

BIOLOGY

Time: 2 Hrs
Marks: 80

STD: IX

SECTION- I (40 MARKS)

Question 1

- (a) Name the phylum of each of the following animals. (5)
- Nereis
 - Centipede
 - Liver fluke
 - Slug
 - Sea urchin
- (b) Name the following. (5)
- The nucleus that directs the growth of the pollen tube.
 - The bacterium which converts nitrite to nitrate.
 - The root like structure present in Bryophytes.
 - The type of tissue which connects a bone to a muscle.
 - This phylum includes organisms with a two layer body wall enclosing a single cavity which opens out by a single mouth.
- (c) Define the following terms. (5)
- Eukaryotes
 - Vaccination
 - Serum
 - Viviparous germination
 - Antibiotics
- (d) Give the location of the following (5)
- Ciliated epithelium
 - Antipodal cells
 - Micropyle
 - Osteoblast
 - Companion Cells
- (e) State the functions of the following. (5)
- Platelets
 - Nucellus
 - Antitoxin
 - Tube feet
 - Pyrogallic acid
- (f) In each set of terms given below, there is an odd one which cannot be grouped in the same category to which the others belong. Identify the odd term in each set and name the category to which the others belong. (5)
- Testa, Tegmen, Endosperm, Placenta
 - Cuttle fish, Devil fish, Dog fish, Loligo
 - Dolphin, Bat, Dog, Shark
 - Composting, Casing, Curing, Cropping
 - Euglena, Amoeba, Paramecium, Yeast

(g) Complete the following paragraph by filling the blanks with appropriate term(s)

(i) Plants absorb nitrogen only in the form of -----, which is replenished in the soil by the process of ----- . For this some bacterium known generally as ----- convert nitrogenous waste of animals and plants into ----- which are further converted to the absorbable form. ----- is another class of bacteria present in the soil which release nitrogen gas back to the atmosphere.

(h) Briefly explain the following.

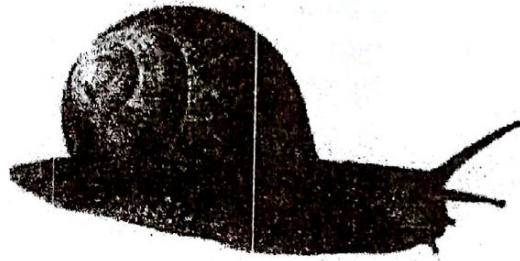
- (i) Binomial nomenclature
- (ii) Irradiation
- (iii) Role of bacteria in industry
- (iv) Viviparous germination
- (v) Anoxybiotic respiration

(5)

SECTION -II (40 MARKS)

Question 2

(a) The picture of an animal is given below. Study the animal and answer the questions that follow. (5)



- (i) Name the phylum to which it belongs
- (ii) Give any two characteristics of that phylum. Is it a vertebrate or an invertebrate?
- (iii) Name any other two animals belonging to this phylum

(b) Give reasons for the following statements. (5)

- (i) Tinned and Canned food is not always safe to eat.
- (ii) Aerobic respiration is more efficient than anaerobic respiration.
- (iii) Tilling of soil is useful for the crops to grow.
- (iv) Soil layer is spread over the compost in mushroom cultivation
- (v) Seeds sown very deep in the soil failed to germinate.

Question 3

(a) Write short notes on the following

- (i) Bioweapons
- (ii) Spawning
- (iii) Moulting
- (iv) Pasteurization
- (v) Botulism

(5)

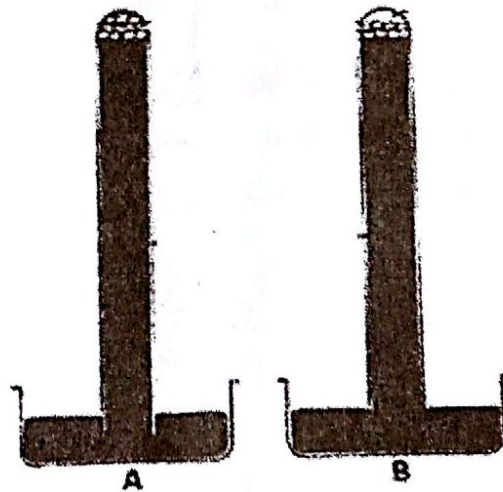
- (b) Write the differences between the following on the basis of what is given in the bracket (5)
- (i) Krebs cycle and Glycolysis (Site)
 - (ii) Dicots and Monocots (Root system)
 - (iii) Bacteria and Euglena (Nucleus)
 - (iv) Poikilothermic and Homoeothermic (Definition)
 - (v) Areolar tissue and Adipose tissue (Function)

Question 4

- (a) (5)
- (i) Draw a neatly label diagram of a neuron.
 - (ii) Write down the functions of a neuron
 - (ii) What is a nerve?
- (b) Answer the following questions (5)
- (i) Name the antibiotic used to treat Rickettsial fever. What is its source organism?
 - (ii) What are the criteria essential for a good antibiotic?
 - (iii) Give any two uses of antibiotics other than as medicines.
 - (iv) Name the antibiotic used to treat tuberculosis.

Question 5

- (a) Study the experimental set up given below and answer the questions (5)



- (i) Which process is demonstrated there?
 - (ii) Name the liquid taken in the test tube.
 - (iii) What is the principle behind the procedure of the above experiment?.
 - (iv) What is the end product obtained here? How was it proved?
- (5)
- (b) i. What is the fluid part of blood known as?
 ii. Mention the cellular components of blood. Represent each by means of diagrams
 iii. How is lymph formed?