

VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF ZOOLOGY

Course Code: 09CT11	Programme: B.Sc.,	CIA: II Test
Date: 03.09.2019	Major: ZOOLOGY	Semester: I
Time: 2Hrs	Year: I	Maximum: 50 Marks
Course Title: INVERTEBRATE-I		

ANSWER ALL QUESTIONS SECTION – A 10X1=10 Marks

Multiple choice questions:

- Pick out which one of the following is causing the sleeping sickness? (CO1)
 a. Entamoeba b. Plasmodium c. Trypanosoma d. Amoeba
- Which one of the following is monogenic parasite? (CO1)
 a. Entamoeba b. Plasmodium c. Trypanosoma d. Amoeba
- The term Porifera means (CO2)
 a. Presence of many pores in the body b. Presence of flagellated cells in body
 c. Present of Mesogloea d. None of these
- Endoskeleton of sponge is ----- (CO2)
 a. Spicules b. Conidoblast c. Cilia d. Trichocyst
- Larva of sponge is known as (CO2)
 a. Amphiblastula b. Paranchymula c. Trochophore d. Both A and B
- Third moulting of *Ascaris* occurs in (CO5)
 a. Liver b. Egg c. Lung d. Intestine
- Which of the following diseases is caused by a nematode? (CO5)
 a. Filariasis b. Amoebiasis c. Leprosy d. Poliomyelitis
- Ascaris lumbricoides* lives in the intestine of (CO5)
 a. Sheep and goat b. Monkey c. Man d. Pig
- Penial setae arise from (CO5)
 a. Vulva of female *Ascaris* b. Cloaca of male round worm
 c. Roof of diencephalon d. Cloaca of an amphibian
- What type of life cycle occurs in *Ascaris lumbricoides* (CO5)
 a. Digenic parasite b. Monogenic parasite c. Trigenic parasite d. Five host

ANSWER ANY FIVE QUESTIONS SECTION – B 5X2=10 Marks

Very short answer:

- Give a note on control measures and prevention of Malaria. (CO1)
- Comment on Choanocyte. (CO2)
- What is spicules? (CO2)
- Comment on rhabditiform larva. (CO5)
- Differentiate the anus and cloaca. (CO5)
- Comment on pin-worm. (CO5)
- Distinguish the cuticle from epidermis in *Ascarislumbricoides*. (CO5)

ANSWER ANY THREE QUESTIONS SECTION – C 3X6=18 Marks

Short answer:

- Write an account on Trypanosome and its causes. (CO1)
- Give a brief note on structure and lifecycle of *Entamoeba* sp. (CO1)
- With a neat sketch discuss the structure of Ascon sponge. (CO2)
- Discuss the parasitic adaptations of Helminthes. (CO5)
- Explain the general characters of phylum Aschelminthes. (CO5)

ANSWER ANY ONE QUESTIONS SECTION – D 1x12=12 Marks

Long Answer:

- Write a detailed account on canal system of Sponges. (CO2)
- Write an account on *Wuchereria bancrofti* (Filarial worm). (CO5)



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF ZOOLOGY

Course Code: 09CT12	Programme: B.Sc.,	CIA: II Test
Date: 06.09.2019	Major: ZOOLOGY	Semester: I
Time: 2Hrs	Year: I	Maximum: 50 Marks
Course Title:	INVERTEBRATE-II	

SECTION – A Multiple choice questions

Answer All Questions:

10X1=10 Marks

- The cavity lying between the body wall and the gut are filled with parenchyma is called (CO1)
a) Acoelom b) Pseudocoelom c) Eucoelom d) Haemocoelom
- The linear arrangement of segments one behind the other is called (CO1)
a) Coelom b) Metamerism c) Symmetry d) organization
- The true metamerism is found in (CO1)
a) Earthworm b) Tapeworm c) Cockroach d) Pila
- The complete metamerism is the feature of (CO1)
a) Annelida b) Arthropoda c) Platyhelminthes d) Helminthes
- The law of adaptive radiation was first proposed by (CO1)
a) Osborn b) Linnaeus c) Mendel d) Hatschek
- The phenomenon of the existence of several morphological forms in a species is called (CO3)
a) Caste system b) Polymorphism c) Co-operation d) Warming
- The worker cells of honey bees are _____ in shape. (CO3)
a) Triangular b) Square c) Hexagonal d) Round
- The nest of termite is called (CO3)
a) Houses b) Hive c) Formicaries d) Termitarium
- The molting process in arthropods is known as (CO3)
a) Ecdysis b) tagmatization c) metamorphosis d) paedomorphosis
- Chemicals for insect communication are called (CO3)
a) Ecdysones b) protosones c) pheromones d) deuterosones

SECTION – B Very short answer

Answer any Five Questions:

5X2=10 Marks

- Write a note on origin of coelom. (CO1)
- Comment on metamerism. (CO1)
- Define the structure and functions of nephridia. (CO1)
- Write a note on productive insects. (CO3)
- Give a short note on helpful insects. (CO3)
- Mention any two functions of tube feet. (CO3)
- Comment on Pedicellaria. (CO3)

SECTION – C Short answer

Answer any Three Questions

3X6=18 Marks

- Give an account on Coelom and its type with examples. (CO1)
- Enlist the types of metamerism. (CO1)
- Describe the adaptive radiation in polychaetes. (CO1)
- Enumerate the morphological features of Centipedes. (CO3)
- Write a note on the classification of phylum Echinodermata. (CO3)

SECTION – D Long Answer

Answer any One Question:

1x12=12 Marks

- List out the general characteristics of Phylum Arthropoda. (CO1)
- Write a detailed account the general characters of Echinodermata with example (CO3)



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT31	Programme: B.Sc.,	CIA: II Test
Date: 03.09.2019	Major: ZOOLOGY	Semester: III
Time: 2Hrs	Year: II	Maximum: 50 Marks
Course Title:	CELL BIOLOGY	

SECTION – A Multiple choice questions**Answer All Questions:****10X1=10 Marks**

- Nucleus was discovered by
a) T. Schwann b) Robert Brown c) Robert Hook d) Kolliker (CO4)
- Polytene chromosomes are found in ----- of insects.
a) Gut b) Salivary glands c) Trachea d) All the above (CO4)
- Study of aging is called
a) Anthropology b) Chronology c) Geronotology d) Histology (CO4)
- Pairing of homologous chromosomes occurs during
a) Leptotene stage b) Pachytene stage c) Late anaphase stage d) Zygotene stage (CO4)
- Nucleolus disappears during ----- of the cell division.
a) Anaphase b) Prophase c) Prophase d) Telophase (CO4)
- Plasmalemma is
a) Permeable b) Selectively permeable c) Non-Permeable d) semi permeable (CO2)
- Endocytosis means
a) Phagocytosis b) Pinocytosis c) Both a and b d) cell vomiting (CO2)
- Golgi bodies are concerned with
a) Excretion b) secretion c) ATP synthesis d) DNA synthesis (CO2)
- The first micellar model was proposed by
a) Helleir and Hoffman b) Danielli and Davson c) Robertson d) Singer and Nicolson (CO2)
- Golgi complex is not found in
a) nerve cells b) RBC c) germ cells d) all the above (CO2)

SECTION – B Very Short Answer**Answer any FIVE Questions:****5X2=10 Marks**

- What is cell aging? (CO4)
- Write the function of nucleolus. (CO4)
- Define nucleoplasm. (CO4)
- What are the phases of cisternae of Golgi complex? (CO2)
- Define phagocytises. (CO2)
- Differentiate active and passive transport. (CO2)
- Mention the source and function of acrosome. (CO2)

SECTION – C Short Answer**Answer any THREE Questions:****3X6=18 Marks**

- Give a short account on giant chromosomes (Any one). (CO4)
- With neat sketch, describe the structure of nucleus. (CO4)
- List out the characteristics of cancer cells. (CO4)
- Narrate the architecture of plasma membrane through fluid mosaic model with a neat diagram. (CO2)
- Describe the morphological features of Golgi complex with a labelled sketch. (CO2)

SECTION – C Long Answer**Answer any ONE Question:****1X12=12 Marks**

- Analyse the different stages of mitosis with neat sketches. (CO4)
- Enlist the functions of a) Cell membrane b) Golgi complex. (CO2)



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT32	Programme: B.Sc.,	CIA: II Test
Date: 06.09.2019	Major: ZOOLOGY	Semester: III
Time: 2Hrs	Year: II	Maximum: 50 Marks
Course Title:	GENETICS	

SECTION – A Multiple Choice Questions**Answer All Questions:****10X1=10 Marks**

- The universal blood donors for the ABO system are type: CO2
a. AB b. A c. B d. O
- Who proposed three genes are involved in the production of Rh antigen? CO2
a. Wiener b. Fisher c. Mendel d. None
- The result of marriage between black Negros and white races is CO2
a. Black b. white c. mulatto d. brown
- Which one is wild type of rabbit? CO2
a. Agouti b. Chinchilla c. Himalayan d. Albino
- The symptoms of erythroblastosis foetalis is CO2
a. jaundice b. anaemia c. both a and b d. none
- Cytoplasmic inheritance was first described by CO5
a. Albert levan b. Cornes c. Mendel d. Jijo
- Which one of the following gene is maintain the kappa particles? CO5
a. M b. GG c. HH d. K
- Which one of the following are inborn error of metabolism? CO5
a. Alkaptonuria b. Colour blindness c. Haemophilia d. All the above
- Albinism is recessive gene represented by CO5
a. AA b. a c. aa d. bb
- The science of improvement of existing human race is called CO5
a. Euthenics b. Eugenics c. Negative eugenics d. Polygenesis

SECTION – B Very Short Answer**Answer any FIVE Questions:****5X2=10 Marks**

- What are Multiple Alleles? CO2
- Comment on acromelanism CO2
- Define Polygenes CO2
- What is multiple gene inheritance? CO2
- Define the extra chromosomal inheritance CO5
- What is free martin? CO4
- Comment on Pedigree analysis CO5

SECTION – C Short Answer**Answer any THREE Questions:****3X6=18 Marks**

- Distinguish between polygenic inheritance and Mendelian inheritance CO2
- Analyse the genetic basis of Rh blood group CO2
- With reference to polygenic inheritance, discuss the inheritance of skin colour in man CO2
- Explain the phenylketonuria is an inborn error of metabolism CO5
- Analyse the term twins and its types. CO5

SECTION – C Long Answer**Answer any ONE Question:****1X12=12 Marks**

- Describe the genetics of ABO blood group CO2
- Discuss the extra chromosomal inheritance in *Paramecium*. CO5



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09SB31	Programme: B.Sc.,	CIA: II Test
Date: 30.08.2019	Major: ZOOLOGY	Semester: III
Time: 1 Hr	Year: II	Maximum: 25 Marks
Course Title:	PUBLIC HEALTH AND HYGIENE	

ANSWER ALL QUESTIONS**SECTION – A****5X1=5 Marks****Multiple choice questions:**

- Which is the protozoan parasite? (CO3)
a. *E. Coli* b. *Pseudomonas* c. *Entamoeba* d. HIV
- Dengue fever is transmitted by the bite of an (CO3)
a. *Aedes* mosquito b. Housefly c. Rat d. Birds
- Rabies also known as (CO3)
a. Hyperphobia b. Hydrophobia c. Hyperglycemia d. Hypophobia
- Expand the SDWA (CO2)
a. Safe Drinking Water Action b. Safe Drinking Water Act
c. Safe Drink Water Action d. Safe Drink Water Act
- Municipal solid waste commonly known as (CO2)
a. Trash b. Garbage c. Both a & b d. Trial

ANSWER ANY TWO QUESTIONS**SECTION – B****2X2=4 Marks****Very short answer:**

- What is JE? (CO3)
- Write the symptoms of Amoebiasis. (CO3)
- What is solid waste management? (CO2)
- Comment on dengue fever. (CO3)

ANSWER ANY ONE QUESTIONS**SECTION – C****1X6=6 Marks****Short answer:**

- Write the symptoms, diagnosis, treatment and prevention of filarial worm. (CO3)
- Poliomyelitis is a viral disease-discuss. (CO3)

ANSWER ANY ONE QUESTIONS**SECTION – D****1X10 Marks****Long Answer:**

- Explain the various sets involved in sewage water treatment. (CO2)
- Describe the structure, infection, Transmission, Control and Treatment of AIDS. (CO3)



DEPARTMENT OF ZOOLOGY

Course Code: 09AT01	Programme: B.Sc.,	CIA: II Test
Date: 07.09.2019	Major: CHEMISTRY / BOTANY	Semester: III
Time: 2Hrs	Year: II	Maximum: 50 Marks
Course Title:	ANIMAL ORGANIZATION	

SECTION – A Multiple choice questions

Answer All Questions:

10X1=10 Marks

- Which of the following does not contain coelom? (CO1)
 a) Porifera b) Coelenterata c) Platyhelminthes d) All the above
- Which of the following is triploplastic coelomate animal? (CO1)
 a) Platyhelminthes b) Aschelminthes c) Annelida d) All the above
- Which of the following is radial symmetry? (CO1)
 a) Porifera b) Nematoda c) Coelenterata d) Annelida
- Which phylum has a true coelom? (CO1)
 a) Cnidaria b) Mollusca c) Porifera d) Annelida
- Which of the following is bilaterally symmetrical? (CO1)
 a) Sponges b) Coelenterates c) Aschelminthes d) Ctenophores
- Which of the following is hearing organ of human ear? (CO4)
 a) Corti b) Mallieus c) Incus d) Stapes
- The rod cells of retina contain (CO4)
 a) Rhodopsin b) Iodopsin c) melanin d) chromatophores
- The colour blind person cannot distinguish red colour due to (CO4)
 a) Protanopia b) Deuteranopia c) Tritanopia d) Myopia
- Which of the following is photoreceptor of Euglena? (CO4)
 a) Eye b) Eye spot c) Compound eye d) none
- Which is the functional unit of compound eye of insect? (CO4)
 a) Eye spot b) Eye c) Ommatidium d) none

SECTION – B Very short answer

Answer any Five Questions:

5X2=10 Marks

- What are chordates? (CO1)
- Comment on notochord. (CO1)
- Write short note on vertebral column. (CO1)
- What are the characteristic of gnathostomata? (CO1)
- Define types of deafness. (CO4)
- What is eye spot? (CO4)
- What is Corti? (CO4)

SECTION – C Short answer

Answer any Three Questions

3X6=18 Marks

- Describe in brief the classification of chordata. (CO1)
- Write a note on superclass agnatha. (CO1)
- Enumerate the general characters of amphibian. (CO1)
- Comment on compound eye of insect with neat sketch. (CO4)
- Describe the human ear with labelled diagram. (CO4)

SECTION – D Long Answer

Answer any One Question:

1x12=12 Marks

- Draw the structure of human eye and comment on it. (CO4)
- Write a detailed account on the general characters of chordates. (CO1)



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT51	Programme: B.Sc.,	CIA: II Test
Date: 04.09.2019	Major: ZOOLOGY	Semester: V
Time: 2Hrs	Year: III	Maximum: 50 Marks
Course Title:	BIOCHEMISTRY AND BIOPHYSICS	

SECTION – A Multiple choice questions**Answer All Questions:****10X1=10 Marks**

- Diffusion takes place against
 - Gravity
 - Pressure
 - Viscosity
 - All
- The force with which the surface molecules are held together is called
 - Surface tension
 - Adsorption
 - Hydrotrophly
 - Dialysis
- Pickout the water insoluble substance.
 - Uric acid
 - Cholic acid
 - Benzoic acid
 - Hippuric acid
- At high temperature enzymes are
 - Killed
 - Denatured
 - Inactivated
 - Highly effective
- Enzymes functional in cells are called
 - Endoenzymes
 - Apo enzymes
 - Exoenzymes
 - Isoenzymes
- Zymogen is a
 - Vitamin
 - Enzyme precursor
 - Modulator
 - Ptyalin
- The energy rich compound that is produced during biological oxidation of glucose is
 - Adenosine triphosphate
 - Pyruvic acid
 - Acetoacetate
 - Adenosine monophosphate
- Which one of the following is important in carbohydrate and fat metabolisms?
 - Pyruvic acid
 - Citric acid
 - Acetyl coenzyme A
 - CO₂
- Pyruvic acid has ----- carbon atoms
 - 5
 - 4
 - 3
 - 2
- Glycolysis occurs in
 - Cytosol
 - Mitochondria
 - Golgi complex
 - Ribosomes

SECTION – B Very short answer**Answer any Five Questions:****5X2=10 Marks**

- Define pinocytosis.
- Mention the hydrotrophic substances.
- What is imbibition?
- State Fick's law.
- Define Isoenzymes.
- What are coenzymes?
- What is glycogenolysis?

SECTION – C Short answer**Answer any Three Questions****3X6=18 Marks**

- Explain the Donnan – membrane equilibrium.
- How will you determine the surface tension?
- Explain the various factors affecting enzyme activity.
- Define and discuss Glycolysis.
- Explain the biosynthesis of glycogen.

SECTION – D Long Answer**Answer any One Question:****1x12=12 Marks**

- Describe the characteristics, principles and importance of adsorption.
- Discuss in detail the citric acid cycle.



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234**DEPARTMENT OF ZOOLOGY**

Course Code: 09CT52	Programme: B.Sc.,	CIA: II Test
Date: 05.09.2019	Major: ZOOLOGY	Semester: V
Time: 2Hrs	Year: III	Maximum: 50 Marks
Course Title:	BIO TECHNOLOGY	

ANSWER ALL QUESTIONS**SECTION – A****10X1=10 Marks****Multiple choice questions:**

- Callus differentiates under the influence of the paired hormones
 - Auxin&cytokinin
 - Auxin&abscisic acid
 - Auxin& ethylene
 - Cytokinin& gibberellin
- The vaccine which developed first from animal cell culture was
 - Polio vaccine
 - Hepatitis B vaccine
 - Influenza vaccine
 - Small pox vaccine
- The first transgenic plant is
 - Maize
 - Wheat
 - Cotton
 - Tobacco
- The green manure is
 - Sasbania
 - Rice
 - Oat
 - Maize
- Which is a hybrid of a plasmid?
 - Cosmid
 - PAC
 - Phagemids
 - BAC
- Which plasmid is inducing tumor in plants?
 - Ti- Plasmid
 - E. Coli*
 - Plasmid
 - Phagemids
- Which one of the following is first artificial cloning vector?
 - P^{UC} vector
 - P^{ACYC184}
 - P^{BR322}
 - P^{UC19}
- Simian Virus 40 is a
 - Oncogenic Virus
 - Blood Virus
 - Plant Virus
 - Bacteria disease
- Insulin and glucagon are produced in the
 - hypothalamus
 - anterior pituitary
 - Liver
 - pancreas
- Molecules or carrier particles that utilized to transfer gene to somatic cells, known as:
 - Plasmid
 - Probe
 - Vector
 - RNA fragment

ANSWER ANY FIVE QUESTIONS**SECTION – B****5X2=10 Marks****Very short answer:**

- Define Explant.
- What is Callus?
- Comment on totipotent plant cell.
- What are monoclonal antibodies?
- Comment on peptide hormones.
- Define phagemid.
- Comment on YAC.

ANSWER ANY THREE QUESTIONS**SECTION – C****3X6=18 Marks****Short answer:**

- Write an account on various types of plant tissue culture.
- Give a short note on plant tissue culture and its significance.
- What are bio-fertilizers? Discuss its significant role in biofarming.
- Write a note on DNA probe.
- Write an essay on gene therapy
- Discuss the Ti-plasmid vector.

ANSWER ANY ONE QUESTION**SECTION – D****1 x 12=12 Marks****Long Answer:**

- Write detailed account on steps, process, and requirements in Animal cell culture and its applications.
- Discuss the pBR³²² vector.



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF ZOOLOGY

Course Code: 09EP51	Programme: B.Sc.,	CIA: II Test
Date: 06.09.2019	Major: ZOOLOGY	Semester: V
Time: 2Hrs	Year: III	Maximum: 50 Marks
Course Title:	BIostatistics, Computer Application and Bioinformatics	

SECTION – A Multiple choice questions

Answer ALL Questions:

10X1=10 Marks

- The positional measure of central tendency is
 - arithmetic mean
 - median
 - geometric mean
 - Harmonic mean
- Find out mean 1,2,3,4,5,6,7,8,9,10
 - 4.7
 - 5.7
 - 6.7
 - 7.7
- Mode is
 - most frequent value
 - least frequent value
 - middle most value
 - none of this
- Find out range: 2,3,4,5,11,8
 - 7
 - 8
 - 9
 - 10
- Quartile deviation is
 - easy to understand and calculate
 - unaffected by extreme items
 - quite satisfactory
 - All
- In HTML the letter 'M' denotes to
 - Makeup
 - Markup
 - Maintain up
 - Must
- Which key can be used to view Slide show?
 - F5
 - F2
 - F7
 - F9
- PowerPoint presentations are widely used as
 - note outlines for teachers
 - project presentations by students
 - communication of planning
 - All the above
- The recovery of e mail password is envisaged during creation of e mail by
 - Login name
 - security questions
 - Web verification
 - Word verification
- Among the following which is not a search engine?
 - Google
 - Yahoo
 - Alta Vista
 - Gmail

SECTION – B Very Short Answer

Answer any FIVE Questions:

5X2=10 Marks

- List out the merits of mode
- Mention the formula for calculation of mean by Assumed method
- Comment briefly on frequency curve
- List out any four browsers
- Write two examples for maintainer status biological databases
- What is disease databases?
- Expand BLAST

SECTION – C Short Answer

Answer any THREE Questions:

3X6=18 Marks

- Enumerate the salient features of graph
- Distinguish between mean and median
- Draw a histogram for the following data which shows the weight of chick in grams

Wt. of chick (g)	0-2	2-4	4-6	6-8	8-10	10-12
No. of chick	7	8	16	3	9	12

- How databases are classified? List them
- Discuss the method of insertion of animation in MS Power point programme

SECTION – D Long Answer

Answer any TWO Questions:

1X12=12 Marks

- Calculate mean and median for the given data which shows the weight of fishes in grams

Wt. of fishes (kg)	0-5	5-10	10-15	15-20	20-25
No. of fishes	4	10	3	8	12

- How will you create and manage an e-mail



VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST - 625234

DEPARTMENT OF ZOOLOGY

Course Code: 09SB51	Programme: B.Sc.,	CIA: II Test
Date: 30.08.2019	Major: ZOOLOGY	Semester: V
Time: 1Hr	Year: III	Maximum: 25 Marks
Course Title:	SERICULTURE	

SECTION – A Multiple choice questions

Answer all questions

1 x 5=5 marks

- Which is the common pest of silkworm?
a) Uzi fly b) House fly c) Dragon fly d) tse-tse fly
- Which is the optimum temperature for rearing silkworm?
a) 24°C b) 34°C c) 44°C d) 54°C
- Which part of silk gland drawn out silk in the form of fine filament?
a) Spinneret b) Prothoracic gland c) Scent glands d) Lyonnet gland
- The root rot diseases caused by
a) Bacteria b) Fungus c) Virus d) Nematodes
- Which of the following is used for bed cleaning?
a) Mountage b) Ant well c) Basket d) Net

SECTION – B Very Short Answer

Answer any two questions:

2x2 = 4 marks

- Give the symptoms and causes of root rot diseases in mulberry.
- Explain the methods of chemical disinfection.
- Enumerate the importance of bed cleaning.
- What is mounting?

SECTION – C Short Answer

Answer any one question:

1x6 = 6 marks

- Describe the viral diseases of mulberry.
- Discuss the silk gland of silkworm with neat labelled diagram.

SECTION – D Long Answer

Answer any one question:

1x10 = 10 marks

- Write an essay on Life cycle of *Bombyx mori*.
- Give a detailed account on pests and diseases of silkworm.

