



WEST BENGAL STATE UNIVERSITY

B.Sc. Major 1st Semester Examination, 2024-25

ZOODSC101T-ZOOLOGY (MAJOR)

NEW AND OLD SYLLABUS

Time Allotted: 2 Hours

Full Marks: 50

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

STUDENTS ARE INSTRUCTED TO MENTION NEW/OLD ON THE ANSWER SCRIPT

NEW SYLLABUS FOR BATCH 2024

1. Answer any **nine** questions from the following: 2×9 = 18
 - (a) Write specific characters with example of Phylum Sarcomastigophora.
 - (b) What is choanocytes and where it is found?
 - (c) Define coelom and name one schizocoelic and one enterocoelic animal. 1 + $\frac{1}{2}$ + $\frac{1}{2}$
 - (d) Distinguish between radial and bilateral symmetry with example.
 - (e) Name one parasitic and one free living Platyhelminthes.
 - (f) State the difference between homonomous and heteronomous metamerism.
 - (g) What is organ of Bojanus? In which phylum it is found?
 - (h) Distinguish between Arachnida and Merostomata.
 - (i) State the difference between pinacocyte and porocyte.
 - (j) Mention the function of macro and micro nucleus in *Paramoecium* sp.
 - (k) What is Clitellum?
 - (l) Write the scientific names of: Cuttlefish and Sea pen.
2. Answer any **four** questions from the following: 3×4 = 12
 - (a) What is spicule? Write a note on different types of spicules found in the Sponges. 1+2
 - (b) Name three crustacean larvae with two specific characters of each. 1+1+1
 - (c) Mention three important characters with examples of Phylum Onychophora.
 - (d) What is Polymorphism? Write the functions of Gastrozooids and Dactylozooids. 1+1+1
 - (e) Write the evolutionary significance of Trochophore larva.

- (f) Name a shell-less mollusc, a mollusc with an external shell and a mollusc with an internal shell. Mention their respective classes.

- (g) Name the phylum of the following larval forms mentioning one character in each.

1+1+1

(i) Zoea (ii) Veliger (iii) Planula.

3. Answer any **four** questions from the following:

5×4 = 20

- (a) Classify Phylum Annelida upto living classes mentioning the distinctive characters of each classes with examples.

5

- (b) Draw and describe the structure of *Paramoecium* sp. with suitable diagram.

3+2

- (c) Mention the Phylum and class of the following animals:

$(\frac{1}{2} + \frac{1}{2}) \times 5$

(i) Liver fluke

= 5

(ii) Jelly fish

(iii) Leech

(iv) Apple snail

(v) Silver fish

- (d) Name the phylum in which the following structures are found and mention one function in each.

$(\frac{1}{2} + \frac{1}{2}) \times 5$

= 5

(i) Radula

(ii) Acetabulum

(iii) Cilia

(iv) Spongin fibre

(v) Green Gland

- (e) Mention two differences between Ostium and Osculum. Describe the Asconoid type of Canal System in Sponges.

2+3

- (f) Why *Limulus* is known as living fossil? Discuss the affinities of *Limulus* with one extinct and one living forms.

1+4

- (g) Write short notes on: (any **two**)

$2\frac{1}{2} \times 2 = 5$

(i) Metagenesis in Obelia

(ii) Evolution of parasitic helminth

(iii) Characteristic features of Ctenophora.

OLD SYLLABUS FOR BATCH 2023

1. Answer any **nine** questions from the following:

2×9 = 18

- (a) Differentiate between Colloblast and Cnidoblast.

- (b) Name the intermediate hosts of *Leishmania* and *Wuchereria*.

1+1

- (c) Differentiate between lobopodia and axopodia.

- (d) What is Spicule? Where is it found?

1+1

- (e) Name one free living and one parasitic Platyhelminthes.

1+1

- (f) Define polymorphism.

- (g) In which phylum do you comb plate? Name one animal from it.

1+1

- (h) Name the places where coral reefs are found within the limit of Indian territory.
- (i) What is the difference between Radial and Biradial symmetry?
- (j) Write the difference between Protozoa and Metazoa.
- (k) What is signet ring?
- (l) What is Acetabulum?

2. Answer any **four** questions from the following: 3×4 = 12
- (a) Classify Phylum Porifera upto classes with example. 2+1
 - (b) Draw and label the Ultra structure of cilia. 1+2
 - (c) What is Coral bleaching? Write a note on conservation of Coral reefs. 1+1+1
 - (d) Describe the pathogenicity of *Entamoeba*.
 - (e) Name the phyla where following larval forms are found: 1+1+1
Planula, Cydippid, Bladder worm.
 - (f) Write down the adaptive features of *Fasciola hepatica*.
 - (g) Describe nucleous changes during conjugation process in *Paramoecium*.
3. Answer any **four** questions from the following: 5×4 = 20
- (a) Draw and describe the canal system in *Sycon*. 5
 - (b) Classify Phylum Platyhelminthes upto classes with distinctive characters and proper example. 5
 - (c) Name an anaerobic flagellated protozoan parasite and discuss its life cycle. 1+4
 - (d) Write short notes on the following: 2½+2½
 - (i) Merozoite and sporozoite
 - (ii) Barrier reef
 - (e) What is febrile paroxysm? Describe the sexual cycle of *Plasmodium vivax*. 1+4
 - (f) Name the phylum and class of the following animals: (½+½)×5
 - (i) Glass sponge
 - (ii) Sea fan
 - (iii) Portuguese Man of War
 - (iv) *Loa loa*
 - (v) *Bipalium*
 - (g) To which phylum do the following structures belong and mention one function of each: (½+½)×5
 - (i) Scolex
 - (ii) Colloblast
 - (iii) Contractile vacuole
 - (iv) Gonozooid
 - (v) Pineal Setae.

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