

This question paper contains 3 printed pages!

AO—88—2018

FACULTY OF SCIENCE

B.Sc. (First Semester) EXAMINATION

MARCH/APRIL, 2018

(CBCS/CGPA)

ZOOLOGY

Paper I

(Life and Diversity of Animal)

(Non-Chordata)

(MCQ + Theory)

(Monday, 2-4-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B.* — (i) Attempt All questions.
(ii) Use separate (OMR) answer-sheet for MCQ Question No. 1.
(iii) One mark to each correct answer of an MCQ.
(iv) Negative marking system is applicable.
(v) Use black ball point pen to darken the circle of correct choice in OMR answer sheet.
(vi) Draw well labelled diagrams wherever necessary for Question Nos. 2, 3 and 4.

MCQ

1. Select the correct answer for each of the following MCQs : 10
- (1) Which stage of *Plasmodium vivax* is infective for mosquito ?
- (A) Merozoites (B) Gametocytes
(C) Ookinete (D) Sporozoite
- (2) Which of the following is a fresh water sponge ?
- (A) *Spongilla* (B) *Euspongia*
(C) *Euplectella* (D) *Sycon*

P.T.O.

- (3) Which zooid is generally motile ?
(A) Polyp (B) Medusa
(C) Both (A) and (B) (D) None of these
- (4) Which is the secondary host of *Taenia solium* ?
(A) Human being (B) Snail
(C) Pig (D) Dog
- (5) *Ascaris* is more commonly found in :
(A) Men (B) Women
(C) Both (A) and (B) (D) Children
- (6) The excretory units of Annelida are :
(A) Uriniferous tubules (B) Flame cells
(C) Nephridia (D) Nephrostomes
- (7) Which one is biggest phylum in regard to the number of species ?
(A) Protozoa (B) Platyhelminthes
(C) Arthropoda (D) Mollusca
- (8) Head, foot and visceral mass this combination of characters is diagnostic of :
(A) Echinodermata (B) Mollusca
(C) Chordata (D) Arthropoda
- (9) Which one of the following is *not* applicable for Echinodermata :
(A) Madreporite (B) Marine
(C) Podia (D) Bilateral Symmetry
- (10) Body of Hemichordata is divided into :
(A) Proboscis, Collar and Trunk
(B) Proboscis, Trunk and Tail
(C) Head, Collar and Trunk
(D) Head, Neck and Abdomen

WT

(3)

AO—88—2018

Theory

2. Describe the life cycle of plasmodium vivax in man and add note on symptoms of Malaria. 10

Or

Write notes on :

(a) Sporozoa

(b) General Characters of Hemichordata.

3. Describe the general characters of coelenterata with suitable example. 10

Or

(a) Cestoda

(b) Oral surface of starfish.

4. Describe respiratory system of cockroach. 10

Or

(a) Polychaeta

(b) Economic importance of Mollusca.

This question paper contains 3 printed pages]

W—102—2018

FACULTY OF SCIENCE

B.Sc. (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA Pattern)

ZOOLOGY

Paper I

(Life and Diversing of Animals—I) (Non-chordata)

(MCQ & Theory)

(Tuesday, 23-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B.* :— (i) Attempt *All* the questions.
(ii) Use separate (OMR) answer-sheet for MCQ Question No. 1.
(iii) One mark for each correct answer of an MCQ.
(iv) Negative marking system is applicable.
(v) Use black ball point pen to darken the circle of correct choice in OMR answer sheet.
(vi) Draw well labelled diagrams wherever necessary for Question Nos. 2, 3 and 4.

MCQ

1. Select the *correct* answer for each of the following MCQs : 10
- (i) Which stage of plasmodium vivax is infective for man ?
- (a) Trophozoite (b) Schizont
(c) Cryptozoites (d) Sporozoites
- (ii) Classification of sponges is based on :
- (a) Locomotory organs (b) Skeleton
(c) Size (d) Number of ostia

P.T.O.

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- (vii) Nematocysts are found in :
- (a) Porifera (b) Platyhelminthes
(c) Coelenterata (d) Annelida
- (viii) Cestodes have :
- (a) A scolex with suckers and hooks
(b) Ribbon like body
(c) Numerous proglottids
(d) All of the above
- (ix) How would you distinguish Male *Ascaris* from Female ?
- (a) By presence of suckers (b) Elongated Body
(c) Curved tail with spicules (d) Bluntly ending tail
- (x) Excretion by nephridia occurs in :
- (a) Porifera (b) Coelenterata
(c) Annelida (d) None of these
- (xi) Male cockroach can be identified from female cockroach by the presence of :
- (a) Long antennae (b) Wingless body
(c) Elongated Abdomen (d) Anal style
- (xii) Pearl is produced by :
- (a) Oyster (b) Nautilus
(c) Doris (d) Chiton
- (xiii) Water vascular system of starfish is called :
- (a) Ambulacral system (b) Pedicellaria
(c) Papulae (d) Canal system
- (xiv) Hemichordates are :
- (a) Acoelomates (b) Coelomates
(c) Pseudocoelomates (d) None of these

WT

(3)

W-102-2018

Theory

10

2. Describe different types of cells in sponges.

Or

Write notes on :

(a) Distinguishing characters of protozoa

(b) Affinities of Hemichordata with chordata.

3. Describe the general characters of phylum platyhelminthes with suitable example.

10

Or

Write notes on :

(a) Polyps

(b) Aboral surface of starfish.

4. Describe digestive system of cockroach.

10

Or

Write notes on :

(a) Economic importance of insects

(b) Class Echinozoa.

This question paper contains 3 printed pages]

B—117—2019

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (First Year) (First Semester) EXAMINATION

MARCH/APRIL 2019

(CBCS/CGPA Pattern)

ZOOLOGY

Paper I

(Life and Diversity of Animals—I) (Non-Chordata)

(MCQ & Theory)

(Tuesday, 2-4-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—**
- (i) Attempt *All* questions
 - (ii) *All* questions carry equal marks.
 - (iii) Use separate OMR answer-sheet for Question No. 1.
 - (iv) One mark each for *correctly* answered Multiple Choice Question (MCQ).
 - (v) Negative marking system for wrong answer of MCQ is applicable.
 - (vi) Use black ball point pen to darken the circle of *correct* choice of answer of MCQ in OMR answer-sheet.
 - (vii) Darken only one circle for the answer of each MCQ.
 - (viii) Illustrate your answers with suitable labelled diagrams wherever necessary for question nos. 2, 3, 4.

MCQ

1. Mark the option for *correct* answer of each of the following MCQs in OMR answer-sheet :

10

(i) Malaria is transmitted by the

- (a) Female culex mosquito (b) Male anopheles mosquito
(c) Female anopheles mosquito (d) Male culex mosquito

P.T.O.

- (ii) Spicules are structural characteristic feature of phylum
- (a) Protozoa (b) Porifera
(c) Annelida (d) Coelenterata
- (iii) The life cycle of *Taenia solium* is :
- (a) Monogenetic (b) Polygenetic
(c) Digenetic (d) None of these
- (iv) In annelida body organization is found.
- (a) Diploblastic (b) Triploblastic
(c) Both the above (d) None of these
- (v) The animals bearing numerous setae are kept in class :
- (a) Hirudinea (b) Oligochaeta
(c) Polychaeta (d) Archianoelida
- (vi) Which of the following is respiratory organ of crustaceans ?
- (a) Gills (b) Lungs
(c) General surface (d) None of these
- (vii) Head, foot, mantle is the diagnostic characteristic of :
- (a) Echinodermata (b) Mollusca
(c) Chordata (d) Arthropoda
- (viii) Which of the following type nervous system is characteristic feature of echinodermata ?
- (a) Nerve ring present (b) Ventral nerve cord is present
(c) Nerve ring absent (d) None of these
- (ix) Which one of the following is *not* applicable for echinodermata ?
- (a) Madreporite (b) Marine
(c) Podia (d) Bilateral symmetry

(x) Hemichordata is :

(a) Ciliary feeders

(b) Mucous feeders

(c) Filter feeders

(d) None of these

Theory

2. Describe sexual life cycle of *Plasmodium vivax* and add a note on symptoms of malaria. 10

Or

Write notes on :

(a) Economic importance of Porifera

(b) General characters of Hemichordata

3. Describe life-cycle of *Ascaris lumbricoides*. 10

Or

Write notes on :

(a) Structure of *Ascaris*

(b) General characters of Mollusca

4. Describe the respiratory system of cockroach. 10

Or

Write notes on :

(a) General characters of Annelida

(b) Gastropoda



This question paper contains 1 printed page

X—54—2019

FACULTY OF SCIENCE

B.Sc. (First Semester) (Regular) EXAMINATION

OCTOBER/NOVEMBER, 2019

ZOOLOGY

Paper-I

(Biodiversity of Invertebrates)

(Monday, 18-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Illustrate your answers with suitable labelled diagrams, wherever necessary.

1. Describe sexual cycle of plasmodium vivax and its control measures. 15

Or

Write notes on :

(a) General characters of Nematelminthes. 8

(b) Classification of Coelenterata. 7

2. Describe in detail nervous system of cockroach. 15

Or

Write notes on :

(a) General characters of Hemichordata. 8

(b) External morphology of starfish. 7

3. Write short notes on (any two) : 10

(a) Economic importance of porifera

(b) Pathogenicity and control measures of Ascaris

(c) Vermicomposting

(d) Explain any two larval forms of Echinodermata.

X—54—2019

1

This question paper contains 3 printed pages

Y—117—2019

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (First Year) (First Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

ZOOLOGY

Paper I (CCZ-I)

(Life and Diversity of Animals-I [Non-Chordata])

(MCQ & Theory)

(Saturday, 21-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-*
- (i) Attempt all questions.
 - (ii) All questions carry equal marks.
 - (iii) Use separate OMR answer-sheet for Question No. 1.
 - (iv) One mark for each correctly answered multiple choice question (MCQ).
 - (v) Negative marking system for wrong answer of MCQ is applicable.
 - (vi) Use black ballpoint pen to darken the circle of correct choice of answer of MCQ in OMR answer-sheet.
 - (vii) Darken only one circle for the answer of each MCQ.
 - (viii) Illustrate your answers with suitable labelled diagrams, wherever necessary.

MCQ

1. Mark the option for correct answer of each of the following MCQs in OMR answer-sheet :

10

- (i) Which stage of plasmodium vivax is infective for mosquito ?
- | | |
|----------------|-----------------|
| (a) Merozoites | (b) Gametocytes |
| (c) Ookinite | (d) Sporozoite |

P.T.O.

- (ii) Classification of sponges is based on.....
- (a) Locomotory organ (b) Skeleton
(c) Sizes (d) Number of Ostia
- (iii) Which zooids is generally called as asexual type
- (a) Polyp (b) Medusa
(c) Both (a) and (b) (d) None of these
- (iv) Intermediate host of Taeniasolium is :
- (a) Sheep (b) Pig
(c) Man (d) Snail
- (v) Which stage of Ascaris is infective to man ?
- (a) Embryonated egg (b) Rhabditiform larva
(c) Adult Ascaris (d) Third stage of larva
- (vi) The Excretory Unit of Annelida are :
- (a) Uriniferous Tubule (b) Flame Cells
(c) Nephridia (d) Rectal gland
- (vii) The Phylum Arthropoda is characterized by :
- (a) Unjointed appendages (b) Jointed appendages
(c) Undeveloped appendages (d) Presence of flame cells
- (viii) The locomotary organ of echinodermata are called :
- (a) parapodia (b) pseudopodia
(c) tube feet (d) setae
- (ix) Larva of Hemichordata is :
- (a) Tornaria (b) Glochidium
(c) Bipinmaria (d) Napulius
- (x) Respiratory organs in Arthropoda are :
- (a) Gills (b) Trachea
(c) Book lungs (d) All of these

(3)

WT

Theory

2. Describe the asexual life cycle of plasmodium vivax. 10

Or

Write notes on :

- (a) General morphology of sycon
- (b) Economic importance of mollusca

3. Describe the general characters of coelenterata with suitable example. 10

Or

Write notes on :

- (a) Structure of Taeniasolium
- (b) Water vascular system

4. Describe the digestive system of cockroach.

Or

Write notes on :

- (a) External morphology of cockroach
- (b) Affinities of hemichordata

10

Name of Examination: Winter Examination 2020			
Name of subject		Zoology	
Subject code: (As per examination time table)		B.Sc. I/Cluster Code 117	
Class:	B.Sc. First Year	Semester	I
Paper title and paper no (As per examination time table)		Paper I: Biodiversity of Invertebrates	
Time:	01 hour	Maximum Marks:	40

- N.B. (1) All questions are compulsory.
(2) All questions carry equal marks
(3) Attempt all the questions**

- Protozoa are also called.....
a) procellular b) multicellular c) acellular d) prokaryote
- The presence of two types of nuclei, a macro-nucleus and a micronucleus is characteristic of protozoans are grouped under the class:
a) Flagellata b) Sporozoa c) Sarcodina d) Ciliata
- The main function of the contractile vacuole is:
a) chlorophyll production. b) synthesis of carbohydrate.
c) eliminating excess water d) to be a photoreceptor to detect light
- The main basis of classification of protozoa is:
a) Size b) Shape c) Locomotory organs d) Number of nuclei
- Class of phylum protozoa move via pseudopodia.
a) Rhizopoda b) ciliate c) flagellate d) sporozoa
- In Euglena locomotion by
a) Cilia b) Flagella c) Pseudopodia d) Myonemes
- In which class of Protozoa, the locomotory organelles absent:
a) Rhizopoda b) Ciliate c) Sporozoa d) Mastigophora
- Plasmodium is the causative agent of malaria which was discovered by:
a) Laveran b) Ross c) Golgi d) Lamble
- Malarial parasite is transmitted by.....
a) Male anopheles b) Male culex
c) House fly d) Female anopheles
- Poriferance are:
a) pore bearing animals b) unicellular organisms
c) parasitic organisms d) metamerically segmented organism
- Body wall in Coelenterate is.....
a) Diploblastic b) Triploblastic c) Single layered d) Polyblastic

12. Phylum Cnidaria (coelenterata) is divided into classes Hydrozoa, Scyphozoa and.....
 a) Anthozoa b) Metazoa c) Protozoa d) Spermatozoa
13. Exoskeleton of corals consist of?
 a) Calcium sulphate b) Calcium carbonate c) Sodium sulphate d) Calcium aluminate
14. Polymorphism occurs in animals of the class:
 a) Hydrozoa b) Anthozoa c) Scyphozoa d) Gastropoda
15. Platyhelminthes are generally called
 a) Flat worms b) Round worms c) Tubiculus worms d) Blind worms
16. Which system is best developed In Helminthes?
 a) Neuro-sensory system b) Reproductive system c) Digestive system d) Respiratory system
17. Flame cell is typical of:
 a) Annelida b) Chordata c) Porifera d) Platyhelminthes
18. Non parasitic, free living flatworms belong to the class:
 a) Trematoda b) Cestoda c) Turbellaria d) nematoda
19. Primary host and secondary host of Taenia are & Respectively.
 a) Man, sheep b) Sheep, snail c) Man, pig d) Pig, man
20. Ascaris is
 a) Free living b) Ectoparasite c) Endoparasite d) Commensal
21. Which one of these is the primary characteristic of phylum annelida?
 a) Trochophore larva in life cycle b) Metameric segmentation
 c) Excretion by flame cells d) Body covered by ciliated epidermis
22. True coelom appeared first in the course of evolution in:
 a) Echinodermata b) Annelida c) Chordata d) Aschelminthes
23. Parapodia are locomotory organs in Neries which belong to the class:
 a) Hirudinea b) Oligochaeta c) Polycheta d) Arachiannelida
24. Earthworm belongs to the class:
 a) Polychaeta b) Oligochaeta c) Hirudinea d) All of the above
25. Which one is known as Nature's plough man
 a) Nereis b) Cattle leech c) Earthworm d) Polygordius
26. Phylum arthropoda is characterized by:
 a) Green gland b) Unjointed appendages c) Jointed appendages d) Protopodite
27. Which of the following phyla has the largest number of species:
 a) Annelida b) Arthropoda c) Coelenterata d) Echinodermata

28. In cockroach, the first pair of wings are called:
 a) Sterna b) Terga c) Tegmina d) Halteres
29. In digestive system of cockroach grinding machine is:
 a) Crop b) Mandible c) Gizzard d) Maxilla
30. Study of insects is known as:
 a) Parasitology b) Entomology c) Acarology d) Helminthology
31. Animals having soft body, mantle and shell belong to phylum:
 a) Annelida b) Echinodermata c) Mollusca d) Arthropoda
32. Mode of respiration in mollusca is:
 a) Cutaneous b) Branchial c) Pulmonary d) All of the above
33. Oysters that produce pearls belong to the class:
 a) Cephalopoda b) Gastropoda c) Scaphopoda d) Pelecypoda
34. Molluscan shells are used in :
 a) Poultry feed b) Making roads c) Cradled d) All of the above
35. Spiny skin, exclusively marine habitat and non-parasitic nature are features of:
 a) Annelida b) Echinodermata c) Hemichordate d) Coelenterata
36. The characteristic feature of echinoderms is the possession of:
 a) water vascular system b) Canal system c) Haemal d) None of the above
37. The locomotory organs of Echinoderms are called:
 a) Parapodia b) Pseudopodia c) Tube feet d) Setae
38. The surface having mouth of starfish directed towards the substratum is called as:
 a) Aboral b) Abactinal c) Oral d) dorsal
39. Which group of animal is known as invertebrate chordates:
 a) Echinodermata b) Hemichordate c) Arthropoda d) All of the above
40. Balanoglossus shows affinity with chordates as it has..... type of coelom:
 a) Enterocoelous b) Pseudocoelom c) Schizocoelom d) None of the above

This question paper contains 2 printed pages!

SB—92—2022

FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. (First Year) (First Semester) EXAMINATION

MAY/JUNE, 2022

(New Course)

ZOOLOGY

Paper-I

(Biodiversity of Invertebrates)

(Thursday, 16-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Illustrate your answers with suitably labelled diagram wherever necessary.

1. Describe the asexual life-cycle of *Plasmodium vivax* and its pathogenicity.

15

Or

Write notes on :

(a) Morphology of *Ascaris lumbricoides*.

8

(b) Polymorphism in Hydrozoa.

7

2. Explain in detail digestive system of cockroaches.

15

Or

Write notes on :

(a) General characters and classification of Mollusca.

8

(b) Larval forms in Echinodermata.

7

P.T.O.

WT

(2)

SB—92—2022

3. Write short notes on (any two) :

10

- (a) Canal System in Sycon
- (b) Structure of *Taenia solium*
- (c) Metamerism in Annelida
- (d) Vermicomposting.

This question paper contains 4 printed pages]

V—113—2017

FACULTY OF SCIENCE

B.Sc. (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2017

(CBCS/CGPA)

ZOOLOGY

Paper II

(Cell Biology)

(MCQ+Theory)

(Saturday, 18-11-2017)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :- (i) Attempt All questions.

(ii) Use separate answer-sheet (OMR) for Question No. 1.

(iii) One mark to each correct answer of an MCQ.

(iv) Negative marking system is applicable.

(v) Use black ball point pen to darken the circle of correct choice in OMR answer-sheet.

(vi) Draw well labelled diagram wherever necessary for Question Nos. 2, 3 and 4.

(MCQs)

1. Choose the correct answer :

10

(i) Robertson proposed the model of plasma membrane.

(a) Bimolecular

(b) Lattice

(c) Trilaminar

(d) Fluid-Mosaic

P.T.O.

- (ii) Plasma membrane is
- (a) Selective barrier
 - (b) Impermeable
 - (c) Non-selective barrier
 - (d) None of the above
- (iii) Acrosome in sperm is formed by
- (a) Ribosome
 - (b) Golgi complex
 - (c) Mitochondria
 - (d) Endoplasmic reticulum
- (iv) Who coined the term 'Ribosomes' ?
- (a) Clade
 - (b) Benda
 - (c) Robertson
 - (d) Palade
- (v) Hydrolytic enzymes stored in
- (a) Lysosomes
 - (b) Mitochondria
 - (c) Golgi complex
 - (d) Endoplasmic reticulum
- (vi) is known as powerhouse of cell.
- (a) Golgi complex
 - (b) Ribosomes
 - (c) Lysosomes
 - (d) Mitochondria

- (vii) In which of the following cells nucleus is absent ?
- (a) RBCs of man
 - (b) Nerve cells
 - (c) Liver cells
 - (d) WBCs of man
- (viii) The cancer of bone is called :
- (a) Carcinomas
 - (b) Sarcomas
 - (c) Melanomas
 - (d) Lymphomas
- (ix) In which of the following type of chromosomes the centromere is located at the terminal position ?
- (a) Metacentric
 - (b) Acrocentric
 - (c) Telocentric
 - (d) Submetacentric
- (x) Balbiani rings are present in
- (a) Lampbrush chromosome
 - (b) Polytene chromosome
 - (c) Polysome
 - (d) Autosome

(Theory)

2. Describe in detail structure of an animal eukaryotic cell.

10

Or

Write notes on :

- (a) Bimolecular model of plasma membrane
- (b) Zygotene in meiosis.

P.T.O.

WT

(4)

V-113-2017

3. Describe in detail structure and functions of mitochondria. 10

Or

Write notes on :

(a) Functions of endoplasmic reticulum

(b) Anaphase of mitosis.

4. Explain in detail structure and functions of lysosomes. 10

Or

Write notes on :

(a) Lampbrush chromosome

(b) Non-malignant tumour.

This question paper contains 3 printed pages]

AO—109—2018

FACULTY OF SCIENCE

B.Sc (First Year) (First Semester) EXAMINATION

MARCH/APRIL, 2018

(CBCS Pattern)

ZOOLOGY

Paper II

(Cell Biology

(MCQ & Theory)

(Wednesday, 4-4-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-*
- (i) Attempt All questions.
 - (ii) Use separate answer sheet (OMR) for Question No.1
 - (iii) One mark to each correctly answer of MCQ.
 - (iv) Negative marking system is applicable.
 - (v) Use black ball point pen to darken the circle of correct choice in OMR sheet.
 - (vi) Draw well labelled diagram wherever necessary.

MCQ

1. Choose the correct answer :

10

- (i) Cell boundary of an animal cell is called :
 - (a) Plasma membrane
 - (b) Cell wall
 - (c) Nuclear membrane
 - (d) Both (a) and (b)
- (ii) Fluid mosaic model of plasma membrane was proposed by :
 - (a) Danielli and Davson
 - (b) Robertson
 - (c) Garter and Grandes
 - (d) Singer and Nicolson
- (iii) The function of smooth endoplasmic reticulum is :
 - (a) Protein synthesis
 - (b) Lipid synthesis
 - (c) Glucose synthesis
 - (d) RNA synthesis

P.T.O.

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- (iv) The inner mitochondrial membrane gives out certain finger like projections is known as :
- | | |
|---------------|-----------------|
| (a) Ribosomes | (b) Flagella |
| (c) Cristae | (d) Pseudopodia |
- (v) Ribosomes are the site of.....
- | | |
|-----------------------|-----------------------|
| (a) Protein synthesis | (b) Steroid synthesis |
| (c) Glucose synthesis | (d) Lipid synthesis |
- (vi) Lysosomes are also known as :
- | | |
|--------------------------|---------------------------------|
| (a) Power house of cell | (b) Suicide bags of cell |
| (c) Food vacuole of cell | (d) Contractile vacuole of cell |
- (vii) Nuclear envelope is also known as :
- | | |
|------------------|----------------------|
| (a) Nuclear sap | (b) Cytokinesis |
| (c) Kariokinesis | (d) Nuclear membrane |
- (viii) The correct sequence of cell cycle is :
- | | |
|-------------------|-------------------|
| (a) G_1-S-G_2-M | (b) $S-G_1-G_2-M$ |
| (c) $M-G_1-G_2-S$ | (d) G_1-G_2-S-M |
- (ix) The division of cell into two identical daughter cells is known as :
- | | |
|----------------|---------------|
| (a) Meiosis | (b) Mitosis |
| (c) Amoebiosis | (d) Autolysis |
- (x) A tumour it is a abnormal growth of tissue, it has no co-ordination with the normal tissue is called :
- | | |
|------------------|------------|
| (a) Tuberculosis | (b) Ulcer |
| (c) Hepatitis | (d) Cancer |

Theory

2. Explain in detail bimolecular and Lattice modes of plasma membrane and add a note on its functions. 10

Or

Write notes on :

- | |
|--------------------------|
| (a) Light Microscopy |
| (b) Non-Malignant Cancer |

WT

(3)

AO—109—2018

3. Describe in detail structure and functions of endoplasmic reticulum.

Or

Write notes on :

10

(a) 70 S ribosomes

(b) Pachytene

4. Describe structure and functions of nucleus.

10

Or

Write notes on :

(a) Polytene chromosome

(b) Cell cycle.

This question paper contains 3 printed pages]

B—150—2019

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (First Year) (First Semester) EXAMINATION

MARCH/APRIL 2019

(CBCS/CGPA Pattern)

ZOOLOGY

Paper II (CCZ-I)

(Cell Biology)

(MCQ & Theory)

(Thursday, 4-4-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-**
- (i) Attempt All questions.
 - (ii) All questions carry equal marks.
 - (iii) Use of separate OMR answer sheet for question no. 1.
 - (iv) One mark each for correctly answered multiple choice question (MCQ).
 - (v) Negative marking system for wrong answer of MCQ is applicable.
 - (vi) Use of black ball point pen to darken the circle of correct choice of answer of MCQ in OMR answer sheet.
 - (vii) Darken only one circle for the answer of each MCQ.
 - (viii) Illustrate your answers with suitably labelled diagrams wherever necessary for questions 2, 3, 4.

MCQ

1. Mark the option for correct answer of each of the following MCQs in OMR answer sheet :

10

- (i) The image formed in electron microscope in the form of
- | | |
|------------------|-----------|
| (a) Ring or spot | (b) Lines |
| (c) Light | (d) Dots |

P.T.O.

WT

(3)

B—150—2019

(x) Micellar modes of plasma membrane was proposed by :

(a) Hiller and Hoffman

(b) Robertson

(c) Singer and Nicolson

(d) Garter and Grendel

Theory

2. Explain in detail fluid mosaic model of plasma membrane. Add a note on its functions. 10

Or

Write notes on :

(a) Light Microscope

(b) Significance of Mitosis.

3. Describe in detail structure and functions of mitochondria. 10

Or

Write notes on :

(a) 70S ribosome

(b) Malignant tumour.

4. Explain structure and functions of Nucleus. 10

Or

Write notes on :

(a) Polytene chromosome

(b) Metaphase in mitosis.

This question paper contains 1 printed page]

X—55—2019

**FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. (First Semester) (Regular) EXAMINATION**

OCTOBER/NOVEMBER, 2019

(New Pattern)

ZOOLOGY

Paper II

(Biodiversity of Chordates)

(Monday, 18-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Illustrate your answers with suitable labelled diagrams, wherever necessary.

1. Describe in detail digestive system of scoliodon. 15

Or

 - (a) General characters of cephalochordata. 8
 - (b) General characters of cyclostomata. 7
2. Write in detail respiratory system of rat. 15

Or

 - (a) Flight adaptations in Birds. 8
 - (b) General characters of Reptiles. 7
3. Write short notes (any two) : 10
 - (a) Urochordata
 - (b) Hibernation in Frog
 - (c) Biting mechanism in snakes
 - (d) Ear of Rat.

X—55—2019

1

This question paper contains 3 printed pages

Y—150—2019

FACULTY OF SCIENCE AND TECHNOLOGY

**B.Sc. (First Year) (First Semester) (Backlog) EXAMINATION
OCTOBER/NOVEMBER, 2019**

ZOOLOGY

Paper II (CCZ-I)

(Cell Biology)

(MCQ & Theory)

(Thursday, 21-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-**
- (i) Attempt all questions.
 - (ii) All questions carry equal marks.
 - (iii) Use separate OMR answer sheet for Question No. 1.
 - (iv) One mark each for correctly answered multiple choice question (MCQ).
 - (v) Negative marking system for wrong answer of MCQ is applicable.
 - (vi) Use black ball point pen to darken the circle of correct choice of answer of MCQ in OMR answer-sheet.
 - (vii) Darken only one circle for the answer of each MCQ.
 - (viii) Illustrate your answers with suitable labelled diagrams wherever necessary for questions 2, 3 and 4.

MCQ

1. Mark the option for correct answer of each of the following MCQs in OMR answer-sheet :

10

- (i) The first operational light microscope was constructed by.....
 - (a) Knoll and Ruska
 - (b) Prebus and Miller
 - (c) Janssen and Hans
 - (d) Siemens
- (ii) Plasma membrane is.....membrane.
 - (a) Selectively permeable
 - (b) Permeable
 - (c) Impermeable
 - (d) Semipermeable

P.T.O.

- (iii) The function of rough endoplasmic reticulum is.....
- (a) Lipid synthesis (b) Protein synthesis
(c) Carbohydrates synthesis (d) Vitamin synthesis
- (iv) ATP formation in mitochondria takes place in.....
- (a) Outer chamber
(b) Outer mitochondrial membrane
(c) Matrix
(d) Cristae
- (v) Nuclear envelop is also known as.....
- (a) Karyotheca (b) Karyokinesis
(c) Nuclear sap (d) Nuclear lamina
- (vi) Nucleolus is associated with the biogenesis of.....
- (a) Endoplasmic reticulum (b) Ribosomes
(c) Lysosomes (d) Golgi complex
- (vii) Rapid and uncontrolled cell division leads to.....
- (a) Cancer (b) Ulcer
(c) Cleavage (d) Development
- (viii) The term meiosis was coined by.....
- (a) C. Cramer (b) J.B. Farmer
(c) Howard (d) Waldeyer
- (ix)type of ribosome found in prokaryotes.
- (a) 70S (b) 80S
(c) 60S (d) 40S
- (x) Lysosome contains.....of enzyme.
- (a) Proteolytic (b) Hydrolytic
(c) Nuclease (d) Endonuclease

Theory

2. Describe in detail structure of an animal eukaryotic cell. 10

Or

Write notes on :

(a) Lattice model of plasma membrane

(b) Significance of meiosis

3. Describe in detail structure and functions of endoplasmic reticulum. 10

Or

Write short notes on :

(a) Functions of Golgi complex

(b) Non-malignant tumour.

4. Describe in detail structure and functions of chromosome. 10

Or

Write notes on :

(a) Nucleolus

(b) Zygotene in meiosis.

This question paper contains 2 printed pages

SB—118—2022

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (First Year) (First Semester) EXAMINATION

MAY/JUNE, 2022

(New Pattern)

ZOOLOGY

Paper-II

(Biodiversity of Chordates)

(Saturday, 18-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions

(ii) Illustrate your answers with suitably labelled diagrams wherever necessary.

1. Define Nervous System. Describe in detail brain of *Scoliodon*. 15

Or

Write notes on :

(i) Origin and Ancestry of Chordata. 8

(ii) General characters of Agnatha. 7

2. Describe the structure and working of heart of rat. 15

Or

Write notes on :

(i) Migration of Birds 8

(ii) Identification keys of poisonous snakes. 7

P.T.O.

WT

(2)

SB-118-2022

3. Write short notes on (any two) :

10

- (i) Urochordata
- (ii) Hibernation
- (iii) Importance of snake venom
- (iv) Ear of Rat.

This question paper contains 3 printed pages]

V—84—2017

FACULTY OF SCIENCE

B.Sc. (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2017

ZOOLOGY

Paper III

(Life and Diversity of Animals—II)

(MCQ & Theory)

(Wednesday, 15-11-2017)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :— (i) One mark to each correct answer of MCQ.
(ii) Negative marking system is applicable.
(iii) Use black ball point pen to darken the circle of correct choice in OMR sheet.
(iv) Darken only one circle for the answer of an MCQ.
(v) Draw a well labelled diagram, wherever necessary.
(vi) Use separate answer-sheet (OMR) for Question No. 1.

MCQ

1. Select the *correct* answer for each of the following MCQs : 10

(i) In cephalochordates presence of :

- (a) Paired fins (b) Unpaired fins
(c) Paired appendages (d) All of these

(ii) Jawed vertebrates are included in :

- (a) Gnathostomata (b) Agnatha
(c) Urochordata (d) Cephalochordata

P.T.O.

- (iii) Cycloid scales are present in fishes.
- (a) Cartilaginous (b) Lung
(c) Bony (d) None of these
- (iv) Scoliodon is called as dogfish because :
- (a) Sense of smell (b) Sense of sight
(c) Feeding habit (d) All of these
- (v) In amphibians, the skin is :
- (a) Protective
(b) Protective, glandular and respiratory
(c) Non-respiratory
(d) Non-glandular
- (vi) Reptiles are :
- (a) Ovoviviparous (b) Viviparous
(c) Oviparous (d) All of these
- (vii) In Birds, the main nitrogenous excretory product is :
- (a) Urea (b) Ammonia
(c) Uric acid (d) Urine
- (viii) True placental mammals are :
- (a) Prototheria (b) Eutheria
(c) Metatheria (d) All of these
- (ix) In Rat, the type of Respiration is :
- (a) Pulmonary (b) Gill
(c) Cutaneous (d) Both (a) and (b)
- (x) In Rat the grinding teeth are :
- (a) Mcisors (b) Canines
(c) Molars (d) Premolars

WT

(3)

V-84-2017

Theory

2. Describe general characters of cyclostomata. 10

Or

(a) General characters of chordates.

(b) Eye of Rat.

3. Describe Brain of Scoliodon. 10

Or

(a) General characters of pisces.

(b) Heart of Rat.

4. Describe general characters of Reptiles. 10

Or

(a) Summer sleep in Frog.

(b) General characters of mammals.

This question paper contains 3 printed pages]

AO—83—2018

FACULTY OF SCIENCE

B.Sc. (Second Semester) EXAMINATION

MARCH/APRIL, 2018

(CBCS/CGPA)

ZOOLOGY

Paper III

(Life and Diversity of Animals-II)

(MCQ + Theory)

(Saturday, 31-3-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B.* :— (i) One mark to each correct answer of MCQ.
(ii) Negative marking system is applicable.
(iii) Use black ball point pen to darken the circle of correct choice in OMR sheet.
(iv) Darken only one circle for the answer of an MCQ.
(v) Draw well labelled diagrams, wherever necessary.
(vi) Use separate answer-sheet (OMR) for Question No. 1.

MCQ

10

1. Select the *correct* answer for each of the following MCQs.

- (1) Chordates are distinguished from non-chordates by presence of
- (A) Ventral nerve cord
(B) Dorsal tubular nerve cord
(C) Paired nerve cord
(D) All of the above
- (2) Circular mouth is present in
- (A) Urochordata (B) Cephalochordata
(C) Hemichordata (D) Cyclostomata

P.T.O.

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- (3) In chondrichthyes fishes, the endoskeleton is
- (A) Cartilaginous (B) Bony
(C) Both (A) and (B) (D) Absent
- (4) In scoliodon there are pair of cranial nerves.
- (A) 6 (B) 8
(C) 10 (D) 12
- (5) Summer sleep in frog is called as
- (A) Aestivation (B) Hibernation
(C) Encystment (D) Nesting
- (6) The venom of cobra affects on
- (A) Respiratory system (B) Nervous system
(C) Digestive system (D) Excretory system
- (7) In Birds, the bones are
- (A) Hollow and heavy (B) Solid and light
(C) Hollow and light (D) Like iron rods
- (8) Egg laying mammals are
- (A) Prototheria (B) Eutheria
(C) Metatheria (D) All of these
- (9) Rat foot bears five toes ending in
- (A) Nails (B) Web
(C) Claws (D) All of these
- (10) The brain of rat, cerebral hemisphere is associated with the function of
- (A) Sense of smell
(B) Co-ordination of intelligence
(C) Sense of balance
(D) Sense of sight

WT

(3)

AO—83—2018

Theory

2. Describe general characters of cephalochordata. 10

Or

(a) Retrogressive metamorphosis.

(b) General characters of mammals.

3. Explain digestive system of scoliodon. 10

Or

(a) Economic importance of fishes.

(b) Ear of Rat.

4. Give an account on parental care in amphibian. 10

Or

(a) Migration of Birds.

(b) Structure of heart of Rat.

This question paper contains 3 printed pages]

W—95—2018

FACULTY OF SCIENCE

B.Sc. (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA)

ZOOLOGY

Paper III

[Life and Diversity of Animals—II (Chordates)]

(MCQ & Theory)

(Monday, 22-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B.* :— (i) All questions are compulsory.
(ii) All questions carry equal marks.
(iii) Draw well labelled diagrams wherever necessary.
(iv) Negative marking system is applicable for MCQs.
(v) Use separate answer-sheet (OMR) for Question No. 1.

MCQ

L. Multiple Choice Questions : 10

- (i) Notochord in cephalochordata is present in :
(a) In head region only (b) In tail region only
(c) Extend from head to tail (d) In middle region only
- (ii) The fundamental characters of chordates are :
(a) Dorsal heart, pharyngeal gill slits, notochord present
(b) Ventral heart, pharyngeal gill slits and tubular nerve cord
(c) Both (a) and (b)
(d) None of the above

P.T.O.

- (iii) Heart in fishes is chambered.
- (a) Single (b) Double
(c) Three (d) Four
- (iv) Scroll valve plays an important role in :
- (a) Speed up the food
(b) Digest food quickly
(c) Mix the food with digestive juices
(d) Delay passage of food
- (v) Anurans are :
- (a) Cyclostomes (b) Urochordates
(c) Amphibians (d) Pisces
- (vi) Largest non-poisonous snake is :
- (a) Cobra (b) Krait
(c) Python (d) Viper
- (vii) In birds gland is present.
- (a) Mucous (b) Oil
(c) Poisonous (d) Scent
- (viii) Pinna is a characteristic of :
- (a) Frog (b) Snake
(c) Rat (d) Fish
- (ix) Marsupials' pouch is present in :
- (a) Monkey (b) Rabbit
(c) Kangaroo (d) Elephant
- (x) In rat, the photosensitive cells are :
- (a) Rods (b) Cones
(c) Both (a) and (b) (d) None of these

Theory

2. Describe general characters of urochordata. 10
- Or*
- (a) General characters of cyclostomata.
- (b) Describe respiratory organs of rat.
3. Describe the structure of Brain of Scoliodon. 10
- Or*
- (a) Economic importance of fishes.
- (b) External characters of Rat.
4. Describe flight adaptations in birds. 10
- Or*
- (a) Summer sleep in Amphibia.
- (b) Classification of mammals.

This question paper contains 3 printed pages]

Y—110—2019

FACULTY OF SCIENCE

**B.Sc. (First Year) (Second Semester) (Backlog) EXAMINATION
NOVEMBER/DECEMBER, 2019**

ZOOLOGY

Paper III

(Life and Diversity of Animals-II)

(MCQ & Theory)

(Friday, 20-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—**
- (i) All questions are compulsory.
 - (ii) All questions carry equal marks.
 - (iii) Use separate (OMR) answer sheet for Q. No. 1.
 - (iv) One mark to each correct answer of MCQ.
 - (v) Negative marking system is applicable.
 - (vi) Use black ball point pen to darken the circle of correct choice in OMR Sheet.
 - (vii) Darken only one circle for the answer of an MCQ.

MCQ

1. Select the correct answer for each of the following MCQs.

10

- (i) Heart in fishes is.....chambered.
 - (a) Single
 - (b) Two
 - (c) Three
 - (d) Four
- (ii) Forebrain of scoliodon is also called as.....
 - (a) Prosencephalon
 - (b) Mesencephalon
 - (c) Rhombencephalon
 - (d) All of these
- (iii) In birds.....organ is absent.
 - (a) Heart
 - (b) Spleen
 - (c) Urinary bladder
 - (d) Kidney

P.T.O.

- (iv) In rat pulmonary artery collects.....blood.
- (a) Deoxygenated (b) Oxygenated
(c) Both (a) and (b) (d) None of these
- (v) Agnatha are the animals without.....
- (a) Teeth (b) Mouth
(c) Jaws (d) Heart
- (vi) Urochordates are also called as.....
- (a) Tunicata (b) Cyclostomata
(c) Cephalochordata (d) All of these
- (vii) Winter sleep in frog is called.....
- (a) Aestivation (b) Hibernation
(c) Encystment (d) Nesting
- (viii) Retrogressive metamorphosis occurs in.....
- (a) Cephalochordata (b) Hemichordata
(c) Urochordata (d) Cyclostomata
- (ix) In osteichthyes fishes, the endoskeleton is.....
- (a) Cartilagenous (b) Bony
(c) Both (a) and (b) (d) None of these
- (x) In vertebrates notochord is replaced by.....
- (a) Vertebral column (b) Bone marrow
(c) Spinal cord (d) Notochord

WT

(3)

Y-110-2019

Theory

2. Describe general characters of cyclostomata. 10
Or
(a) Retrogressive metamorphosis.
(b) General characters of pisces.
3. Describe digestive system of scoliodon. 10
Or
(a) General characters of amphibia.
(b) Eye of rat.
4. Explain flight adaptations in birds. 10
Or
(a) General characters of Reptilia.
(b) Summer and winter sleep in frog.

This question paper contains 2 printed pages]

SB—102—2022

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

MAY/JUNE, 2022

(New Course)

ZOOLOGY

Paper-III

(Comparative Anatomy of Vertebrates)

(Friday, 17-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2.30 Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions.

(ii) Illustrate your answers with suitable labelled diagram wherever necessary

1. What is integument ? Describe in detail the derivatives of integuments in vertebrates. 15

Or

Write short notes on :

(a) Digestive Glands in Vertebrates. 8

(b) Accessory Respiratory organs. 7

2. Explain in detail the evolution of heart in vertebrates. 15

Or

Write short notes on :

(a) Comparative account on Aortic Arches in reptiles, birds and mammals. 8

(b) Pronephros and mesonephros. 7

P.T.O.

3. Write short notes on (any two) :

10

- (a) Structure of Neuron
- (b) Trachea
- (c) Metanephros
- (d) Sweat Glands.

This question paper contains 3 printed pages]

V—101—2017

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2017

(CBCS/CGPA)

ZOOLOGY

Paper IV

(Developmental Biology)

(MCQ+Theory)

(Friday, 17-11-2017)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-** (i) Attempt All questions.
(ii) Use OMR sheet for Question No. 1.
(iii) One mark to each correct answer of an MCQ.
(iv) Negative marking system is applicable.
(v) Use black ball point pen to darken the circle of correct choice in OMR answer-sheet.
(vi) Draw well labelled diagrams wherever necessary for Question Nos. 2, 3 and 4.

(MCQs)

1. Select the *correct* answer for each of the following MCQs : 10
- (i) Gametogenesis involves
- (a) Growth, multiplication and maturation
(b) Growth, maturation and multiplication
(c) Multiplication, growth and maturation
(d) Maturation, growth and multiplication
- (ii) Male gamete is
- (a) Ova (b) Egg
(c) Spermatozoan (d) None of these

P.T.O.

WT

- (iii) The production of gametes is called :
- (a) Oogenesis (b) Gametogenesis
(c) Spermatogenesis (d) Parthenogenesis
- (iv) When egg contains a small or negligible amount of yolk it is said to be :
- (a) Microlecithal egg (b) Macrolecithal egg
(c) Centrolecithal egg (d) Telolecithal egg
- (v) is the reserved food material present in egg.
- (a) Yolk (b) Lipid
(c) Protein (d) Carbohydrate
- (vi) In frog fertilization is
- (a) Internal (b) External
(c) Alternate (d) None of these
- (vii) Division in frog's egg is
- (a) Holoblastic (b) Diploblastic
(c) Triploblastic (d) Meroblastic
- (viii) The function of amnion with respect to the embryo is
- (a) Excretion (b) Secretion
(c) Respiration (d) Protection
- (ix) A child produced in laboratory method is known as
- (a) Natural baby (b) Laboratory baby
(c) Test-tube baby (d) None of these
- (x) GIFT means
- (a) Gamete Intra Uterine Transfer
(b) Gamete Intra Fallopian Transfer
(c) Gamete Extra Uterine Transfer
(d) Zygote Intra Uterine Transfer

WT

(3)

V-101-2017

(Theory)

2. Describe the process of Oogenesis.

10

Or

Write notes on :

- (a) Telolecithal egg
- (b) Infertility in male

3. Describe the process of fertilization in frog.

10

Or

Write notes on :

- (a) Structure of sperm of frog
- (b) Embryonic stem cells.

4. Describe the structure of chorion and amnion and add a note on its functions.

10

Or

Write notes on :

- (a) Yolk sac placenta
- (b) Sources of stem cells.

V-101-2017

3

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This question paper contains 3 printed pages]

AO-98-2018

FACULTY OF SCIENCE

B.Sc (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2018

(CBCS/CGPA Pattern)

ZOOLOGY

Paper IV

(Developmental Biology)

(MCQ & Theory)

(Tuesday, 3-4-2018)

Time : 10.00 a.m. to 12.00 noon

Time-2 Hours

Maximum Marks-40

- N.B. :-
- (i) Attempt all questions.
 - (ii) Use separate answer sheet (OMR) for Question No.1
 - (iii) One mark to each correct answer of MCQ.
 - (iv) Negative marking system is applicable.
 - (v) Use black ball point pen to darken the circle of correct choice in OMR answer sheet.
 - (vi) Draw well labelled diagrams wherever necessary for Question Nos. 2, 3, and 4.

MCQ

1. Select the correct answer for each of the following MCQs :

10

- (i) The production of gametes is called.....
 - (a) Gametogenesis
 - (b) Biogenesis
 - (c) Homeogenesis
 - (d) Genesis
- (ii) Formation of spermatozoa is refers to.....
 - (a) Oogenesis
 - (b) Spermatogenesis
 - (c) Germination
 - (d) None of these
- (iii) The.....develop to the acrosome.
 - (a) Golgi bodies
 - (b) Nucleus
 - (c) Centromeres
 - (d) Centriole

P.T.O.

- (iv) The growth duration of frog oocyte is prolonged for..... years.
- (a) One (b) Two
(c) Three (d) Four
- (v) Graafian follicle consist of a cavity called.....
- (a) Centrum (b) Antrum
(c) Quantum (d) None of these
- (vi) The first test tube baby was.....
- (a) Louice Brown (b) Louice Joy
(c) John (d) Jeny
- (vii) The replacement of the lost part of the organism is called
- (a) Regeneration (b) Recombination
(c) Reproduction (d) Fertilization
- (viii) When the egg contains large amount of yolk is called..... egg.
- (a) Microlecithal (b) Megalecithal
(c) Hololecithal (d) Alecithal
- (ix) Allantois is..... in function.
- (a) Excretory (b) Mesonary
(c) Diffusery (d) None of these
- (x) The sperm of frog is.....
- (a) Haploid (b) Diploid
(c) Both a and b (d) None of these

Theory

2. Describe the types of eggs on the basis of distribution of yolk.

10

Or

Write notes on

- (a) Spermatogenesis
(b) Test-tube baby

WT

(3)

AO-98-2018

3. Describe the process of formation of three germinal layers in frog.

Or

Write notes on :

- (a) Regeneration in Non-chordates
 - (b) Natural parthenogenesis.
4. Explain the classification of placenta on the basis of mode of distribution of villi and functions of placenta.

10

Or

Write notes on :

- (a) Chorio-allantois placenta
- (b) Role of stem cells in human welfare.

AO-98-2017

This question paper contains 3 printed pages]

W—112—2018

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA Pattern)

ZOOLOGY

Paper IV

(Developmental Biology)

(MCQ & Theory)

(Wednesday, 24-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B.* :— (i) Attempt *All* questions.
(ii) Use OMR sheet for Question No. 1.
(iii) One mark to each correct answer of an MCQ.
(iv) Negative marking system is applicable.
(v) Use black ball point pen to darken the circle of correct choice in OMR answer-sheet.
(vi) Draw diagrams wherever necessary for Question Nos. 2, 3 and 4.

MCQ

1. (i) Production of gamets is called : 10
(a) Spermatogenesis (b) Gametogenesis
(c) Oogenesis (d) All of these
- (ii) Spermatozoon is the :
(a) Egg (b) Ova
(c) Female gamet (d) Male gamet
- (iii) Chalaza is found in the egg of :
(a) Wall lizard (b) Rat
(c) Rabbit (d) Hen

P.T.O.

- (iv) Failure in the development of uterus, it is :
- (a) Female infertility (b) Male infertility
(c) Both (a) and (b) (d) None of these
- (v) The fertilized egg is divided by the process of :
- (a) Cleavage (b) Oogenesis
(c) Regeneration (d) Invagination
- (vi) Fertilisation in frog is :
- (a) In uterus (b) Internal
(c) External (d) None of these
- (vii) The main function of Allantois is :
- (a) Protection (b) Nutrition
(c) Excretion (d) None of these
- (viii) Bone marrow contains a stem cell is :
- (a) Nerve cell (b) Haematopoietic
(c) Embryonic (d) Totipotent
- (ix) GIFT means :
- (a) Gamete intra uterine transfer
(b) Zygote intra fallopian transfer
(c) Gamete intra fallopian transfer
(d) Zygote intra uterine transfer
- (x) Complete parthenogenesis is found in :
- (a) Birds
(b) Wasps
(c) Both (a) and (b)
(d) None of the above

WT

(3)

W—112—2018

Theory

2. Describe the process of spermatogenesis. 10

Or

Write notes on :

- (a) Types of eggs on the basis of amount of yolk
(b) Infertility in male.

3. Describe the process of Blastulation in frog. 10

Or

Write notes on :

- (a) Structure of ovum of frog
(b) Sources of stem cells.

4. Define placenta. Describe classification of placenta on the basis of mode of distribution of villi. 10

Or

Write notes on :

- (a) Functions of Placenta
(b) Natural parthenogenesis.

W—112—2018

3

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This question paper contains 3 printed pages]

B—133—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2019

(CBCS/CGPA Pattern)

ZOOLOGY

Paper IV

(Developmental Biology)

(MCQ+Theory)

(Wednesday, 3-4-2019)

Time: 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—**
- (i) Attempt All questions.
 - (ii) Use OMR sheet for Question No. 1.
 - (iii) One mark to each correct answer of an MCQ.
 - (iv) Negative marking system is applicable.
 - (v) Use black ball point pen to darken the circle of correct choice in OMR answer-sheet.
 - (vi) Draw a well labelled diagrams wherever necessary for Q. Nos. 2, 3 and 4.

(MCQ)

1. Multiple choice questions :

- (i) Spermatogenesis takes place in
 - (A) Ovary
 - (B) Testis
 - (C) Liver
 - (D) Kidney
- (ii) The sperm of frog is
 - (A) Haploid
 - (B) Diploid
 - (C) Both (A) and (B)
 - (D) None of these
- (iii) Process of fusion of male and female gamete is called
 - (A) Regeneration
 - (B) Metamorphosis
 - (C) Parthenogenesis
 - (D) Fertilisation

P.T.O.

- (iv) In Blastula, macromeres lie towards
- (A) Centre (B) Periphery
(C) Animal pole (D) Vegetal pole
- (v) Cleavage that divides the egg completely is known as
- (A) Superficial (B) Meroblastic
(C) Discoidal (D) Holoblastic
- (vi) Which stem cells are also called as somatic stem cells
- (A) Nerve cells (B) Stromal cells
(C) Embryonic stem cells (D) Adult stem cells
- (vii) The inability or failure to conceive is called
- (A) Sterility (B) Fertility
(C) Infertility (D) All of these
- (viii) The first test tube baby was
- (A) Robert Brown (B) Louise Brown
(C) Robert Edwards (D) Robert Anderson
- (ix) Cotyledonary type of placenta is found in
- (A) Pig (B) Cow
(C) Camel (D) Elephant
- (x) Parthenogenesis produced experimentally in the laboratory is called
- (A) Incomplete parthenogenesis
(B) Complete parthenogenesis
(C) Artificial parthenogenesis
(D) All of the above

(Theory)

2. Describe the process of Oogenesis.

Or

Write notes on

- (a) Types of eggs on the basis of distribution of yolk.
(b) Infertility in female.

WT

(3)

B-133-2019

3. Describe the process of fertilisation in frog.

Or

Write notes on :

- (a) Structure of sperm of frog
- (b) Embryonic and adult stem cells.

4. Define placenta. Describe classification of placenta on the basis of mode of origin.

Or

Write notes on :

- (a) Extra embryonic membrane-yolk sac
- (b) GIFT.

B-133-2019

This question paper contains 2 printed pages|

SB—126—2022

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (First Year) (Second Semester) EXAMINATION

MAY/JUNE, 2022

(New Course)

ZOOLOGY

Paper-IV

(Developmental Biology of Vertebrates)

(Monday, 20-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

N.B. :— (i) Attempt all questions

(ii) Illustrate your answers with suitably labelled diagrams wherever necessary.

1. Describe in detail patterns of eggs. 15

Or

Write notes on :

(a) Explain Human Gastrulation. 8

(b) Explain causes of infertility. 7

2. Explain mechanism of morphogenetic movement. 15

Or

(a) Explain morulla in human fertilization. 8

(b) Explain characteristics of morphogenetic field. 7

P.T.O.

3. Write short notes on (any *two*) :

10

- (a) Sperm of frog
- (b) Explain sixteen hours chick blastoderm
- (c) Induced ovulation in fishes
- (d) Tadpole Larva.

This question paper contains 3 printed pages]

AO—113—2018

FACULTY OF SCIENCE

B.Sc. (Third Semester) EXAMINATION

MARCH/APRIL, 2018

(CBCS/CGPA)

ZOOLOGY

Paper VI

(Genetics)

(MCQ+Theory)

(Wednesday, 4-4-2018)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—40

- N.B. :— (i) All questions are compulsory.
(ii) All questions carry equal marks.
(iii) Draw neat and labelled diagrams wherever necessary.

(MCQ)

1. Select the *correct* answer from the given multiple choices : 10
- (i) The term genetics was coined by
- (a) Mendel (b) William Bateson
(c) DeVries (d) Morgan
- (ii) The genetic make up of organism is called as
- (a) Phenotypes (b) Genotypes
(c) Alleles (d) Genomes
- (iii) A disease caused by recessive lethal genes in man is
- (a) Sickle cell anaemia (b) Colourblindness
(c) Haemophilia (d) Hypertrichosis
- (iv) The Rh blood group was discovered by
- (a) Landsteiner and Winener
(b) Bateson and Punnet
(c) Watson and Crick
(d) Malphigi

P.T.O.

- (v) The ratio between the X chromosome and autosomes is called as
- (a) Sex ratio (b) Sex index
(c) Sex-determining ratio (d) Both (B) and (C)
- (vi) The point of contact between two non-sister chromatids is called as
- (a) Chiasma (b) Diad
(c) Tetrad (d) Synapse
- (vii) The human female is
- (a) Homogametic (b) Heterogametic
(c) Polygametic (d) Isogametic
- (viii) The term mutation was introduced by
- (a) Darwin (b) Dobzhansky
(c) DeVries (d) Mendel
- (ix) The accumulation of homogentisic acid in the blood is called as
- (a) Alkaptonuria (b) Phenylketonuria
(c) Albinism (d) Critchat syndrome
- (x) The Okazaki fragments are joined by an enzyme
- (a) DNA polymerase (b) DNA ligase
(c) RNA polymerase (d) Endonuclease

(Theory)

2. Describe Mendel's dihybrid cross with a suitable example.

10

Or

Write short notes on :

- (a) Laws of Dominance
(b) Types of RNA.

3. Define multiple alleles ? Explain the inheritance of blood group in man. 10

WT

(3)

AO-113-2018

Or

Write short notes on :

(a) Significance of crossing over

(b) Sickle cell anaemia.

4. Describe bridges ratio theory of genic balance.

10

Or

Write short notes on :

(a) Polyploidy

(b) DNA structure.

AO-113-2018

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