

This question paper contains 4 printed pages]

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S. No. of Question Paper : 73

Unique Paper Code : 223353

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Name of the Paper : Biodiversity II (Animal)–LSPT-305

Name of the Course : B.Sc. Life Sciences

Semester : III

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Sections A and B to be answered on separate answer books.

Question No. 1 is compulsory in each Section and

answer any *two* more questions from each Section.

Draw neat and labelled diagrams wherever necessary.

Section A

1. (a) Define the following :

3

(i) Binary fission

(ii) Torsion

(iii) Deuterostomes

(b) Differentiate between the following :

8

(i) Bilateral symmetry and radial symmetry

P.T.O.

- (ii) Schizogony and sporogony
- (iii) Monogenetic and digenetic parasite
- (iv) Isogamy and Anisogamy.

(c) Match the following :

3

- | | |
|-----------------|--------------------|
| (1) Choanocyte | (i) <i>Pila</i> |
| (2) Radula | (ii) <i>Obelia</i> |
| (3) Metagenesis | (iii) <i>Sycon</i> |

2. Describe the life cycle of *Plasmodium* with the help of suitable diagrams. 12
3. (a) Explain the various adaptations of parasitic nematodes. 6+6
- (b) Discuss in detail the characteristics of phylum Echinodermata.
4. Write short notes on any *three* of the following : 4+4+4
- (i) Polymorphism in Cnidaria
 - (ii) Metamerism in Annelida
 - (iii) Social life in termites
 - (iv) Syconoid canal system.

Section B

1. (a) Define the following :

2

- (i) Bipedal
- (ii) Symsacrum

(b) Fill in the blanks with suitable terms/words :

3

- (i) A protochordate showing retrogressive metamorphosis is
- (ii) The reptilian skull without temporal vacuity is called
- (iii) The flightless birds are classified as
- (iv) The hoofed mammals are called
- (v) is the connecting link between birds and reptiles.
- (vi) The anterior part of *Balanoglossus* is called

(c) Match the following :

2

- | | |
|-----------------|------------------------|
| (i) Monotremata | (a) <i>Lepidosiren</i> |
| (ii) Lungfish | (b) <i>Echidna</i> |
| (iii) Marsupial | (c) <i>Macropus</i> |
| (iv) Jawfish | (d) <i>Petromyzon</i> |

(d) Differentiate between the following terms :

6

- (i) Amniote and anamniote
- (ii) Catadromous and anadromous migration
- (iii) Prototheria and Eutheria

2. Describe the various morphological and anatomical adaptations for flight in birds.

12

3. (a) What is osmoregulation ? Compare the mechanism of osmoregulation in a marine bony fish with that in a cartilaginous fish. 8
- (b) Differentiate between the characteristics of Lacertilia and Ophidia. 4
4. Write short notes on any *three* of the following : 4,4,4
- (a) Anura
- (b) Origin of tetrapod
- (c) *Australopithecus*
- (d) Protochordates.