

2022

Time : 3 hours

Full Marks : 60

Candidates are required to give their answers

in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer all questions as directed.

1. Choose the correct alternative for each of the following questions : 2×10=20

(a) How many pairs of walking legs does prawn have ?

- (i) Three pairs
- (ii) Four pairs
- (iii) Five pairs
- (iv) Six pairs

(b) Radula is found in which of the following species :

- (i) Pila
- (ii) Chiton
- (iii) Lamellidens
- (iv) Pinetada

(c) Pila has a :

- (i) Gill
- (ii) Pulmonary sac

(iii) Trachea

(iv) Both (i) & (ii)

(d) Star fish belongs to class :

(i) Asteroidea

(ii) Ophiuroidea

(iii) Echinoidea

(iv) Holothuroidea

(e) Main function of pedicellariae in Asterias

is :

(i) Digestion

(ii) Excretion

(iii) Respiration

(iv) Capture of prey and removal of
debris

(f) The term ecosystem was proposed by :

(i) E. Haeckel

(ii) A.G. Tansley

(iii) H. Godwin

(iv) E. P. Odum

(g) The main nitrogen reservoir in the
biosphere are : <https://www.jharkhandstudy.com>

(i) Ocean

(ii) Rocks

(iii) Atmosphere

(iv) Organism

(h) Which among the following are the most
important agents for carbon dioxide
fixation :

(i) Bacteria

(ii) Fungi

(iii) Algal

(iv) Protozoa

(i) How is the flow of energy from Sun to producer and then to the consumers :

(i) Multidirectional

(ii) Bidirectional

(iii) Unidirectional

(iv) None of these

(j) What is the source of energy for all ecosystem on Earth ?

(i) Water

(ii) Lava

(iii) Hydrothermal vents

(iv) Sun

2. Write short notes on any five of the following :

5×4=20

(a) Abdominal appendages

~~(b) Gill~~

(c) Osphradium

(d) Radula

(e) Bipinnaria larva

~~(f) Grassland Ecosystem~~

~~(g) Oxygen cycle~~

(h) Phosphorous cycle

(i) Food web

(ii) Ecological Pyramid

3. Answer any two questions of the following :

10×2=20

(a) Give an account of digestive system of Prawn.

(b) Describe the nervous system of Pila.

(c) What do you understand by ecosystem?

Describe the various components of an ecosystem giving suitable examples.

(d) Define biogeochemical cycle. Describe nitrogen cycle.

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