Chapter 7

DIVERSITY IN LIVING ORGANISMS

Multiple Choice Questions

1. Find out incorrect sentence
- (a) Protista includes unicellular eukaryotic organisms
- (b) Whittaker considered cell structure, mode and source of nutrition for classifying the organisms in five kingdoms
- (c) Both Monera and Protista may be autotrophic and heterotrophic
- (d) Monerans have well defined nucleus

2. Which among the following has specialised tissue for conduction of water?
- (i) Thallophyta
- (ii) Bryophyta
- (iii) Pteridophyta
- (iv) Gymnosperms

- (a) (i) and (ii)
- (b) (ii) and (iii)
- (c) (iii) and (iv)
- (d) (i) and (iv)

3. Which among the following produce seeds?
- (a) Thallophyta
- (b) Bryophyta
- (c) Pteridophyta
- (d) Gymnosperms

4. Which one is a true fish?
- (a) Jellyfish
- (b) Starfish
- (c) Dogfish
- (d) Silverfish

5. Which among the following is exclusively marine?
- (a) Porifera
- (b) Echinodermata
- (c) Mollusca
- (d) Pisces

6. Which among the following have open circulatory system?
   (i) Arthropoda
   (ii) Mollusca
   (iii) Annelida
   (iv) Coelenterata
   (a) (i) and (ii)
   (b) (iii) and (iv)
   (c) (i) and (iii)
   (d) (ii) and (iv)

7. In which group of animals, coelom is filled with blood?
   (a) Arthropoda
   (b) Annelida
   (c) Nematoda
   (d) Echinodermata

8. Elephantiasis is caused by
   (a) Wuchereria
   (b) Pinworm
   (c) Planarians
   (d) Liver flukes

9. Which one is the most striking or (common) character of the vertebrates?
   (a) Presence of notochord
   (b) Presence of triploblastic condition
   (c) Presence of gill pouches
   (d) Presence of coelom

10. Which among the following have scales?
   (i) Amphibians
   (ii) Pisces
   (iii) Reptiles
   (iv) Mammals
   (a) (i) and (iii)
   (b) (iii) and (iv)
   (c) (ii) and (iii)
   (d) (i) and (ii)

11. Find out the false statement
   (a) Aves are warm blooded, egg laying and have four chambered heart
   (b) Aves have feather covered body, fore limbs are modified as wing and breathe through lungs
   (c) Most of the mammals are viviparous
   (d) Fishes, amphibians and reptiles are oviparous

16-04-2018

12. Pteridophyta do not have
(a) root
(b) stem
(c) flowers
(d) leaves

13. Identify a member of porifera
(a) *Spongilla*
(b) *Euglena*
(c) *Penicillium*
(d) *Hydra*

14. Which is not an aquatic animal?
(a) Hydra
(b) Jelly fish
(c) Corals
(d) Filaria

15. Amphibians do not have the following
(a) Three chambered heart
(b) Gills or lungs
(c) Scales
(d) Mucus glands

16. Organisms without nucleus and cell organelles belong to
(i) fungi
(ii) protista
(iii) cyano bacteria
(iv) archae bacteria
(a) (i) and (ii)
(b) (iii) and (iv)
(c) (i) and (iv)
(d) (ii) and (iii)

17. Which of the following is not a criterion for classification of living organisms?
(a) Body design of the organism
(b) Ability to produce one's own food
(c) Membrane bound nucleus and cell organelles
(d) Height of the plant

18. The feature that is not a characteristic of protochordata?
(a) Presence of notochord
(b) Bilateral symmetry and coelom
(c) Jointed legs
(d) Presence of circulatory system

19. The locomotory organs of Echinodermata are
(a) tube feet
(b) muscular feet
(c) jointed legs
(d) parapodia

20. Corals are
(a) Poriferans attached to some solid support
(b) Cnidarians, that are solitary living
(c) Poriferans present at the sea bed
(d) Cnidarians that live in colonies

21. Who introduced the system of scientific nomenclature of organisms
(a) Robert Whittaker
(b) Carolus Linnaeus
(c) Robert Hooke
(d) Ernst Haeckel

22. Two chambered heart occurs in
(a) crocodiles
(b) fish
(c) aves
(d) amphibians

23. Skeleton is made entirely of cartilage in
(a) Sharks
(b) Tuna
(c) Rohu
(d) None of these

24. One of the following is not an Annelid
(a) Nereis
(b) Earthworm
(c) Leech
(d) Urchins

25. The book Systema Naturae was written by
(a) Linnaeus
(b) Haeckel
(c) Whittaker
(d) Robert Brown

26. Karl Von Linne was involved with which branch of science?
(a) Morphology
(b) Taxonomy
(c) Physiology
(d) Medicine

27. Real organs are absent in
(a) Mollusca
(b) Coelenterata
(c) Arthropoda
(d) Echinodermata

28. Hard calcium carbonate structures are used as skeleton by
(a) Echinodermata
(b) Protochordata
(c) Arthropoda
(d) Nematoda

29. Differentiation in segmental fashion occurs in
(a) Leech
(b) Starfish
(c) Snails
(d) Ascaris

30. In taxonomic hierarchy family comes between
(a) Class and Order
(b) Order and Genus
(c) Genus and Species
(d) Division and Class

31. 5-Kingdom classification has given by
(a) Morgan
(b) R. Whittaker
(c) Linnaeus
(d) Haeckel

32. Well defined nucleus is absent in
(a) blue green algae
(b) diatoms
(c) algae
(d) yeast

33. The 'Origin of Species' is written by
(a) Linnaeus
(b) Darwin
(c) Hackel
(d) Whittaker

34. Meena and Hari observed an animal in their garden. Hari called it an insect while Meena said it was an earthworm. Choose the character from the following which confirms that it is an insect.

(a) Bilateral symmetrical body

(b) Body with jointed legs

(c) Cylindrical body

(d) Body with little segmentation

Short Answer Questions

35. Write true (T) or false (F)

(a) Whittaker proposed five kingdom classification.

(b) Monera is divided into Archaebacteria and Eubacteria.

(c) Starting from Class, Species comes before the Genus.

(d) *Anabaena* belongs to the kingdom Monera.

(e) Blue green algae belongs to the kingdom Protista.

(f) All prokaryotes are classified under Monera.

36. Fill in the blanks

(a) Fungi shows———mode of nutrition.

(b) Cell wall of fungi is made up of ———.

(c) Association between blue green algae and fungi is called as———.

(d) Chemical nature of chitin is ———.

(e) ———has smallest number of organisms with maximum number of similar characters

(f) Plants without well differentiated stem, root and leaf are kept in ———.

(g) ———are called as amphibians of the plant kingdom.

37. You are provided with the seeds of gram, wheat, rice, pumpkin, maize and pea. Classify them whether they are monocot or dicot.

38. Match items of column **(A)** with items of column **(B)**

(A)	**(B)**
(a) Naked seed	(A) Angiosperms
(b) Covered seed	(B) Gymnosperms
(c) Flagella	(C) Bryophytes
(d) *Marchantia*	(D) *Euglena*
(e) *Marsilea*	(E) Thallophyta
(f) *Cladophora*	(F) Pteridophyta
(g) *Penicillium*	(G) Fungi

39. Match items of column **(A)** with items of column **(B)**

(A)	**(B)**
(a) Pore bearing animals	(A) Arthropoda
(b) Diploblastic	(B) Coelenterata
(c) Metameric segmentation	(C) Porifera
(d) Jointed legs	(D) Echinodermata
(e) Soft bodied animals	(E) Mollusca
(f) Spiny skinned animals	(F) Annelida

40. Classify the following organisms based on the absence/presence of true coelom (i.e., acoelomate, pseudocoelomate and coelomate)

Spongilla,	Sea anemone,	Planaria,	Liver fluke
Wuchereria,	*Ascaris*,	*Nereis*,	Earthworm,
Scorpion,	Birds,	Fishes,	Horse.

41. Endoskeleton of fishes are made up of cartilage and bone; classify the following fishes as cartilagenous or bony

Torpedo,	Sting ray,	Dog fish,
Rohu,	Angler fish,	Exocoetus.

42. Classify the following based on number of chambers in their heart.

Rohu, *Scoliodon*, Frog, Salamander, Flying lizard, King Cobra, Crocodile, Ostrich, Pigeon, Bat, Whale

43. Classify Rohu, *Scolidon*, Flying lizard, King Kobra, Frog, Salamander, Ostrich, Pigeon, Bat, Crocodile and Whale into the cold blooded/warm blooded animals.

44. Name two egg laying mammals.

45. Fill in the blanks

(a) Five kingdom classification of living organisms is given by ———.

(b) Basic smallest unit of classification is ———.

(c) Prokaryotes are grouped in Kingdom ———.

(d) *Paramecium* is a protista because of its ———.

(e) Fungi do not contain ———.

(f) A fungus ——— can be seen without microscope.

(g) Common fungi used in preparing the bread is ———.

(h) Algae and fungi form symbiotic association called ———.

46. Give True (T) and False (F)

(a) Gymnosperms differ from Angiosperms in having covered seed.

(b) Non flowering plants are called Cryptogamae.

(c) Bryophytes have conducting tissue.

(d) *Funaria* is a moss.

(e) Compound leaves are found in many ferns.

(f) Seeds contain embryo.

47. Give examples for the following

(a) Bilateral, dorsiventral symmetry is found in———.

(b) Worms causing disease elephantiasis is———.

(c) Open circulatory system is found in———where coelomic cavity is filled with blood.

(d) ———are known to have pseudocoelom.

48. Label a,b,c and d. given in Fig. 7.1 Give the function of (b)

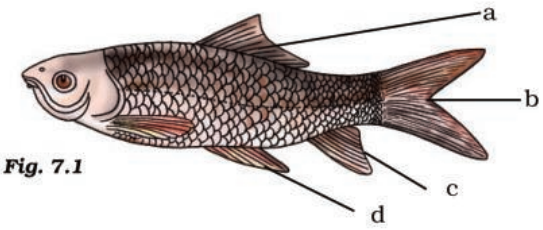


Fig. 7.1

49. Fill in the boxes given in Fig. 7.2 with appropriate characteristics/plant group (s)

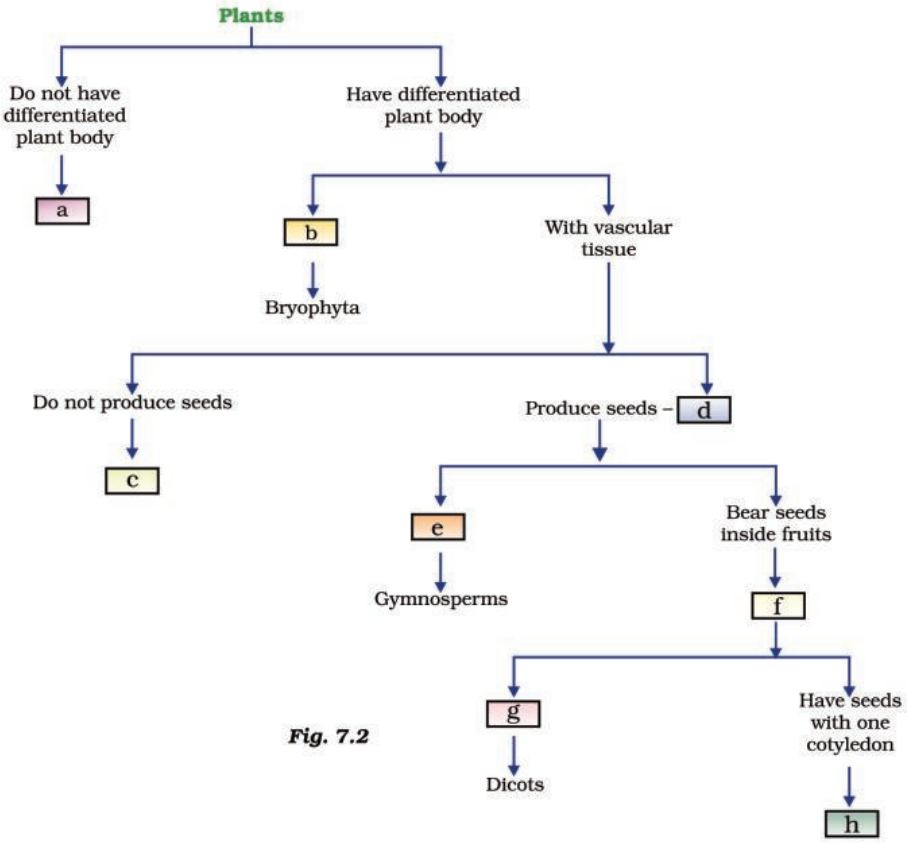


Fig. 7.2

16-04-2018

Long Answer Questions

50. Write names of few thallophytes. Draw a labelled diagram of *Spirogyra*.

51. Thallophyta, bryophyta and pteridophyta are called as 'Cryptogams'. Gymnosperms and Angiosperms are called as 'phanerogams'. Discuss why? Draw one example of Gymnosperm.

52. Define the terms and give one example of each

(a) Bilateral symmetry

(b) Coelom

(c) Triploblastic

53. You are given leech, *Nereis*, *Scolopendra*, prawn and scorpion; and all have segmented body organisation. Will you classify them in one group? If no, give the important characters based on which you will separate these organisms into different groups.

54. Which organism is more complex and evolved among Bacteria, Mushroom and Mango tree. Give reasons.

55. Differentiate between flying lizard and bird. Draw the diagram.

56. List out some common features in cat, rat and bat.

57. Why do we keep both snake and turtle in the same class?