

CBSE Test Paper 02
Chapter 07 Diversity in Living Organism

1. The class Aves have the following features except that their **(1)**
 - a. respiration is not through lungs
 - b. skeleton is light
 - c. heart is four-chambered
 - d. forelimbs are modified into wings
2. Which one of the following is not a characteristic of an Earthworm? **(1)**
 - a. Unisexual
 - b. Locomotion by setae
 - c. Segmented body
 - d. Hermaphrodite
3. Male ascaris can be distinguished from female Ascaris by ____ **(1)**
 - a. Both Curved posterior end and Round Shape
 - b. Curved posterior end
 - c. Presence of penial setae
 - d. Round Shape
4. Male Ascaris can be distinguished from female Ascaris by **(1)**
 - (A) Curved posterior end
 - (B) Round shape
 - (C) Presence of penial setae
 - a. Only A
 - b. Both B and C
 - c. Both A and C
 - d. All of these
5. The locomotory organs of echinodermata are **(1)**

- a. muscular feet
- b. tube feet
- c. parapodia
- d. jointed legs

6. What is characteristic? **(1)**
7. Name the reptile in which heart is four chambered. **(1)**
8. What do you mean by the term chondrichthyes? **(1)**
9. What is monera? **(1)**
10. What is the contribution of Carl Woese in classification of organisms? **(1)**
11. Define - sporophyte and gametophyte **(3)**
12. What are lichens? Describe the characteristics of lichens? **(3)**
13. What do you mean by 'characteristics'? **(3)**
14. Differentiate monocot and dicot plant. **(5)**
15. What are the characteristics of kingdom Monera? **(5)**

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Answers

1. a. respiration is not through lungs

Explanation: Birds do not have diaphragm rather air enters and exits with change in pressure in air sacs. They have lungs but lungs do not expand or contract due to absence of diaphragm.

2. a. Unisexual

Explanation: Earthworm is bisexual, possess segmented body and locomotion is done by setae.

3. a. Both Curved posterior end and Round Shape

Explanation: Males are shorter than females and post anal tail is curved while female have straight posterior end.

4. c. Both A and C

Explanation: Male Ascaris differ from female Ascaris in different way. Female Ascaris are longer in size, male Ascaris have curved posterior end and contain penial setae.

Ascaris worms are **sexually dimorphic**, which means that there are differences in body size, shape, color, and so forth between males and females. For example, the males are shorter in length than the females. Male Ascaris worms range from 15-31 cm in length, with the length of female Ascaris worms ranging from 20-49 cm, with an average length of 30 cm. Also, the males have a smaller diameter than females. one of the simplest ways to determine if an *Ascaris* worm is *male* or *female* is the presence or absence of a spicule

5. b. tube feet

Explanation: Tube feet help in locomotion feeding and respiration of echinoderms. They are located in the grooves in arm and work due to hydraulic pressure.

6. Characteristic is a particular form or function found in all members of one or more

organisms.

7. Crocodile
8. Cartilaginous fishes.
9. Monera is the kingdom of prokaryotic organisms which include bacteria and virus.
10. Carl Woese (1994) has divided kingdom monera into archaebacteria (= archaea) and eubacteria.
11. Sporophyte – It is the diploid ($2n$) phase or individuals in the life of an organism and produce spores.
Gametophyte – It is the haploid (n) phase or individuals in the life – cycle of an organism and produce gametes for sexual reproduction.
12. Lichens are called compound plants as algae and fungi live together in close association, as a result of which both are benefitted.

Characteristics of lichens are:

- i. Lichens are a group of plants of composite thalloid nature, formed by the association of algae and fungi.
- ii. The algal partner-produced carbohydrate through photosynthesis is utilised by both of them and the fungal partner serves the function of absorption and retention of water.
- iii. Based on the morphological structure of thalli, they are of three types crustose, foliose and fruticose.
- iv. Lichen reproduces by all the three means – vegetative, asexual, and sexual.
 - a. Vegetative reproduction: It takes place by fragmentation, decaying of older parts, by soredia and isidia.
 - b. Asexual reproduction: By the formation of oidia.
 - c. Sexual reproduction: By the formation of ascospores or basidiospores. Only fungal component is involved in sexual reproduction.
- v. Ascospores are produced in Ascolichen.
 - a. The male sex organ is flask-shaped spermatogonium, produces unicellular spermatia.
 - b. The female sex organ is carpogonium (ascogonium), differentiates into basal

coiled oogonium and elongated trichogyne.

- c. The fruit body may be apothecia! (discshaped) or perithecial (flask-shaped) type.
- d. Asci develop inside the fruit body containing 8 ascospores. After liberating from the fruit body, the ascospores germinate and, in contact with suitable algae, they form new lichen.

vi. Basidiospores are produced in Basidiolichen, generally look like bracket fungi and basidiospores are produced towards the lower side of the fruit body.

13. Characteristic means a particular form or a particular function of any organism. For example, the presence of five fingers on each hand of a human being is a characteristic.

14.

Character	Monocots (Monocotyledonae)	Dicots (Dicotyledonae)
1. seed – cotyledons	One	Two
2. seed – germination	Hypogeal	Epigeal or hypogeal
3. Root	Primary root short lived, adventitious fibrous root system present	Primary root present. (forming tap root system)
4. leaf	Isobilateral – Parallel venation.	Dorsiventral – Reticulate venation
5. stem – cambium	Absent	Present

- 15.
- i. The organisms do not possess a clearly defined nucleus, i.e., the nucleus is not enclosed by a nuclear membrane.
 - ii. Cell organelles are also not covered with a membrane.
 - iii. Organisms are unicellular, microscopic prokaryotes living in moist conditions.
 - iv. Cell wall may or may not be present.
 - v. The mode of nutrition may be autotrophic or heterotrophic.
 - vi. Reproduction is primarily asexual by binary fission or budding.