UNIT 1

CHPATER NO.4

ANIMAL KINGDOM

Question carrying one mark each

1. Why classification of animal is important ?
2. What is the use of classification of animals ?
3. What is body symmetry ?
4. What is coelom ?
5. What is issue level of organization ?
6. What organ level of organization ?
7. What is incomplete digestive system ?
8. What is complete digestive system ?
9. What is mesoglea ?
10. What are coelomates ?
11. What are pseudocoelomeates ?
12. What are acoelomates ?
13. What is the nature of mesoderm in pseudocoelomeates?
14. From which germinal layer, not chord is derived ?
15. What are germ layers ?
16. What are chordates ?
17. What is notochorda ?
18. Where do you find notochord in chordates ?
19. Which group of animal is called sponges ?
20. Where do you find pariferans ?
21. Write an example of an primitive multicellular level of organization animal.
22. Where does the water move in sponge body ?
23. What are ostia ?
24. What is the function of ostia ?
25. Name the central cavity of the sponges ?
26. What is osculum ?

27. What is the function of canal system ?
28. What are choanocytes ?
29. Name the skeleton support of sponge body ?
30. What is the nature of fertilization in poriferans ?
31. What is the nature of development of ponferans ?
32. What is indirect development ?
33. What is the difference between lavva and adult
34. Give an example for marine sponge ?
35. Name an fresh water sponge.
36. Which sponge is called bath sponge ?
37. What are sessile animals ?
38. What are cnidocytes or cnidoblasts ?
39. Name the cell which has stinging capsule
40. What are nematocytes ?
41. What is the function of cnidoblost cells ?
42. Name the group of animals which possess cnidoblastis ?
43. Write expansion form of G.V.C. ?
44. What is hypostome ?
45. Name the hard calcareous skeleton of cnidarians.
46. Name the cylindrical body form of cnidarian.
47. Name the umbrella shaped free swimming form of cnidarian.
48. Define polyp.
49. Define medusae.
50. Which animal is called 'portuguse man of war' ?
51. Which animal is called sea pen ?
52. Write the scientific name of sea fan.
53. What is the common name of meandrina ?
54. Which animal phylum is called sea walnut or combjellies ?
55. How many rows of ciliated comb plates are present in ctenophorans ?
56. Why members of platyhelminithes in commonly called flatworms.
57. In which platyhelminthes forms, hooks & suckers are present ?

58. What is the function of hooks and suckers ?
59. What are flame cells ?
60. Name the cell which are involved in excretion and osmoregulation in platyhelminithes.
61. Which member of platyhelminithes has high capacity of regeneration ?
62. Why aschelminthes are named as round worms ?
63. Which level of body organization is seen in aschelmenthis ?
64. What is the nature of pharynx in found worm ?
65. How excretory products are removed from the body of round worms ?
66. Which worm is called filarial worm ?
67. Which worm is called hook worm ?
68. Metameric segmentation can be found for the first time in which animal phylum ?
69. What are metameres ?
70. How does circular and longitudinal muscle help annelidans ?
71. Write an example for aquatic annelidan.
72. What type of circulation is found annelidans ?
73. Write the scientific name of blood sucking leech.
74. Which is the largest phylum in the animal kingdom ?
75. Two thirds of known animals species belongs to which phylum.
76. What is the nature of exosketeton that covers the body of an arthropod ?
77. What is the meaning of the term arthropoda ?
78. What are statolysts ?
79. Name the excretory structure of arthropods.
80. Name a gregarious pest of arthropoda.
81. Name an arthropoda which is called living fossile.
82. Which animal phylum is the second largest ?
83. What is the nature of body cover of molluscan ?
84. What is mantle ?
85. What is mantle cavity ?
86. Where are the gills located in molluscan body ?

87. What is the body symmetry of adult echinoderm ?
88. What is the body symmetry of larval echinoderm ?
89. Which is the most distinctive features of echinoderms ?
90. How does echinoderms generally reproduce ?
91. What type of fertilization is seen in echinoderms ?
92. What is the nature of development in echinodermate ?
93. Which echinoderm is called brittle star ?
94. Which echinoderm is called sea urchin ?
95. Which echinoderm is called sealilly ?
96. What are echinoderms ?
97. Why echinoderms are called exclusively marian forms ?
98. What is the function of mantle cavity ?
99. Which region of molluscan body has sensory tentacles ?
100. What is radula ?
101. What is the function of radula ?
102. What are oviparous animals ?
103. From which molluscan pearls are obtained ?
104. Which mollusean is called Devil fish ?
105. Which molluscan has elephant tusk like shell ?
106. Which sup phylum of chordate is now included under nonchordata as separate phylum.
107. What is the general body form of hemichordate ?
108. Name the excretory structure of hemichordate.
109. What type of circulation is found in hemichordate ?

Two marks questions

1. What are multi cellular animals ? give an example.
2. What is cellular level of organization ? Give an example.
3. What is organ level of organization ? Give an example.
4. Name two types of circulation found in animals.
5. Define open circulation with an example.

6. Define closed circulation with an example.
7. Name the any two types of body symmetry with an example for each.
8. Define a symmetry with an example.
9. Define radial symmetry with an example.
10. Define bilateral symmetry with an example.
11. What are biploblastic animals ? Give an example.
12. What are triploblastic animals ? Give an example.
13. Define metamerism with an example.
14. What are acoelmates ? Give an example.
15. What are non chordates ? Give an example.
16. Name any two fundamental features on which animals are classified.
17. Name the levels of animal classification based on organization.
18. Name the levels of animal classification based on body symmetry.
19. Mention the level of animal classification based on body cavity.
20. Define hermophrodites with an example.
21. Name the gametes produced by the hermophrodites.
22. How does sponges reproduce?
23. What are cnidarians ? Give an example.
24. Mention the types of Digestion in coelenterates.
25. Name the two basic body forms of cnidarians ?
26. Define metagenesis with an example.
27. What are the functions of comb plates ?
28. What is bioluminescence ? Give an example.
29. Write any two examples of ctenophore.
30. What are endoparasites ? Give an example.
31. What is the common name of Taenia solium and fasciola hepatica.
32. What are dioecious animals ? Give an example.
33. From which latin term, the word annalida in taken and what does it means ?
34. What are parapodia ? What is its function ?
35. What are the main components of neural system of annelida.
36. Write an example for dioecious and monoecious annelidan.

37. Name the respiratory structures of arthropods.
38. Name the sensory structures of arthropods.
39. Name any two economically important insects.
40. What are vectors ? Give an example.
41. What are living fossils ?
42. Name the major regions of unsegmented body of an molluscan.
43. What is the function of water vascular system ?
44. Where are the mouth and anus located in echinoderms ?
45. What is the nature of echinoderm larvae ?
46. Name the body components of hemichordate.
47. Write any two example of hemichordate.

4 Marks questions

1. Represent schematically the classification of animal kingdom based on common fundamental features.
2. List out eight important characteristic features of phylum porifera.
3. Briefly explain the different types of body cavity.
4. Enumerate the salient features of phylum coelenterata.
5. List out the general characters of ctenophora.
6. Mention the general characters of phylum platyhelminthes.
7. Write any four distinct features of aschelminthes.
8. Compare and contrast parasitic platyhelminthes with that aschelminthes.
9. List out the eight important features of annelida.
10. Write the general characters of phylum Arthropoda
11. Mention the general features of phylum mollusca.
12. Enumerate the special features of phylum echinodermate.
13. List out the characters of phylum hemichordate.

Five marks questions

1. Mention general characters of phylum parifera.
2. Write any five unique features of phylum coelenterate
3. Bring out the general characters of phylum platyhelminthes.

4. List out the different between male & female round worm.
5. Enumerate unique features of sponges.
6. List out the general characters of phylum annelida.
7. Write the general characters of phylum mollusca.
8. What are the salient features of echonodermata.
9. Justify the inclusion of hemichordate under non chordate.
10. Mention the group of animals in which the following organs are found.

    a) Radula b) Compound eye c) water vascular system

    d) canal system e) closed circulatory system f) Nematocysts

    g) Flame cells h) visceral hump i) Nepheridia

    j) Parapodia

UNIT 1

CHPATER NO.4

ANIMAL KINGDOM

ANSWERS

One marks question

1. Over one million different animals are present.
2. It helps in assigning a systematic position of newly found specious.
3. Arrangement of cell in the body.
4. Cavity present between body wall and alimentary canal.
5. Number of cells arranged in complex performing same functions
6. Group of tissue joined together to form an organ performing a particular function.
7. Digestive system with single opening to the outside the body.
8. Digestive system having two openings one mouth and another anus.
9. Undifferentiated layer present between ectoderm and endoderm.
10. Animals possessing body cavity.
11. Animals having body cavity without living of mesoderm.
12. Animals in which body cavity is absent.
13. Scattered pouches like between the ectoderm and endoderm.
14. Mesoderm
15. Embryonic layers from which tissues and organs are derived.
16. Animals having notochord
17. Hard rod like structure derived from mesoderm.
18. Present on the dorsal side of the body.
19. Members of phylum porifera.
20. They are generally marine few are fresh water.
21. Sponges.
22. Water moves through canal system.
23. Minute pores on the body wall of sponges.
24. It allows water to enter into the body.
25. spongocoel.

26. Large opening through which water comes out of sponges.
27. Helps in gathering food, exchanges of gases and removes waste.
28. Collar cells lining the spongocoel and the canal system is called coanocytes.
29. Spicules
30. Internal fertilization.
31. Indirect development
32. Development involving larval stage.
33. Larva is morphologically under developed adult
34. Sycon
35. Spongilla
36. Enspongia
37. Animals which are non motile
38. Animals possessing cnidoblat cells
39. Cnidoblast
40. Cells with long thread like tentacles.
41. Used in anchorgage, defence and food capture
42. Cridarians.
43. Gastro vascular carity.
44. Structure on which mouth is located
45. Corals
46. Polyp
47. Medusoid
48. Polyp is asexually reproducing body form.
49. Sexually reproducing body form.
50. Physalia
51. Pennatula
52. Gargoina
53. Brain Coral
54. Ctenophora
55. Eight external rows
56. Body is dorsoventrally flattened

57. Parastic forms
58. They help in absorption of nutrients form host and also attach to the surface.
59. Specialized cells involved in osmoregulation and excretion.
60. Flame cells
61. Planaria
62. Body is circular in cross section
63. Organ system level of organization
64. Well developed muscular pharynx
65. Through excretory pores of the excretory tube
66. Wuchereia
67. Ancylostoma
68. Annelida
69. Body segments
70. It helps in locomotion
71. Nereis
72. Closed circulation
73. Hirudinaria
74. Arthropoda
75. Arthropoda
76. chitirous exoskeleton
77. Jointed appendages
78. They are balancing organs
79. Malpighian tubules
80. Locusta (or locust)
81. Limulus
82. Phylum mollusca
83. Calcareous shell
84. Soft and spongy layer of skin
85. The space between hump and mantle.
86. Gills are located in the mantle cavity
87. Radially symmetrical

88. Bilateral symmetry
89. Presence of water vascular system
90. Sexual method
91. External fertilization.
92. Indirect development
93. Opniura
94. Echinus
95. Antedon
96. Animals with spiny body layer
97. They are found only in marian environment
98. Mantle cavity help in respiration & excretion
99. Sensory tentacles are present in the anterior head region.
100. File like rasping organ present in the mouth.
101. Helps in feeding.
102. Animals which lay eggs
103. Pearl oysters or pinctada
104. Octopus
105. Dentalium
106. Hemichordata
107. Worm like marine form
108. Proboscis gland
109. Open type of circulation

Answers for 2 marks questions

1. Animals made up of more than two cells example sponges
2. Body made up of loose arrangement of cells example : sponges
3. When number of organs joined to perform a perlicular function example annelida to chordate
4. 1) open types of circulation
   2) closed type of circulation

5. Circulation in which blood is in direct contact with cells and tissues example Arthropodas
6. Is one in which blood is circulated through blood vessles example Arthropods
7. 1) Radial symmetry, example Echinodermata
   2) bilateral symmetry, example platyhelmenthes
8. When animals can not be divided into two equal halves passing through the centre in any plane example : sponges
9. Animal in which can be divided into two equal halves passing through the central axis in any plane. Example coelenterate & echinodermata
10. When an body can be divided into two equal halves on only one set plane. Example : Annelida to chordate on only one set plane (Except echinodermata)
11. Animals whose body cells derived from embrgonic layers like ectoderm & endoderm ex : coclentrates
12. Animals whose body structures are developed from three embryonic layers viz., ectoderm, endoderm & mesoderm
13. The phenomenon of body segmentation both externally and internally example :earthwarm
14. Animals without body cavity are called acoelmoates example : platyhelmenithes
15. Animals without notochord, example porifera to echinodermata
16. Animals are classified on the basis of
    a) level of organization
    b) body cavity or coelom
17. 1) Cellular level of organization
    2) tissue, organ and organ system level of organization
18. Based on body symmetry animals can be classified into two types viz.,
    a) Radial symmetrical animals
    example : coelenterata & ctenophores
    b) Bilateral symmetrical animals
    example : platyhelminthes to chordates

19. On the basis of body cavity animals can be classified into
    a) Acoelmates example : platyhelminthes
    b) pseudocoelomate ex : aschelminthes
    c) Codomates example annelida to chordate
20. Hermophrodites are the animals which have both sex example : Annelida
21. Hermophodites produces both sperm and ova
22. Sponges reproduce asexually by fragmentation
23. animals which posses cnidoblast cells are called cnidarians example : hydra
24. Coelentrates digest food both extra cellular and intra cellular digestion
25. 1) Polyp form (sexual reproduction)
    2) medusoid form (sexual reproduction)
26. A alternation of generation is called metagenesis
    Example : coelentrates
27. 8 comb plates help in locomotion
28. Properity of living organization to emit light is called bioluminesnce example ctenophores
29. Pleuro bractria and ctenophore
30. Animals which lead their life inside another animal is called endoparasites example : Tapeworm
31. Tapeworm and liver fluke
32. Animals with separate sex ie., male and female body example aschelminthes
33. Annulus is the latin term used and is means little rings i.e., annelidans have little rings on the body.
34. Laternal appendages processed in aquatic forms which help in swimming is called parapodia
35. The main components of neural system are
    a) paired ganglion
    b) ventral nerecord with lateral nerves
36. Dioecious = nerieis
    Monoecious = earthworm & leech

37. Respiratory structures of anthropodes are

    a) gills b) book gills c) book lungs d) tracheal system

38. Sensory structures found in arthropods are

    a) Anternnae

    b) Eye (simple & compound)

    c) statocysts

39. 1) Honey bee or apis

    2) Bombyx or silkworm

40. Vectors are those animals which carries diseases causing germs in them example : mosquito (anopheles culex)

41. Animals which have not undergone any changes in body, over a long period of time (begone years) & live even today are called living fossils

42. Body of molluscan can be identified into head, muscular foot and visceral hump.

43. It helps in locomotion, capture and transport food, also respiration

44. Mouth is located on ventral or lower surface and anus on the upper or dorsal surface of the body.

45. Larva of echinoderms are free swimming and bilaterally symmetrical in nature

46. Hemichordate body mainly consists of proboscis, collar and trunk

47. Balonoglossus and saccogloussus

Answers for 4 marks questions

1. Schematic representation of animal classification on common fundamental features

Animalia

Cellular level — Tissue organ / organ system level

Eg : porifera

Radial Symmetrical — Bilateral Symmetrical

Eg : Coelentrata & Ctenophore

Acoelmates — pseudocoelomates — Eucoelomates

Eg : platybel mintis — eg : Aschelmenthes — eg : Annelida chordata

2. Following are the important characteristic features of phylum porifera
   1. They are marine, symmetrical
   2. Primitive, multicellular
   3. Cellular level of organization
   4. Canal system for water transport
   5. Central cavity is called spongocel present
   6. Body possess minutes pores called ostia ----------
   ----
   7. Presence of specialized collar cells or choanocytes
   8. Spicules are the skeletal support to body

3. 1) Space between body wall and gut wall is called body cavity or coelom
   2) Cavity lined by mesodermal epithelum make is a eucoelome
   3) If the mesoderm present as scattered pouches between ectoderm and endoderm is called pseudocoelom eg : aschelmenthes
   4) If the body space is filled with tissue and is absent is called eucoelome eg : platyhelmenthes

4. Members of phylum coelentrata are

a) Aquatic, marine, free swimming or sessile

b) Radically symmetrical, presence of cnidoblats

c) Tissue level of organization and are bliploblastic

d) Exhibit two body form viz ployp & medusae

5. 1) Ctenophores are exlusively marine, radially symmetrical, diploblastic with tissue level of organization

2) commonly called sea walnuts or comb jellies as they bear comb plates

3) they exhibit bioluminescence

4) sexes are not separate reproduce only by sexual method with external fertilization & indirect development

6. 1) Dorsaventral flattened body

` 2) Mostly endoparasites in animals & humans

3) Bilaterally symmetrical, triploblastic acoelomates

4) Organ level of organizations, hooks & suckers present in parasitic forms

5) They possess specialized cells called flame cells for excretion & osmoregulation

6) Sex are not separate internal fertilization

7) Development is indirect with many larval stages

8) High regeneration capacity

7. Four district features of aschelminthes are

1) circular in cross section free living or parastic

2) organ level of body organization

3) Triploblastic, bilaterally symmetrical pseudocoelomate

4) muscular pharynx, well developed excretory system with separate sexes

8.

Platyhelminthes	Aschelminthes
1) Generally live in the intestine	1) intestinal parasites
2) possess hooks and suckers	2) possess thick resistant cuticle
3) acoelomate	3) pseudocoelmate
4) Triploblastic	4) triploblastic

9. General features of annelida

1) wrinkled body or ring like body
2) Aquatic, free living some are parastic
3) organ system level of organization, with metamerical segmentation
4) body possess longitudinal & circular muscle
5) closed circulation
6) Nepherida are execratory structure.
7) Well developed nervous system with ganglion double nerve cord and lateral nerves
8) reproduce sexually

10. Arthropods have

1) Jointed appendages
2) Body is distinguished into head, thorax and abdomen
3) Well developed respiratory organs like, gills, book gills, book lungs & tracheal system
4) Open circulation : presence of compound & simple eye
5) Excretion through malpighian tubules
6) Fertilization is internal
7) Development is direct or indirect
8) Insects are economically important

11. General features of phylum mollusca are

1) Second largest animal kingdom
2) Terrstrial or aquatic, bilaterally symmetrical
3) Triploblastic coelomate, body covered by shell.
4) body is unsegmented with distinct head, foot & visceral hump
5) Presence of mantle with mantle cavity
6) Mouth has rasping organ called radula
7) Oviparous with indirect development
8) Sensory tentacles are present in the head

12. Features of ech\inodemata

1) Echinoderms has spiny body with calcareous ossicles
2) They are exclusively marine
3) complete digestive system
4) Presence of water vascular system for food transport and locomotion
5) no special excretory structure
6) Sexes are separate with sexual reproduction
7) external fertilization development is external
8) Indirect development with larva free swimming

13. Hemichordates are

1) worm like body, marine
2) organ level of organization
3) body is composed of proboscis, collar & long trunk
4) Sexes are separate with external fertilization
5) Development is indirect
6) Respiration through gills
7) Excretory organs are proboscis gland
8) Open type of circulation

Answers for 5 marks questions

1. General characters of porifera are

1) They are marine mostly a symmetrical
2) Primitive multicellular
3) Canal system for water transport
4) Cavity of sponges is called spongocoel.
5) body had minute pores called ostia and large opening called oscalum
6) Presence of specialized collar cells or choanocytes
7) Body is supported by a skeleton made up of spicules
8) They are hermaphrodites
9) Fertilization is internal
10) Development is indirect with a larval stage

2)

1) Coelenterates are diploblastic radially symmetrical animals
2) Exhibit tissue grade of organization
3) Cnidoblasts are for offensive and digensive structure
4) They exhibit polymorphism with polyp & medusoid forms
5) digestive system is incomplete with gastro vascular cavity

3)

1) Dorsoventrally flatterned body
2) Triploblastic bilaterally symmetrical acoelmate
3) First to exhibit organ level of organization
4) Parasitic forms have hooks and suckers
5) Digestive system is incomplete without anus
6) Skeletal circulatory & respiratory systems are absent
7) Sketetal system consists of flame cells
8) Sexes are not separate
9) Internal fertilization indirect development

10) Life cycle is complicated with many larval stages and have high capacity of regeneration.

4.

	male worm	**female worm**
1.	smaller in length	longer in length
2.	posterior end curred	posterior end is straight
3.	presence of cloaca	Cloaca absent
4.	Digestive system opens Out through cloaca	Digestive system opens outside by anus
5.	Penial seta present	penial absent bat female genital Opening present

5. 1) Body of sponge is perforated with dermal ostia
   2) Cellular level of body organization
   3) Body has space or cavity called spongoeoel
   4) Spongoel opens out by osculum
   5) Body wall has canal system
   6) Spicules are skeletal structures
   7) Collar cells or choanocytes present
   8) Reproduction by both asexual and sexual method

6) Following the general characters of phylum annelida
   a) Bilaterally symmetrical, triploblastic, eucoelomates
   b) body is metamerically segmented
   c) Head is distinct
   d) Parapodia for locomotion present (in Nereis)
   e) Closed circulation with blood vessels
   f) Excretory system consists of nepherida
   g) Nervous system consists of ganglion, double nerve cord and lateral nerves
   h) some are monoceious or dioecious
   i) reproduction sexual
   j) Development is indirect

7. General characters of phylum mollusca are as follows

   1) Triploblastic, bilaterally symmetrical, coelomate
   2) Soft body with distinct head, foot & visceral hump
   3) body is covered by hard calcareous shell.
   4) body has lateral folds called mantle.
   5) Mantle enclose a cavity called mantle cavity and has respiratory structures gills & execratory in functions.
   6) Mouth has a rasping structure called radula
   7) Head has sensory tentacles
   8) Dioecious and oviparous
   9) indirect development with larval stage

8. Following are some of the important features of echinoderms

   1) Exclusively marine organ system level of organization
   2) Spiny body with exoskeleton of calcareous ossicles
   3) Adults are radically symmetrical while larval is bilaterally symmetrical
   4) Digestive system is complete
   5) Water vascular system for food transport & locomotion
   6) Exchanges of gases also occur through water vascular system
   7) no special excretory structure
   8) sexes are separate with sexual reproduction
   9) Fertilization is external and development also external
   10) Larval stage is free swimming

9. Hemichordates are included under separate phylum under non chordate as

   1) Small group which are worm like body
   2) Chordate character are not complete hence the name hemichordate
   3) Marine with organ system level of organization
   4) Triploblastic, bilaterally symmetrical coelomate
   5) body is cylindrical warm like composed of proboscis, collar and trunk
   6) Sexes are separate with external fertilization

7) Development is indirect

8) Open type of circulation

9) respiration through gills

10) Proboscis glands are excretory in nature

10.

	Organs	Group of animal
1.	Radula	Mollusca
2.	Compound eye	Arthropoda
3.	Water vascular system	Echinodermata
4.	Canal system	Porifera
5.	Closed circular system	Annelida
6.	Nematocysts	Coelenterata or cnidarians
7.	Flame cells	Platyhelminthes
8.	Visceral hump	Molluscans
9.	Nepheridia	Annelida
10.	Parapodia	Annelida