

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234
DEPARTMENT OF ZOOLOGY



Course Code: 09CT21	Programme: B.Sc	CIA: I
Date: 16.02.2021	Major: Zoology	Semester: II
Duration: 2 Hours	Year: I	Max.Marks: 50
Course Title:		CHORDATES I

SECTION – A (Remembering)

Answer ALL the Questions:

(10 X 1 = 10 Marks)

- | | | |
|----|---|------|
| 1 | Branchiostoma belongs to | CO 1 |
| | a. Hemichordata b. Cephalochordata c. Urochordata d. None of these | |
| 2 | Feeding mode of Branchiostoma is | CO 1 |
| | a. Filter feeding b. Carnivorous c. Omnivorous d. Herbivorous | |
| 3 | Placoid scales are characteristics of ----- fishes | CO 3 |
| | a. Ostracoderms b. Placoderms c. Elasmobranch d. Common carps | |
| 4 | Luciferin is oxidized and produce light with help of enzyme | CO 3 |
| | a. Amylase b. Protease c. Luciferase d. Carboxylase | |
| 5 | Integument refers to | CO 3 |
| | a. Lungs b. Heart c. Skin d. Eye | |
| 6 | Sucking mouth and rasping tongue is present in | CO 2 |
| | a. Ostracoderms b. hag fishes c. Lampreys d. Sharks | |
| 7 | Placoid scales are present in | CO 2 |
| | a. Salmons b. Lamprey c. Sharks d. Hag fishes | |
| 8 | Frog hibernate during | CO 2 |
| | a. Winter b. Spring c. Summer d. Autumn | |
| 9 | Reptiles are | CO 2 |
| | a. Warm blooded b. Cold blooded c. Hot blooded d. All of these | |
| 10 | Sound box or voice box in birds is known as | CO 2 |
| | a. Larynx b. Syrinx c. Synsacrum d. Pygostyle | |

SECTION – B (Remembering)

Answer any FIVE Questions:

(5 X 2 = 10 Marks)

- | | | |
|----|---|------|
| 11 | What you meant by cephalization? | CO 1 |
| 12 | How the hemichordates are differing from cephalochordate? | CO 1 |
| 13 | What is Photophores? | CO 3 |
| 14 | Write any four key function of Integument system. | CO 3 |
| 15 | Draw the structure of buccal funnel of petromyzon. | CO 2 |
| 16 | Write a note on fins of shark. | CO 2 |
| 17 | Define: - Nuptial pad. | CO 2 |

SECTION – C (Understanding)

Answer any THREE Questions:

(3 X 6= 18 Marks)

- | | | |
|----|--|------|
| 18 | Differentiate between the protochordate and hemichordate with the morphological characteristic features. | CO 1 |
| 19 | With neat sketch discuss the morphological features of Balanoglossus. | CO 1 |
| 20 | Discuss in detail morphological features, habit and habitats and development of Branchiostoma. | CO 1 |
| 21 | Write down the general characteristic features of sub phylum vertebrata. | CO 1 |
| 22 | With neat sketch discuss the morphological structure of Petromyzon | CO 2 |

SECTION – D (Applying)

Answer any ONE Question:

(1X 12= 12 Marks)

- | | | |
|----|--|------|
| 23 | Comparatively discuss various integument derivatives of various animal groups. | CO 3 |
| 24 | Describe the external features of Shark and Frog with a labelled diagram. | CO 2 |

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Course Code: 09CT22	Programme: B.Sc	CIA: I
Date: 20.02.2021	Major: Zoology	Semester: II
Duration: 2 Hours	Year: I	Max.Marks: 50
Course Title:	CHORDATES II	

SECTION – A (Remembering)

Answer **ALL** the Questions: **(10 X 1 = 10 Marks)**

- 1 Multi Axolotl larva posses (CO3)
a). external gill b). caudal fin c). laterally compressed tail d). all of these
- 2 Frogs and toads belongs to order (CO3)
a). apoda b). anura c). stegostephalia d). urodela
- 3 Salamander belongs to the class (CO3)
a). reptilia b). amphibia c). aves d). mammalia
- 4 Midwife toad is another name of (CO3)
a). alytes b). hyla c). rhacophorus d). pipa
- 5 Neotany is found in larvae of (CO3)
a). rana b). salamandra c). ichthyophis d). necturas
- 6 Which _____ were the first true vertebrate? (CO1)
a) Shark b) Hippocampus c) Ostracoderms d) Balanoglossus
- 7 The first vertebrate originated in the late _____ period of Paleozoic era. (CO1)
a) Silurian b) Cambrian c) Devonian d) Triassic
- 8 The amphibians originated from _____ (CO1)
a) Rat b) Mammals c) Fishes d) Plant
- 9 The gradual development of land life by an aquatic ancestor is called _____ (CO1)
a) Pre-adaptation b) Terrestrialization c) Locomotion d) All the above
- 10 Pneumatic bone, Stryx, Pecten and keel is found in _____ (CO1)
a) Birds b) Mammals c) Reptiles d) Frog

SECTION – B (Remembering)

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

- 11 Mention few characteristic features of Hyla faber. (CO3)
- 12 Write a short note about the Desmognathus fucus. (CO3)
- 13 What is Neoteny? Mention its types. (CO3)
- 14 Write short note about the structural features of Axolotl. (CO3)
- 15 Define fossils. (CO1)
- 16 What is geological time scale? (CO1)
- 17 Interpret the term Terrestrialization. (CO1)

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

- 18 Enumerate the characteristics of Ichthyophis glutinosa. (CO3)
- 19 Describe in brief the flight adaptation in birds. (CO3)
- 20 Write a note about the flightless birds. (CO3)
- 21 Give an account on ancestors of amphibians with appropriate illustrations. (CO1)
- 22 Argue that seymouria as connecting link between amphibians and reptiles (CO1)

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

- 23 Write an essay on parental care in Amphibia. (CO3)
- 24 Justify that birds are glorified reptiles through the principles of Huxley. (CO1)

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Course Code: 09CT41	Programme: B.Sc	CIA: I
Date: 16.02.2021	Major: Zoology	Semester: IV
Duration: 2 Hours	Year: II	Max.Marks: 50
Course Title: DEVELOPMENTAL BIOLOGY		

SECTION – A (Remembering)

Answer **ALL** the Questions: **(10 X 1 = 10 Marks)**

- 1 _____ was the father of embryology. (CO1)
a. William Harvey b. Aristotle c. Malpighi d. Herophilus
- 2 The theory of preformation was proposed by (CO1)
a. Leeuvehock b. H.C.Pander c. Von Baer d. Malpighi
- 3 The spermatogenesis refers to the formation of _____. (CO1)
a. Germinal epithelium b. Mesorchium c. Spermatozoa d. Endoderm
- 4 Oogenesis is a process by which the _____ develops in the ovary (CO1)
a. Oocytes b. Ovum c. Follicles d. Germplasm
- 5 The cell which are destined to develop into gametes are called (CO1)
a. Ectoderm b. Primordial gem cells c. Spermatozoa d. Ooplasm
- 6 The phase in which the ovum is expelled out through the process of ovulation is (CO4)
a. Proliferative phase b. Menstrualphase c. Ovulatory phase
d. Secretaryphase
- 7 The menstrual cycle is seen in (CO4)
a. Primates b. Amphibia c. mammals d. Reptiles
- 8 The hormone is responsible for pregnancy is (CO4)
a. Estrogen b. Ammonic
c. Progesterone d. Pro estrogen
- 9 The process by which the baby is born and marks the termination of pregnancy is (CO4)
a. Delivery b.Lactation
c. Carriage d.Parturition
- 10 The growing fetus attached by umbilical cord to the placenta is bathed by (CO4)
a. Amniotic fluid b. Chorionic fluid
c.Allantoic fluid d. Yolk sac

SECTION – B (Remembering)

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

- 11 What are Primordial germ cells? (CO1)
- 12 Mention the functions of Sertoli cells. (CO1)
- 13 Comment on Mesorchium. (CO1)
- 14 Write a short note on Vitellogenesis? (CO1)
- 15 List out various cavity of Brain. (CO4)
- 16 Write a short note on origin of Endocardium. (CO4)
- 17 Write short comment on the changes in human ovary under the influence of FSH. (CO4)

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

- 18 State the importance of preformation and epigenesis theory. (CO1)
- 19 Describe the fertilizin-antifertilizin reactions. (CO1)
- 20 What is an acrosome reaction? Mention its role during fertilization. (CO1)
- 21 Describe the development of kidney from Nephrostome. (CO4)
- 22 Write an account on the function of various foetal membrane and extraembryonic membrane of Chick. (CO4)

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

- 23 Describe in detail the process involved during spermatogenesis. (CO1)
- 24 Write an essay on various phases of menstrual cycle and its hormonal control. (CO4)

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Course Code: 09CT42	Programme: B.Sc.,	CIA: I
Date: 20.02.2021	Major: Zoology	Semester: IV
Duration: 2 Hours	Year: II	Max.Marks: 50
Course Title: PHYSIOLOGY		

SECTION – A (Remembering)

Answer **ALL** the Questions:

(10 X 1 = 10 Marks)

- 1 Which one is the cheapest source of energy in food?
a) Carbohydrate b) Protein c) Fat d) Vitamins (CO1)
- 2 Vitamin B1 is called
a) Thiamine b) Retinol c) Niacin d) Biotin (CO1)
- 3 Iron deficiency leads to
a) anaemia b) tetany c) goitre d) fluorosis (CO1)
- 4 Light enters eye through a transparent membrane known as
a) Cornea b) Pupil c) Retina d) Iris (CO5)
- 5 The delicate membrane at the end of the external auditory meatus is called
a) Tympanum b) Malleus c) Stapes d) Incus (CO5)
- 6 The anticoagulant secreted by leech is
a) Hirudin b) Cephalin c) Fibrin d) Heparin (CO2)
- 7 In human, heart beat originates in
a) Right auricle b) SA node c) AV node d) Bundle of His (CO2)
- 8 The diffusion of Cl⁻ ions from plasma to RBC and back is called
a) RQ b) Root effect c) Chloride shift d) Bohr effect (CO2)
- 9 Chemically the blood clot is
a) Fibrin b) Thrombin c) Prothrombin d) Fibrinogen (CO2)
- 10 The RQ value for carbohydrates is
a) 5 b) 3 c) 7 d) 1 (CO2)

SECTION – B (Remembering)

Answer any **FIVE** Questions:

(5 X 2 = 10 Marks)

- 11 Enlist the water soluble vitamins with their biochemical name. (CO1)
- 12 Comment on Iron and calcium. (CO1)
- 13 List out the types of receptors in man. (CO5)
- 14 Specify the molecular significance of hemoglobin with regard to its function. (CO2)
- 15 Define phagocytosis. (CO2)
- 16 What is stroma? (CO2)
- 17 Discriminate the myogenic heart from neurogenic heart. (CO2)

SECTION – C (Understanding)

Answer any **THREE** Questions:

(3 X 6 = 18 Marks)

- 18 Enumerate the physiological functions of carbohydrates and proteins. (CO1)
- 19 Give an account on structure and functions of human ear with neat sketch. (CO5)
- 20 Draw the structure of human eye and comment on it. (CO5)
- 21 Define respiratory quotient. (CO1)
- 22 Comment on composition and functions of blood. (CO2)

SECTION – D (Applying)

Answer any **ONE** Question:

(1 X 12 = 12 Marks)

- 23 Give a detailed account on fat soluble vitamins. (CO1)
- 24 Discuss the mechanism transporting O₂ and CO₂. (CO2)

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Course Code: 09SB41 **Programme:** B.Sc **CIA:** I
Date: 15.02.2021 **Major:** Zoology **Semester:** IV
Duration: 1 Hour **Year:** II **Max.Marks:** 25
Course Title: **CLINICAL LAB TECHNOLOGY**

SECTION – A

Answer **ALL** the Questions:

(5 X 1 = 5 Marks)

- 1 Temperature inside the autoclave at____. CO1
a. 125°C b. 120°C c.121°C d. 135°C
- 2 Which one the microscope is used to observe living cells and tissues. CO1
a. Binocular b. Dark field c. Phase contrast d. Compound
- 3 ____type of samples are observed in TEM and SEM CO1
a. Solid b. Dry c. Semi – solid d. All the above
- 4 Electron microscope was first designed by CO1
a. Knollard Rusks b. Funk c. Zernike d. T.H Morgan
- 5 The wavelength of X-ray is CO2
a.0.01 to 10nm b. 0.01 to 50nm c. 0.01 to 100nm d. 0.01 to 100nm

SECTION – B

Answer any **TWO** Questions:

(2 X 2 = 4 Marks)

- 6 Write any two uses of X-ray. CO2
- 7 Mention the role of Colorimeter CO2
- 8 Comment on Risk Groups-2 CO1
- 9 Write the application of Phase contrast microscope CO1

SECTION – C

Answer any **ONE** Questions:

(1 X 6= 6 Marks)

- 10 Write a note on biomedical waste management. CO1
- 11 Explain the applications of autoclave. CO1

SECTION – D

Answer any **ONE** Question:

(1 X 10= 10 Marks)

- 12 Describe the principles and applications of Centrifuge. CO1
- 13 Explain the electron microscope and their applications. CO1

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Course Code: 09AT02 **Programme:** B.Sc., **CIA:** I
Date: 19.02.2021 **Major:** Chemistry/
Botany **Semester:** IV
Duration: 2 Hours **Year:** II **Max.Marks:** 50
Course Title: **BIOLOGY AND HUMAN WELFARE**

SECTION – A (Remembering)

Answer **ALL** the Questions:

(10 X 1 = 10 Marks)

- 1 Entamoeba is an
a) Ectoparasite b) Endoparasite c) Free living d) Saprophyte (CO3)
- 2 Pick out the intermediate host of Plasmodium.
a) Man b) Pig c) Cat d) Mosquito (CO3)
- 3 Sexual dimorphism is found in
a) Hydra b) Earthworm c) Wucheraria d) Fasciola (CO3)
- 4 What is the common name of Ancylostoma duodenale?
a) Hook worm b) Tape worm c) Pinworm d) Filarial worm (CO3)
- 5 Which one is the vector of Wucheraria?
a) Man b) Culex c) Pig d) Anopheles (CO3)
- 6 Rabies caused by
a) a worm b) a virus c) a bacteria d) fungus (CO1)
- 7 What is the usual incubation period?
a) 7 to 14 days b) 3 to 8 weeks c) 2 to 4 weeks d) 5 to 7 days (CO1)
- 8 AIDS is diagnosed by
a) Northern blotting b) Southern blotting c) ELISA d) Eastern blotting (CO1)
- 9 Which of the following is not a symptom of cholera?
a) High blood pressure b) Fast heart rate c) Dehydration d) Severe diarrhea (CO2)
- 10 Symptoms of Tetanus
a) Headache b) body pain c) fever d) vomiting (CO2)

SECTION – B (Remembering)

Answer any **FIVE** Questions:

(5 X 2 = 10 Marks)

- 11 Give a note on symptoms and causes of amoebiasis. (CO3)
- 12 What is Endoparasite? (CO3)
- 13 Define Digenic parasite? (CO3)
- 14 Define pathogenicity. (CO1)
- 15 Expand the following term: DPT and BCG. (CO2)
- 16 Name any two Cholera vaccines. (CO2)
- 17 Write a short note about thrombocytopenia and leukopenia. (CO2)

SECTION – C (Understanding)

Answer any **THREE** Questions:

(3 X 6 = 18 Marks)

- 18 Describe the life cycle and causes of *Ancylostoma duodenale*. (CO3)
- 19 Give an account on symptoms, causes and control methods of Elephantiasis. (CO3)
- 20 Briefly describe the structure of virus with neat diagram. (CO1)
- 21 Describe the symptoms, causes, transmission and control methods of Rabies. (CO1)
- 22 Enumerate the characteristics of bacteria. (CO2)

SECTION – D (Applying)

Answer any **ONE** Question:

(1 X 12 = 12 Marks)

- 23 Write an essay on causative organism, symptoms and mode of transmission of Malaria (CO3)
- 24 Discuss elaborately the causative organism, symptoms mode of transmission and control measures of Tuberculosis. (CO2)

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Course Code:	09CT61	Programme:	B.Sc	CIA:	I
Date:	16.02.2021	Major:	Zoology	Semester:	VI
Duration:	2 Hours	Year:	III	Max.Marks:	50
Course Title:	EVOLUTION				

SECTION – A (Remembering)

Answer **ALL** the Questions:

(10 X 1 = 10 Marks)

- 1 Germplasm theory was given by CO 1
a. Weismann b. Darwin c. Lamarck d. Hugo de Varies
- 2 Oparin's concepts regarding the 'origin of organic compounds' is based on the CO 1
a. Origin of the earth proposed by Sir James Jean b. Abiogenesis theory c. Biogenesis theory d. Cosmozoic theory
- 3 According to Lamarck, Variation in the organisms arise due to CO 1
a. Use and disuse of organs b. Change in Germplasm c. Both (a) & (b) d. Change in the structure of the chromosomes.
- 4 Analogous organs are those which are CO 1
a. Structurally similar b. Functional similar c. Both (a) & (b) d. Normally non- functional
- 5 Which one of the following is a vestigial organ in humans? CO 1
a. Vermiform appendix b. Coccyx c. Ear muscles d. All of these
- 6 In which one of the following speciation does a population split into two geographically CO 3
isolated populations?
a. Natural speciation b. Allopatric c. Parapatric d. Sympatric
- 7 New species is develop due to CO 3
a. Isolation and Mutation b. Competition and Mutation c. Isolation and Variation d. Competition and Variation
- 8 The term mimicry was introduced by CO 3
a. Bates b. DeVaries c. Darwin d. Jenner
- 9 Biological factor that prevent gene flow are called----- CO 3
a. Isolating mechanisms b. Mutation c. Hybridization d. Genetic difference
- 10 "An edible or harmless species resembles an inedible or harmful species" is example for CO 3
a. Batesian mimicry b. Mullerian mimicry c. Protective mimicry d. Aggressive mimicry

SECTION – B (Remembering)

Answer any **FIVE** Questions:

(5 X 2 = 10 Marks)

- 11 Define vestigial organs CO 1
- 12 What is atavism? CO 1
- 13 Discriminate homology and analogy. CO 1
- 14 What is speciation? CO 3
- 15 What you mean by biological wastage? CO 3
- 16 Define: Gause's law. CO 3
- 17 Mimicry is a kind of adaptation- Justify CO 3

SECTION – C (Understanding)

Answer any **THREE** Questions:

(3 X 6= 18 Marks)

- 18 Describe origin of life with reference to Oparin – Haldane theory. CO 1
- 19 Bring out embryological evidences in support of common ancestry in the course of evolution. CO 1
- 20 Summaries the various factors involved in speciation. CO 3
- 21 Differentiate between allopatric and sympatric speciation. CO 3
- 22 Discuss the following: CO 3
i. Continental Drift Hypothesis
ii. Types of Extinction

SECTION – D (Applying)

Answer any **ONE** Question:

(1X 12= 12 Marks)

- 23 Discuss Lamarckism and Neo - Lamarckism with appropriate illustrations. CO 1
- 24 Give a detailed account on isolating mechanisms in evolution. Briefly comment on each of them. CO 3

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Course Code: 09EP61 **Programme:** B.Sc., **CIA:** I
Date: 17.02.2021 **Major:** Zoology **Semester:** VI
Duration: 2 Hours **Year:** III **Max.Marks:** 50
Course Title: **DAIRY FARMING**

SECTION – A (Remembering)

Answer **ALL** the Questions: **(10 X 1 = 10 Marks)**

- 1 Fat content in the mil of murrah is **CO1**
a) 7.82% b) 6.2% c) 7.5% d) 8%
- 2 Which of the milk is nutritionally superior among the following? **CO1**
a) Buffalo b) Cow c) Camel d) Goat
- 3 Origin of red Sindhi is **CO1**
a) Maharashtra b) Karachi c) Gujarat d) Burma
- 4 What is the milk yield of Holstein – Friesian per lactation? **CO1**
a) 600kg b) 4000 kg c) 5000 kg d) 6000 kg
- 5 Animals of one breed **CO1**
a) Are animals of common ancestry b) Have distinguishable characteristics
c) Produce offspring with the same characteristics d) All of the above
- 6 The spoilage of milk is mainly due to the formation of **CO4**
a. Sweetness b. Bacteria c. Acidity from bacteria d. Alkalinity
- 7 The chemical used to clean and wash the hands before milking is **CO4**
a. Hydrochloric acid b. Potassium permanganate
c. Sodium sulphate d. Sodium Phosphate
- 8 The milk byproduct obtained by concentration of full cream milk by removing part of its water is **CO4**
a. Milk powder b. Condensed milk c. Ghee d. Butter
- 9 Each alveolus of udder is drained by a small duct called **CO4**
a. Interlobular b. Lobular c. Teat cistern d. Terminal duct
- 10 The name of the milk protein is **CO4**
a. Lactoalbumin b. Lactoglobulin c. Caesin d. Peptones

SECTION – B (Remembering)

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

- 11 Define: Hybrid vigour? **CO1**
- 12 What is indigenous cattle state with suitable examples **CO1**
- 13 Write any two demerits of inbreeding? **CO1**
- 14 Significant characters of Murrah. **CO1**
- 15 Write short notes on suspensory structure of udder **CO4**
- 16 Comment on streak canal and feat canal **CO4**
- 17 What is pasteurization? **CO4**

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

- 18 Explain the scope of dairy farming. **CO1**
- 19 Compare the characters of Jersey and Holstein fresian. **CO1**
- 20 Explain various by-products of milk **CO1**
- 21 Describe the morphology and anatomy of udder **CO4**
- 22 Discuss the adulteration of milk and its detecting methods **CO4**

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

- 23 Explain the characteristics of any five milch breeds of cow in India. **CO1**
- 24 Write a detailed account an composition of milk and colostrum and add importance of colostrum. **CO4**

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Course Code: 09EP62	Programme: B.SC.,	CIA: I
Date: 18.02.2021	Major: Zoology	Semester: VI
Duration: 2 Hours	Year: III	Max.Marks: 50
Course Title: ENVIRONMENTAL BIOLOGY		

SECTION – A (Remembering)

Answer **ALL** the Questions: **(10 X 1 = 10 Marks)**

- 1 The formation of soil from rock is CO1
a. pedology b. pedogenesis c. hydrologic cycle d. phototropism
- 2 Which one of the following is called as environmental trigger? CO1
a. soil b. light c. water d. temperature
- 3 The biological effect of temperature is CO1
a. metabolism b. growth c. development d. All
- 4 In the following food chain, which organism is the primary consumer? CO2
grass -----> rabbit -----> snake -----> hawk
a. Grass b. Rabbit c. Snake d. Hawk
- 5 Which of the following is an abiotic factor in an ecosystem? CO2
a. Bird b. Tree c. Rock d. Deer
- 6 When in a population, the birth and death rates exactly balance each other, it is called CO3
a. Plateau Phase b. Exponential growth phase c. Initial growth phase d. Acceleration phase
- 7 Ecotone is CO3
a. Functional status of an organism in its community
b. Intermediate zone lying between two adjacent communities
c. Intermediate zone between two ecosystems
d. Intermediate zone between Sea and river
- 8 The meeting place of the river and sea is called CO4
a. Estuary b. Limnology c. Oceanology d. Sea shore
- 9 Temperate evergreen forests are found in CO4
a. Western Ghats b. Himalayan Range c. Aravalli Range d. Assam
- 10 Adyar Estuary is situated in CO4
a. Tamil Nadu b. Kerala c. Andhra d. Orissa

SECTION – B (Remembering)

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

- 11 Write the scope of environmental biology. CO1
- 12 What is pedology? CO1
- 13 Comment on eurythermal CO1
- 14 What is energy flow? CO2
- 15 What is edge effect? CO3
- 16 Comment on Biotic potential CO3
- 17 Comment on any two adaptations of cave animals CO4

SECTION – C (Understanding)

Answer any **THREE** Questions: **(3 X 6= 18 Marks)**

- 18 Explain the soil profile with suitable diagram. CO1
- 19 Discuss thermal stratification with illustrations CO1
- 20 Describe ecological pyramid with examples CO2
- 21 Write an account on population growth curves CO3
- 22 Define age pyramids. Describe the salient features of age pyramids CO3

SECTION – D (Applying)

Answer any **ONE** Question: **(1X 12= 12 Marks)**

- 23 Write an essay on nitrogen cycle CO2
- 24 Give an account of the desert adaptation of animals CO4

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DEPARTMENT OF ZOOLOGY



Course Code: 09SB61	Programme: B.Sc	CIA: I
Date: 12.02.2021	Major: Zoology	Semester: VI
Duration: 1 Hour	Year: III	Max. Marks: 25
Course Title:	FISH CULTURE	

SECTION – A

Answer **ALL** the Questions:

(5 X 1 = 5 Marks)

- 1 Pisciculture is culture of CO1
a. earth worm b. Prawns c. Fishes d. silkworm
- 2 CMFRI is CO1
a. Central Marine Fish Research Institution
b. Central Marine Fisheries Research Institute
c. Central Mariculture Fish Research Institute
d. Central Marine Fish Recreation Institute
- 3 The important food fish is CO2
a. Rohu b. Catla c. Wallago d. Clarius
- 4 The optimum temperature for fish is _____ CO2
a. 20 – 25⁰C b. 30 – 35⁰C c. 35 - 40⁰C d. 15 - 20⁰C
- 5 Culture of many species of carps in a pond is called CO3
a. monoculture b. monosex culture c. poly culture d. Integrated fish farming

SECTION – B

Answer any **TWO** Questions:

(2 X 2 = 4 Marks)

- 6 What is Mariculture? CO1
- 7 Comment on semi intensive culture CO1
- 8 What is sluice gate? CO2
- 9 Define monoculture CO3

SECTION – C

Answer any **ONE** Questions:

(1 X 6= 6 Marks)

- 10 Describe the maintenance and management of fish pond CO2
- 11 Discuss monosex culture with examples CO3

SECTION – D

Answer any **ONE** Question:

(1 X 10= 10 Marks)

- 12 Describe physical and chemical parameters of water. CO1
- 13 Explain the induced breeding technique in fish CO3

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Course Code: 09SB62	Programme: B.Sc.,	CIA: I
Date: 13.02.2021	Major: ZOOLOGY	Semester: VI
Duration: 1 Hour	Year: III	Max.Marks: 25
Course Title: VERMITECHNOLOGY		

SECTION – A

Answer **ALL** the Questions:

(5 X 1 = 5 Marks)

- 1 Earthworm belongs to the Phylum
a) Annelida b) Neooligochaeta c) Acanthobdellida d) Rhyncobdellida **CO1**
- 2 Earthworm belongs to the order
a) Archioligochaeta b) Neooligochaeta c) Acanthobdellida d) Rhyncobdellida **CO1**
- 3 Which one of the following is the exotic species?
a) Eisenia fetide b) Perionyx excavates c) Lambido marisi d) Pheretima elongata **CO1**
- 4 The number of earthworm species in India is
a) 409 b) 590 c) 609 d) 709 **CO1**
- 5 The food of earthworm is
a) Detritus b) Grazious c) Parasitic d) Saprophyte **CO2**

SECTION – B

Answer any **TWO** Questions:

(2 X 2 = 4 Marks)

- 6 List out the exotic and indigenous species of earthworms. **CO1**
- 7 Give the systematic position of earthworm. **CO1**
- 8 Draw the morphological structure of earthworm with neat sketch. **CO2**
- 9 Expand KVIC. **CO2**

SECTION – C

Answer any **ONE** Questions:

(1 X 6= 6 Marks)

- 10 Enlist the scope of Vermitechnology. **CO1**
- 11 Describe habit and habitat of earthworm. **CO2**

SECTION – D

Answer any **ONE** Question:

(1 X 10= 10 Marks)

- 12 Enumerate the general characteristics of phylum Annelida **CO1**
- 13 Write an essay on life cycle of earthworm. **CO2**

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234
DEPARTMENT OF ZOOLOGY



Course Code:	09SB63	Programme:	B.Sc.,	CIA:	I
Date:	15.02.2021	Course:	Zoology	Semester:	VI
Duration:	1 Hour	Year:	III	Max. Marks:	50
Course Title:	ZOOLOGY FOR COMPETITIVE EXAMINATION				

SECTION – A

Answer **ALL** the Questions:

(50 X 1 = 50 Marks)

- 1 Birds and bats are good fliers. The a bat differs from a bird in having. **CO1**
a)Diaphragm b)Four-chambered heart c)Wings d)Small brain
- 2 The group amniota includes **CO1**
a)Birds and mammals b) Birds and reptiles c)Reptiles and mammals d)Reptiles, birds and mammals
- 3 Vertebrates possess **CO1**
a)Well developed body cavity with alimentary canal b)Dorsal tubular nerve cord
c)Ventrally situated heart d)All of these
- 4 Snakes are not found in **CO1**
a)India b)UK c)USSR d)West indies
- 5 Canal system is characteristics of **CO1**
a)Hydra b)Sponges c)Sea anemone d)Sea urchin
- 6 Biramous appendages are typically found in **CO1**
a) Insects b)Crustaceans c)Arachnida d)Polychaeta
- 7 Which of the following is homothermous? **CO1**
a) Lizard b)Frog c)Rabbit d)Cuttle fish
- 8 Pharyngeal gill slits are found in **CO1**
a)Flying fish b)Silver fish c)Cray fish d) Cuttle fish
- 9 A pearl oyster belongs to class **CO1**
a)Mollusca b) Bivalvia c) Scaphopoda d)Gastropoda
- 10 Amoebiasis is caused by **CO1**
a)Plasmodium vivax b)Taeniasolium c)Entamoebahistolytica d)Entamoebagingivalis
- 11 Method of food intake in Paramecium is **CO1**
a)Holozoic b)Holophytic c)Saprozoic d)Autozoic
- 12 The cell drinking phenomenon is termed as **CO1**
a)Circumfluence b)Ingestion c) Pinocytosis d) Cirucumvallation
- 13 Protozoans respire through **CO1**
a)Pseudopodia b)Contractile vacuole c)General surface d)None of these
- 14 In a Paramecium, the trichocysts are used for **CO1**
a)Fight or flight response b)Defence c)Offense d)Both a and b
- 15 Sponges capture their food by **CO1**
a) Choanocytes b) Porocytes c) Amoebocytes d) Ponacocytes
- 16 Larva of sponge is known as **CO1**
a) Planula larva b)Amphiblastula larva c)Trochophore larva d) Glochidium larva
- 17 The gametes in sponges develop from **CO1**
a) Amoebocytes b)Archeocytes c)Choanocytes d)Myocytes **CO1**

- 18 Canal system in *Lucosolenia* is
a)Asconoid b)Syconoid c)Leuconoid d)Rhagon
- 19 Cells that aid in locomotion of a sponge are **CO1**
a)Porocytes b)Myocytes c)Choanocytes d)None of these
- 20 Which of the organism is sedentary as adult but active as larva? **CO1**
a) Frog b)Jelly fish c)Rat flea d)Sponge
- 21 Hydra respire through **CO1**
a) Mesoglea b)General surface c)Pellicle d)Gastrodermis
- 22 Coral reef formation is mainly related to **CO1**
a) Sponges b)Anthozoans c)Molluscs d)Hydrozoans
- 23 Asexual reproduction of *Obelia* involves **CO1**
a)Budding of medusa b)Budding of hydrants c)Budding of blastostyle d)All of these
- 24 The filaria parasite is transmitted by **CO1**
a) Female culex b)Male culex c)Female anopheles d)Male anopheles
- 25 The secondary host of *Taeniasolium* is **CO1**
a)Pig b)Female anopheles c)Cow d) Culex
- 26 The head region of tapeworm is known as **CO2**
a) Proglottid b) Rostellum c) Acetabulum d)Scolex
- 27 Free living platyhelminthic forms belong to the class **CO2**
a) Turbellaria b) Cestoda c)Trematoda d)Nematode
- 28 Nutrition in *Taenia* is **CO2**
a) Holozoic b)Holophytic c)Saprozoic d)Mixotrophic
- 29 Infection of *Ascaris* usually occurs by **CO2**
a)Mosquito bite b)Tse-tse fly c)Imperfectly cooked pork d)Contaminated water and vegetables
- 30 Pineal setae arise from **CO2**
a)Vulva of female *Ascaris* b)Roof of diencephalon c)Cloaca of an amphibian
d)Cloaca of male roundworm
- 31 Sense organs of *Ascaris* are **CO2**
a)Epidermal cords b)Spicules c)Papillae and amphids d)Circumcentric ring
- 32 In *Ascaris*, the excretory organs are **CO2**
a)Nephridia b)Kidneys c)Excretory cells d)Flame cells
- 33 The development of *Ascaris* eggs require **CO2**
a)Oxygen b)Moisture c) A temperature lower than that of human body
d)A temperature higher than that of human body
- 34 Role of typhlosole in the intestine of earthworm is **CO2**
a)To kill bacteria b)To increase absorptive surface c) To produce digestive enzymes
d)To control blood flow
- 35 *Pheretima* is **CO2**
a)Sterile b)Unisexual c)Hermaphrodite d)Radial symmetrical
- 36 Copulation occurs between earthworms **CO2**
a)Generally at night during rainy season b)Generally at day time during rainy season
c)At night during winter season d)At night during summer season
- 37 The mouth parts of cockroach are **CO2**
a)Cutting and biting type b)Piercing and sucking type
c)Grasping and sucking type d)Siphoning and sucking type **CO2**

- 38 In bee the royal jelly is fed to the
a)Queen b)Drones c)Larva that becomes queen d)Larva that becomes the drones
- 39 Silk glands are modified **CO2**
a)Salivary glands b)Collateral glands c)Anal glands d)Mushroom glands
- 40 The vector for the viral dengue fever is **CO2**
a)Sandfly b)Housefly c)Head louse d)Mosquito
- 41 Lac is a product of **CO2**
a)Faecal matter of lac insect b)Excess of oozing out of body
c)Secretion from the body d)Excretion from the body
- 42 A hermit- crab is scientifically known as
a)Sea anemone b)Sea cucumber c)Sea star d)Sea horse
- 43 True and complete metamorphosis is found in **CO2**
a) Silver fish b)Cockroach c)Moth of mosquito d)Grasshopper
- 44 Internal shell is present in **CO2**
a)Sepia b)Lamellidens c)Chiton d)Pila
- 45 The generic name of apple snail is **CO2**
a)Pila b)Aplysia c)Helix d)Aphrodite
- 46 The blood pigment of mollusca is **CO2**
a)Myoglobin b)Anthocyanin c)Haemocyanin d)Haemoglobin
- 47 Ink glands occurs in **CO2**
a)Ascaris b)Pila c)Fasciola d)None of the above
- 48 The larvae of sea stars are **CO2**
a)Redia and cercaria b)Bipinnaria and brachiolaria c)Trochophore and aurecularia
d)None of these
- 49 A characteristics of Echinodermata is **CO2**
a)Bilateral symmetry b)Metamerism c)Water vascular system d)Schizocoel
- 50 Radial symmetry is seen in **CO2**
a)Mollusca b)Star fishes c)Sponges d)Fishes