ is a medical Ultra-Sonography.
a) Doppler scan b) X-rays
c) CT scans d) Ultra sound
6. Haemometer is also known as_____.
a) EEG b) ECG
c) Haemoglobinometer d) Haemocytometer

7. _____ is used to count the bacterial cells in broth culture.

- a) Chromatography
- b) Colorimeter
- c) Electrophoresis
- d) All the above

8. Counting chamber of RBC is _____ small squares.

- a. 70
- b. 60
- c. 50
- d. 80

9. Lipid profile is a panel of blood tests used for screening tool for abnormalities of _____.

- a. Cholesterol
- b. Protein
- c. Mineral
- d. Vitamins

10. The soft X-ray is easily absorbed in _____.

- a) H₂O
- b) Petrol
- c) Air
- d) Earth

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. What is Doppler scan?

12. Expand: ESR & AFM

13. Write any two uses of colorimeter

14. What is diabetes?

15. Mention the role of TEM.

16. What is bleeding disorders?

17. Comment on Risk Groups-2

SECTION – C

Answer ALL Questions :

(3 × 9 = 27)

18.a) Write a note on biomedical waste management.

[OR]

b) Describe the mode of transmission, pathogenicity & control measures of jaundice.

19.a) Explain the techniques of paper chromatography.

[OR]

b) Critically comment on haemocytometer.

20.a) Elucidate the medical importance of stool examination.

[OR]

b) Write the principle and uses of autoclave in research laboratories.

SECTION – D

Answer any TWO Questions :

(2 × 14 = 28)

21. Write an essay on urine profile examination.

22. Discuss the role of Magnetic Resonance Imaging (MRI) scan.

23. Briefly explain the principle and applications of centrifuge.

24. Describe the medical importance of ECG.

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**BIOLOGY AND HUMAN WELFARE**

Under CBCS – Credit 4

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. Minor symptoms of polio include which of the following?
 a) cough b) Fever c) Headache d) A rash
2. The HIV infects _____
 a) DNA b) RNA c) T helper cell d) Capsid
3. Bacterial cell wall composed of
 a) Cellulose b) peptidoglycan c) Lipid d) Chitin
4. What is the pathogen that causes tetanus?
 a) Babesiamicroti b) Trypanosoma cruzi
 c) Clostridium tetani d) Toxoplasma gondii
5. Which is the primary host of plasmodium?
 a) Man b) Pig c) Cat d) Female Anopheles
6. Which one is the vector of Wucheraria?
 a) Man b) Culex c) Pig d) Anopheles
7. Pisciculture is culture of
 a) Frogs b) Fishes c) Prawns d) Birds

8. The useful microorganism present in vermicasting is
a) Antibiosis b) Mutualism c) Symbiosis d) Parasitism
9. Which season is best for the growth of the fungus
a) Rainy b) Summer c) Winter d) All the above
10. Which is the unfertile female of the honey comb?
a) Queen b) Worker c) Drone d) Wax moth

SECTION – B

Answer any FIVE Questions : **(5 × 2 = 10)**

11. Mention the symptoms of AIDS.
12. What is tetanus? How it is treated?
13. What are the symptoms of ancylostomiosis?
14. List the diseases of silkworm and briefly explain how it is caused?
15. What is nuptial flight?
16. What are the uses of biogas?
17. List out the uses of honey.

SECTION – C

Answer ALL Questions : **(5 × 5 = 25)**

18. a) . Summarize the cause, clinical symptoms and control of polio.
[OR]
b). Outline the clinical features of rabies.

19. a). Explain the biology of *Vibrio cholera*.

[OR]

- b). Show the clinical manifestations of tuberculosis.

20. a). Explain the pathogenesis of *Entamoeba histolytica* .

[OR]

- b). Describe the life cycle of *Wuchereria*.

21. a). Classify and briefly explain the various methods of silkworm rearing.

[OR]

- b). Give an account on cycle of Ross.

22. a). Describe the morphology of Indian Oyster mushroom.

[OR]

- b). Describe the biology of honey bee.

SECTION – D

Answer any THREE Questions : **(3 × 10 = 30)**

23. Construct a structure of a typical virus and explain it with a neat labeled diagram.
24. Illustrate a fine structure of a typical bacterium with a diagram.
25. Identify the causes, clinical symptoms, treatment and control measures of malaria.
26. Organize the life cycle of *Bombyx mori* and explain the changes that take place at every stage.
27. Build an appropriate method for the production of biogas.

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**EVOLUTION**

Under CBCS – Credit 4

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. The first scientist to hypothesise the life formation is
 - a. Oparin
 - b. Miller
 - c. Richter
 - d. Cuvier
2. The theory of use and disuse of organs was given by
 - a. Jean Baptistie De Lamarck
 - b. Alfred Russell Wallace
 - c. TR Malthus
 - d. Charles Darwin
3. Darwin during his Voyage around the world, he observed the flora and fauna of:
 - a. Greenland
 - b. Channel Islands
 - c. Galapagos Island
 - d. Queen land
4. Genetic Drift is also known as
 - a. Founder effect
 - b. Sewall Wright effect
 - c. Bottleneck effect
 - d. Gene migration
5. Formation of new species from pre-existing ones is
 - a. Mutation
 - b. Speciation
 - c. Isolation
 - d. Polyploidy

6. Sewall Wright has modified his genetic drift theory into
- a. Sampling error theory b. Shifting balance theory
- c. Natural selection theory d. Punctuated equilibrium theory
7. The geological time scale has been broadly divided into ----- major divisions
- a. 4 b.5 c. 6 d. 7
8. The first land vertebrate appeared during the
- a. Cambrian period b. Ordovician period
- c. Jurassic period d. Devonian period
9. The region on the earth considered as cradle of human evolution is
- a. Central Asia b. North America c. South Africa d. Australia
10. Which one of the following appears to be an evolutionary link between the old forest- dwelling horses and Morden plains- dwelling grazers?
- a. Mesohippus b. Miohippus c. Parahippus d. Merychippus

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. Define- Vestigial organs.
12. What do you mean by Atavism?
13. Comment on intra-specific struggle.
14. What is species?
15. Mention any three salient features of Batesian mimicry.
16. List any three conditions essential for Fossilization.
17. Comment on Equus.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) . Explain the biochemical evidences of evolution with reference to visual pigments.
- [OR]**
- b). Illustrate the principles of Lamarckism.
19. a). Give a brief account on Hardy-Weinberg law.
- [OR]**
- b). Enlist the evolutionary significance of genetic drift.
20. a). Write short notes on Allopatric speciation.
- [OR]**
- b). Elucidate the types of colouration.
21. a). List out the types of Fossils.
- [OR]**
- b). Briefly explain the continental Drift hypothesis.
22. a). What is mimicry? Discuss its significance in adaptation of animal.
- [OR]**
- b). Analyse the adaptive radiation in Mammals.

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. Describe the embryological evidences for Evolution.
24. Discuss the principles of Darwinism with examples.
25. Elaborate the types of pre-zygotic isolation with examples.
26. Give a detailed account on Geological time scale.
27. Explain in detail about Biological evolution of man.

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B.Sc. Zoology Degree (Semester) Examinations, April 2020

Part – III : Core Subject : Sixth Semester : Paper – II

MICROBIOLOGY & IMMUNOLOGY

Under CBCS – Credit 5

Time: **3** Hours

Max. Marks: **75**

SECTION – A

Answer ALL Questions :

(10 × 1 = 10)

1. The first virus was discovered by Ivanowski in
 - a) 1896
 - b) 1897
 - c) 1898
 - d) 1899
2. Actinomycetes is an intermediate link between
 - a) Bacteria and fungi
 - b) Bacteria and virus
 - c) Bacteria and Algae
 - d) Bacteria and yeast
3. Biological nitrogen fixation requires
 - a) Hydrogen
 - b) ATP
 - c) Leg haemoglobin
 - d) All
4. MPN method is used for the confirmation of
 - a) Coliform bacteria
 - b) Halococcus
 - c) Methanococcus
 - d) Spirillum
5. Which one is responsible for tuberculosis?
 - a) *Bordetella*
 - b) *Mycobacterium*
 - c) *Corynebacterium*
 - d) *Streptococcus*
6. HIV infects the _____ cells of immune system.
 - a) T_H cells
 - b) B cells
 - c) RBC
 - d) T_C cells

**SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. Ongole is the general utility breed of
 - a) Bihar
 - b) Gujarat
 - c) Andhra Pradesh
 - d) Kerala
2. The milk of which exotic breed is with high content fat?
 - a) Jersey
 - b) Holstein-Friesian
 - c) Brown Swiss
 - d) Gurunsey
3. Basic function of amino acids is
 - a) Respiration
 - b) photosynthesis
 - c) growth and repair
 - d) digestion
4. A typical rumen contains volatile fatty acids normally in the greatest quantity is
 - a) Acetic
 - b) Propionic
 - c) Butyric
 - d) Lactic
5. The cow with milk fever show the signs of
 - a. Hypersensitivity
 - b. Restlessness
 - c. Head bobbing
 - d. All the above
6. Mode of transmission of FMD are
 - a) Close animal-to-animal contact
 - b) long-distance aerosol

c) feed supplements containing infected animal products

d) All the above

7. The percentage of immunoglobulin is much higher in

a. Milk b. Fresh milk c. Dried milk d. Colostrum

8. The byproduct of milk made out of skim milk is

a. Dahi b. Butter c. Ghee d. Ice cream

9. The main limitations of artificial insemination is

a) Trained operator b) low cost

c) size & weight of cow d) old bulls

10. The commercial name of Tamilnadu milk union marketing products is

a) Milima b) Nandini c) Aavin d) Arogyaa

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. Brief on inbreeding.

12. Comment on Milk fever.

13. What is Blot?

14. Comment on Hybrid vigour.

15. Define colostrum.

16. Write about liquid nitrogen method

17. Holstein friesian.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) Enlist the scope of dairy farming.

[OR]

b) Give a brief account on the nutritive value of cattle feeds.

19. a) Describe on food additives and silage preparation.

[OR]

b) Give a detailed account on feeding schedule for cow and calf.

20. a) Write on predominant viral diseases in dairy farming.

[OR]

b) Brief about metabolic diseases of cattle.

21. a) Narrate the techniques need to follow for the production of quality milk.

[OR]

b) Explain any six milk by-products you have studied.

22. a) What are equipments need for dairy farming.

[OR]

b) Explain the role of co – operative societies in milk marketing.

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. Write an essay on artificial insemination.

24. Explain about anatomy of udder and physiology of milk production.

25. Enlist and explain on bacterial diseases prone to cattles.

26. Give an account an the composition of milk & colostrum.

27. Explain the characteristics of any five milch breeds of cow in India.

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B.Sc. Zoology Degree (Semester) Examinations, April 2020

Part – III : Elective Subject : Sixth Semester : Paper – II

ENVIRONMENTAL BIOLOGY

Under CBCS – Credit 5

Time: **3** Hours

Max. Marks: **75**

SECTION – A

Answer ALL Questions :

(10 × 1 = 10)

1. The specific heat of water is
 a. 1⁰C b. 2⁰C c. 3⁰C d. 4⁰C
2. The biological effect of temperature is
 a. metabolism b. growth c. development d. All
3. The release of water vapour from the leaves of trees is called
 a. Evaporation b. Precipitation c. Condensation d. Transpiration
4. Which of the following organisms is an autotroph?
 a. Algae b. beer c. cheetah d. fish
5. Succession that begins from fresh water habitat is called
 a. Hydrosere b. Xerosere c. Psammosere d. All the above
6. The population growth in man is found to be maximum in ____
 a. Tropical countries b. Temperate countries
 c. North America d. Tropical and sub – tropical countries
7. The Coniferous trees occur in
 a. River Delta b. Himalayas c. Both A and b d. None of the above

8. Filter feeding is a characteristic feature of
a. Tubicolous life b. Terrestrial life c. Detritus life d. Burrowing life
9. Bhopal episode is caused by
a. Mercury b. Carbon dioxide c. DDT d. Methyl isocyanate
10. Indian rhinoceros is the most important protected species in
a. Gir National Park b. Corbett National Park
c. Bandipur National Park d. Kaziranga National Park

SECTION – B

Answer any FIVE Questions : (5 × 2 = 10)

11. Define buoyancy?
12. Short notes on water properties?
13. Explain ecological niche?
14. What is energy flow?
15. Comment on any two adaptations of cave animals.
16. Explain interspecific relationship?
17. Define pedology?

SECTION – C

Answer ALL Questions : (5 × 5 = 25)

18. a) . Write an account on soil profile.
[OR]
b). Explain the account of Poikilothermic animals with suitable examples?

19. a). Give a brief account on food chain & food web?

[OR]

- b). Explain commensalism with suitable examples.

20. a). Give an account of logistic growth. How does it differ from exponential growth?

[OR]

- b). Brief notes on age pyramids.

21. a). Write an account on estuarine adaptation.

[OR]

- b). Give a detail account on parasitic adaptations?

22. a). Pond as an eco system – Discuss.

[OR]

- b). Give Short notes on environmental pollutants?

SECTION – D

Answer any THREE Questions : (3 × 10 = 30)

23. Describe the light and effects of light on animals?
24. Explain Nitrogen cycle.
25. Write an essay on ecological succession.
26. Give an account of the desert adaptation of animals.
27. Give a detailed account on wild life conservation and its management.

Y Y Y Y Y

**FISH CULTURE**

Under CBCS – Credit 2

Time: 2 Hours

Max. Marks: 75

SECTION – A**Answer ALL Questions :****(10 × 1 = 10)**

1. Pisciculture is a culture of
 - a. earth worm
 - b. Prawns
 - c. Fishes
 - d. silkworm
2. The important food fish is
 - a. Rohu
 - b. Catla
 - c. Wallago
 - d. Clarius
3. Which one of the following is integrated fish farming?
 - a. Paddy cum fish culture
 - b. monoculture
 - c. Monosex culture
 - d. Polyculture
4. The optimum temperature for fish is _____
 - a. 20 – 25⁰C
 - b. 30 – 35⁰C
 - c. 35 - 40⁰C
 - d. 15 - 20⁰C
5. Induced breeding is effective in which of them?
 - a. Pisciculture
 - b. Sericulture
 - c. Apiculture
 - d. Lac culture

**SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. *Eisenia fetida* is an exotic species of ----.
 a) India b) China c) Australia d) New Zealand
2. The bottom of the basal layer of the vermibed is constituted by
 a) Bricks or pebbles b) coconut husk
 c) coarse sand d) loamy soil
3. Earthworms act as
 a) Pollinators b) pollutants
 c) Detoxifying agents d) None of these
4. The ingredients of vermiwash are
 a) Coelomic fluid b) Mucus c) Enzymes d) All the above
5. The plant growth hormones produced by microbes in vermicompost are
 a) Auxins b) Gibberellins c) Cytokinins d) All the above
6. The mixture of diluted 10% vermiwash and neem extract act as effective
 a) Fungicide b) Pesticide c) Rodenticide d) Herbicide
7. Earthworms found on the surface of soil are called
 a) Epigeic (epigenic) b) Endogeic (endogenic)
 c) Anneic d) Hygienic

8. Duration of vermicomposting is

- a) 6 – 8 weeks b) 10 – 12 weeks
c) 15 – 20 weeks d) 2 – 3 weeks

9. Tunneling activity of earthworms improves

- a) Soil aeration b) Porosity c) Permeability d) All the above

10. Expansion of KVIC is

- a) Karnataka state khadi and Village Industries Corporation
b) Kerala Village Income Certificate
c) Kollam Victory Instagram Corporation
d) Kolkata Visitor's Information Centre

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. How do the exotic species of earthworms superior than indigenous species for vermicomposting?
12. Name the African and Indian earthworms commonly used in vermicomposting.
13. Interpretate the term vermicomposting.
14. Specify the chemical composition of vermicasts.
15. Name the method of vermiwash application for inducing flowering in crops.
16. What is horticulture?
17. Mention the role of funding agencies in establishing vermicomposting unit.

SECTION – C

Answer ALL Questions :

(3 × 9 = 27)

18. a) What are measures to be taken in selection of food for earthworms in vermicomposting?

[OR]

b) What are the steps involving in the preparation of vermibed for vermiculture?

19. a) Define and characterize vermicasts.

[OR]

b) Write down the procedure for the preparation of vermiwash.

20. a) Give an account on economics of vermicompost.

[OR]

b) Enumerate the applications of vermiwash.

SECTION – D

Answer any TWO Questions :

(2 × 14 = 28)

21. Enumerate the characteristic features of indigenous and exotic species of earthworms with appropriate illustrations.
22. Elaborate various methods of vermicomposting.
23. Enumerate the applications of vermicomposting in agriculture and horticulture.
24. Mention the measure to be taken in the management of vermicomposting.

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B.Sc. Zoology Degree (Semester) Examinations, April 2020
Part – IV : Skill Based Subject : Fourth Semester : Paper – III

ZOOLOGY FOR COMPETITIVE EXAMINATION

Under CBCS – Credit 2

Time: 2 Hours

Max. Marks: 75

SECTION – A

Answer ALL Questions :

(75 × 1 = 75)

1. The group amniota includes
 - a) Birds and mammals
 - b) Birds and reptiles
 - c) Reptiles and mammals
 - d) Reptiles, birds and mammals
2. In the course of evolution, the true coelom appeared first in
 - a) Aschelminthes
 - b) Annelid
 - c) Arthropods
 - d) Echinodermata
3. Radial symmetry is seen in
 - a) Mollusca
 - b) Star fishes
 - c) Sponges
 - d) Fishes
4. Canal system is found in
 - a) Hydra
 - b) Sponges
 - c) Sea anemone
 - d) Sea urchin
5. Tube feet are the locomotory organs found in
 - a) Protozoans
 - b) Arthropods
 - c) Echinodermata
 - d) Molluscs
6. Which of the following is homothermous?
 - a) Lizard
 - b) Frog
 - c) Rabbit
 - d) Cuttle fish
7. The basic unit of taxonomy is
 - a) Genus
 - b) Order
 - c) Class
 - d) Species
8. The trophozoite of Plasmodium lives in
 - a) Erythrocytes of man
 - b) Liver cells
 - c) Stomach of mosquito
 - d) Blood plasma

26. Study of sharks and rays is known as

- a) Saurology
- b) Traumatology
- c) Torpedology
- d) Ichthyology

27. Parental care by males is found in

- a) Hippocampus
- b) Labeo
- c) Anabas
- d) None of these

28. The flying fish Exocoetus belongs to the class

- a) Dipnoi
- b) Osteichthyes
- c) Cyclostomata
- d) Chondrichthyes

29. Salmon is an example of

- a) Anadromous migration
- b) Catadromous migration
- c) Cartilaginous fish
- d) None of these

30. Cod liver oil is a rich source of

- a) Vitamin A
- b) Iron
- c) Calcium
- d) Vitamin B complex

31. The swim bladder in a fish is an organ of

- a) Digestion
- b) Buoyancy
- c) Respiration
- d) Food storage

32. Tooth shaped scales are

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

33. Lung fish is

- a) Protopterus
- b) Coelacanth
- c) Scoliodon
- d) Labeo

34. Nostrils are not connected with mouth cavity in

- a) Frogs
- b) Fishes
- c) Lizards
- d) Pigeons

35. The adult amphibians possess

- a) Pronephric kidney
- b) Mesonephric kidney
- c) Metanephric kidney
- d) Both a and b

36. A limbless amphibian is

- a) Cryptobranchus – hell blender
- b) Necturus – mud puppy
- c) Uraeotyphlus – blind worm
- d) Alytes – midwife toad

37. A urinary bladder is absent in

- a) Chameleon
- b) House lizard
- c) Snake
- d) Crocodile

38. A bat is

- a) Mammal
- b) Reptile
- c) Bird
- d) Fish

39. Birds have

- a) Sharp eyesight
- b) Keen smelling power
- c) Both a and b
- d) Sharp eyesight and poor smelling power

40. The largest living bird is

- a) Ostrich
- b) Albatros
- c) Penguin
- d) Elephant bird

41. Connecting link between reptiles and birds is

- a) Archaeopteryx
- b) Dimetrodon
- c) Sphenodon
- d) Dodo

42. Remiges are quill feathers attached to

- a) Head of peacock
- b) Wings of modern birds
- c) Tail of modern birds
- d) None of these

43. In rabbit, the danger signal is given by

- a) Sound
- b) Tail
- c) External ear
- d) Fore limbs

44. Monkey, Apes and Man belong to the order
a) Lemuroidea b) Anthropoidea c) Primates d) Any of these
45. Ovoviviparity is found in
a) Echidna b) Shrew c) Dolphin d) Kangaroo
46. Scientific name of man is
a) Dolphins b) Oracto logus cuniculus
c) Homo sapiens fossilis d) Homo sapiens sapiens
47. Red bone marrow is found in
a) Man b) Fish c) Lizard d) Frog
48. Umbilical cord is an example of
a) Mucous connective tissue b) Adipose tissue
c) Fibrous tissue d) Areolar tissue
49. Life of RBC is
a) 130 days b) 120 days c) 128 days d) 122 days
50. The smallest type of leucocyte in the blood of human adult is_____.
a) Monocytes b) Microcytes c) Lymphocytes d) Eosinophils
51. Fat soluble vitamins are
a) A, D and E b) B, C and D c) E, D and B d) A, B and C
52. Synthesis of vitamin A takes place in
a) Blood b) Spleen c) Pancreas d) Liver
53. The deficiency of vitamin A causes
a) Anaemia b) Scurvy c) Rickets d) Xerophthalmia
54. Wound healing is enhanced by vitamin
a) A b) C c) D d) E
55. Deficiency of vitamin D in children is
a) Beri-beri b) Pellagra c) Rickets d) Osteomalacia
56. Digestion of carbohydrates is enhanced by
a) Repsin b) Pepsin c) Amylopsin d) Trypsin
57. Starch is converted into maltose by
a) Invertase b) Zymase c) Diastase d) Lipase
58. The enzymes are chemically speaking
a) Proteins b) Lipids c) Vitamins d) None of these
59. When a man starves, he first of all consumes stored
a) Fats b) Proteins c) Glycogen d) Carbohydrates
60. Basic unit of protein is
a) Helical strand b) Peptones c) Amino acids d) Glucose
61. The end product of fat digestion is
a) Amino acids b) Starch c) Fatty acids d) Glucose
62. Quick energy we get, is stored in the form of
a) Glucose b) ADP c) ATP d) DNA
63. Increased heat production is caused in humans by increased activity of
a) Liver b) Brain c) Heart d) Skeletal muscle
64. The major site of gluconeogenesis is
a) Muscles b) Kidney c) Liver d) Brain
65. Normal growth and development of an organism depends on
a) A balanced diet b) Rich carbohydrate diet
c) Rich protein diet d) Rich fatty diet
66. Citric acid cycle was proposed by
a) H.J.Muller b) T.Caperson c) F.Sanger d) H.A.Kreb

67. Air directly enters the tracheae via the

- a) External nares b) Pharynx c) Larynx d) Bronchi

68. In all vertebrates, the oxygen transport is through

- a) Haemocyanin b) Haemoglobin c) Myoglobin d) Haemoerythrin

69. Expiration after full inspiration is called

- a) Vital capacity b) Lung capacity
c) Tidal volume d) Residual volume

70. Oxygen dissociation curve of Hb is

- a) Hyperbolic b) Sigmoid c) Linear d) Stationary

71. During hibernation the frog respire by

- a) Skin only b) Lungs only
c) Partly by lungs and partly by skin d) Both skin and lungs

72. Pacemaker of the heart is

- a) S.A. node b) A.V. node c) A.V. Septum d) I.A. septum

73. Urea is synthesized in

- a) Kidney b) Lungs c) Intestine d) Liver

74. Vitamin excreted in urine by higher vertebrates is

- a) A b) B c) K d) C

75. ADH influences the reabsorption of

- a) Glucose b) Proteins c) Water d) Salts

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