

Parvatibai Chowgule College of Arts and Science
Autonomous

B.Sc. Online Semester End Examination, February 2022

Semester: I

Subject: Zoology

Title: Animal Diversity: Non Chordates (Core)

Duration: 2 Hours

Max. Marks: 45

Instructions: 1. All main questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw diagrams wherever necessary.

Q.1. Answer ANY THREE of the following:

(09)

- a) Invertebrate animal species contributes the most to biodiversity in the world. Justify.
- b) Identify and classify the organism up to class level. Differentiate between acoelom and pseudocoelom.



- c) The organism given below is considered to be a connecting link between Annelida and Arthropoda. Identify and Explain.



- d) Identify and classify the animals 'A' and 'B' from the image given below. Write the unique features of their respective classes.



A

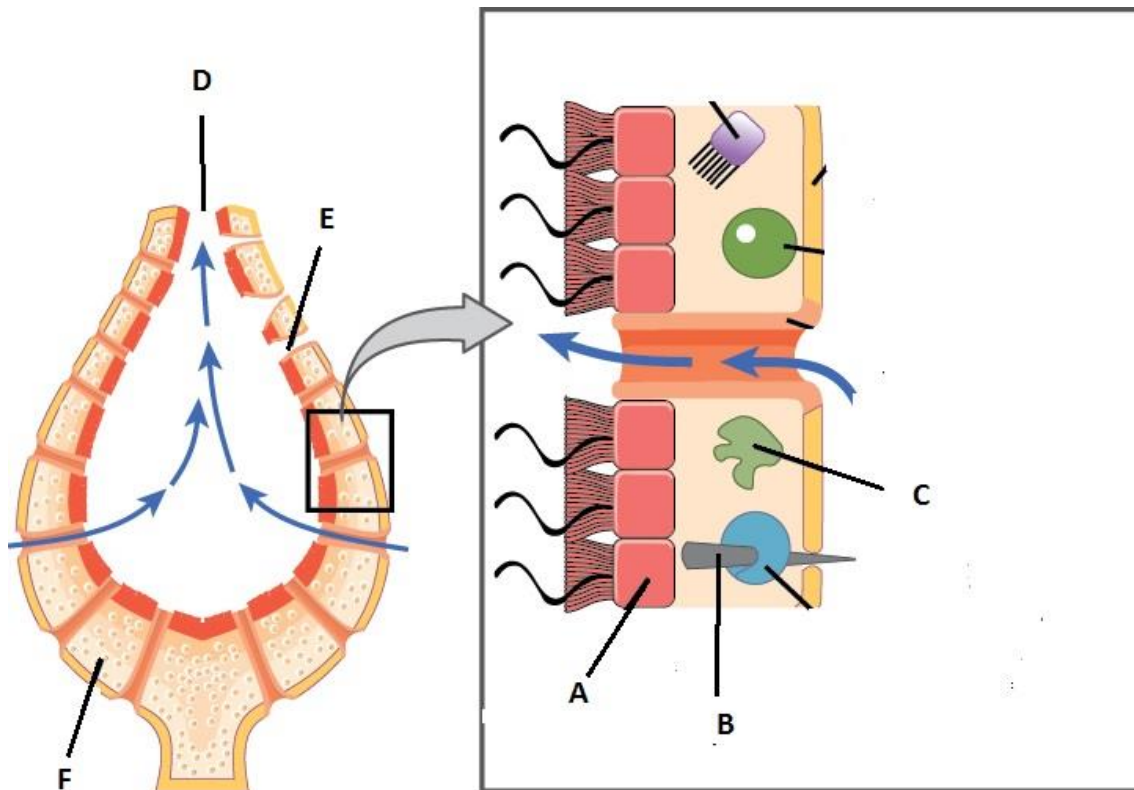


B

Q.2. Answer ANY TWO of the following:

(12)

- a) Analyze the basic body plan of the organism given below. Identify the marked parts (A, B, C, D, E and F) and highlight its functions. Classify the phylum of the given animal up to class level. Write the characteristic features of each class.



- b) Study the two images given below. Identify and classify 'A' and 'B' up to class level. Compare the characteristic features of their respective phyla in detail.

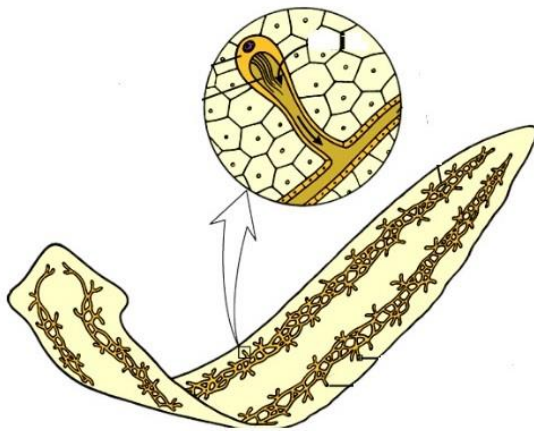


'A'

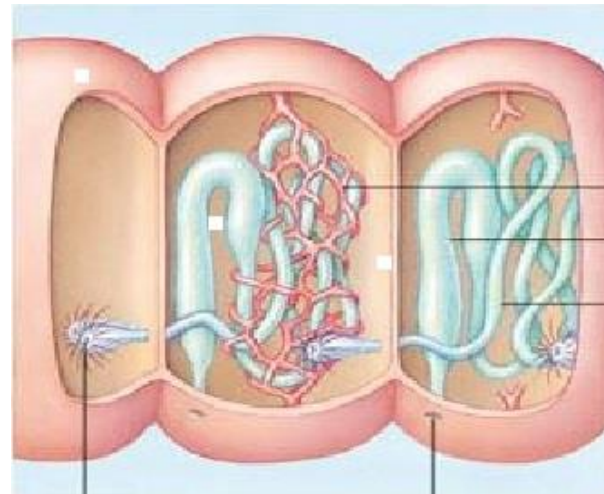


'B'

- c) Identify the excretory organs 'A' and 'B' given below. With the help of an example, explain how these organs help in the removal of waste in the organism. Does the principle nitrogenous waste excreted differ among non chordates? If yes, explain.



A



B

Q.3. Answer ANY TWO of the following:

(12)

- a) Animals with stinging cells are a characteristic feature of phylum 'A'. Comment on how the phylum gets its names and write the general characters with respect to its habit and habitat, morphs/forms, symmetry, digestive system and reproductive system.

- b) Analyze and identify the images 'P' and 'Q'. Identify the phylum the given animals belong to and give an outline classification up to class level. Comment on the general characters with respect to various biological systems.



P



Q

- c) Two main types of reproduction are characteristic of most animals. Among these two, 'A' produces offsprings without the union of sex cells and 'B' produces offsprings by the union of sex cells. Identify 'A' and 'B'. Explain 'A' among the non chordates.

Q.4. Answer ANY ONE of the following:

(12)

- A) Identify the animals A, B and C from the images given below. Give a comparative account on its feeding, nutritional apparatus, digestion, absorption and assimilation.



A



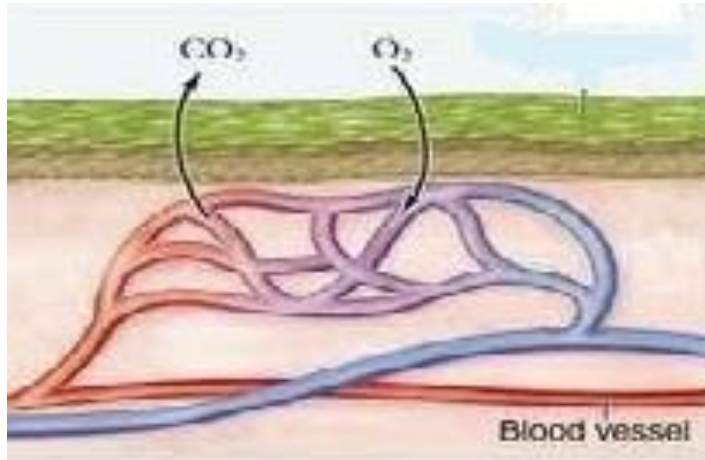
B



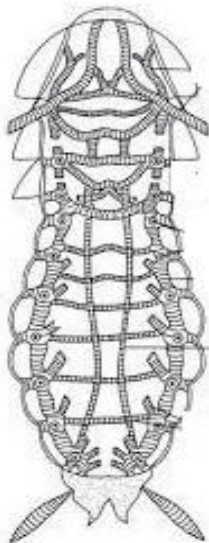
C

OR

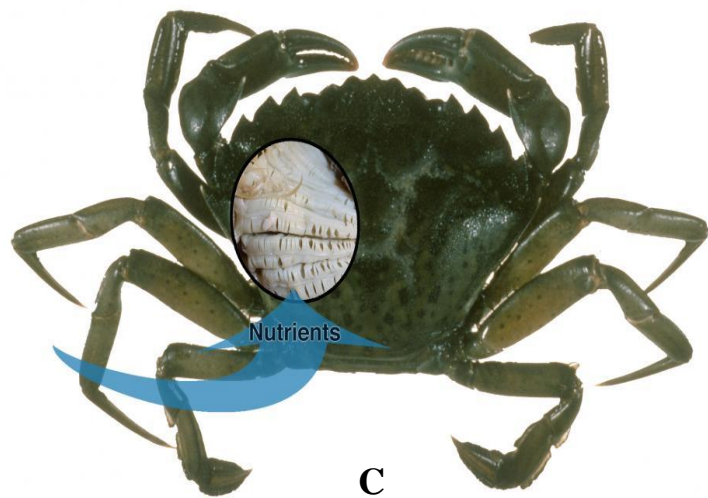
- B) Analyze the image 'A' and identify the biological process. Identify the special organs labeled as 'B' and 'C' that help in the above process. With the help of examples, explain how these special organs help in the above process. Do any pigments help in this process? If yes, enlist the types among the non chordates and state its function.



A



B



C
