

**TDC Odd Semester Exam., 2020
held in July, 2021**

ZOOLOGY

(Pass)

(3rd Semester)

Course No. : ZOOP-301

**(Non-chordates, Organic Evolution
and Adaptation)**

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, choosing **one**
from each Unit

UNIT—I

1. (a) What is holozoic mode of nutrition?
How do megalospheric individuals differ
from microspheric individuals in
Polystomella? 1+1=2
- (b) How many nuclei are there in the cell
of Paramecium? Discuss modes of
reproduction in Paramecium. 1+4=5

2. (a) What are choanocyte cells? State the
functional significance of canal system
in Porifera. 2+2=4
- (b) What is metagenesis? Differentiate
between polyp and medusa. 1+2=3

UNIT—II

3. (a) Write the systematic position of
Fasciola. What is acetabulum? 2+1=3
- (b) Name four larval stages found in the life
history of *Fasciola*. Add a note on
pathogenicity and control measures of
Fasciola. 1+3=4
4. (a) What is meant by monogenetic
parasite? How could a male *Ascaris* be
distinguished from the female one? 1+2=3
- (b) Discuss the life history of *Ascaris*. 4

UNIT—III

5. (a) How many body segments (somites)
does Leech possess? What are meant by
pre-testicular and testicular nephridia?
1+1=2
- (b) Describe reproductive system of Leech
with suitable diagram. 5

6. (a) What is cephalothorax? How many abdominal appendages are there in Prawn? 1+1=2
- (b) Describe digestive system of Prawn. 5

UNIT—IV

7. (a) What is osphradium? 2
- (b) Describe digestive system of *Pila* with suitable diagram. 5
8. (a) Name the larval stages found in the life cycle of *Asterias*. 1
- (b) Describe water vascular system of *Asterias* with suitable diagram. 6

UNIT—V

9. (a) Who formulated the 'recapitulation theory'? State the theory briefly. 1+2=3
- (b) Discuss briefly the morphological evidences in animals in support of organic evolution. 4
10. Discuss the morphological and anatomical modifications in modern birds and bat for sustained flight. 7

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