

ZOOLOGY

UNIT - I

(EAMCET2005)

01. **Statement (S)** : Species are groups of potentially inter-breeding natural populations that are isolated from other such groups.

Reason (R) : Reproductive isolation brings about distinctive morphological characters.

- 1) Both statement and reason are true and reason is a correct explanation to statement
- 2) Only statement is true and the reason is not true
- 3) Both statement and reason are not true
- 4) Both statement and reason are true, but reason is not the correct explanation to the statement

(EAMCET2006)

02. **Statement (S)** : Linnaeus system of animal classification is essentially an artificial system, yet it has become a natural system.

Reason (R) : Similarities forming the basis in Linnaeus system are indicative of genetic relationship

- 1) Both (S) and (R) are true and (R) is the correct the correct explanation to (S)
- 2) Both (S) and (R) are true, but (R) cannot explain (S)
- 3) Only (S) is true and (R) is not true
- 4) (S) is not correct and (R) is true

(EAMCET2007)

03. Identify the **correct** set from the following :

(i) The application of Mathematics to Biology is Biometry.

(ii) The study of Genetics that deals with the systematic (symptomatic) treatment of genetic disorders is Euphenics.

(iii) The branch of Biochemistry concerned with the study of transformation and use of energy by living cells of organisms is Biotechnology.

(iv) The study that deals with the application of statistical, methods for computation and analysis of biological data is Bioinformatics.

The **correct** set is

- (1) (i) and (ii) (2) (i) and (iii) (3) (ii) and (iii) (4) (i) and (iv)

(EAMCET2008)

04. Which of the following groups of organisms are ecologically similar?

- 1) Producer protists and consumer protists
- 2) Monerans and producer protists
- 3) Consumer protists and fungi
- 4) Monerans and fungi

(EAMCET 2009)

05. **Assertion (A)** : "The Biological Species" concept helps us to ask how species are formed

Reason (R) : The concept of Biological species focusses our attention on the question of how reproductive isolation comes about.

1. Both A and R are correct, but R does not explain A
2. Both A and R are correct
3. only A is true but R is not correct
4. Both A and R are correct and R is a true explanation to A

UNIT- II

(EAMCET2005)

06. Which of the following require an invertebrate intermediate host ?

I. Dugesia II. Schistosoma III. Echinococcus

IV. Ancylostoma V. Wuchereria

- 1) III and IV
- 2) II and V
- 3) III and V
- 4) I and IV

07. Lepidopleurus belongs to :
 1) Polyplacophara 2) Echinoidea 3) Cephalopoda 4) Asteroidea
08. The coelom of the animals which are commonly known as “tooth shells” originates
 1) By enterocoelic method
 2) By Schizocoelic method and filled with coelomic fluid
 3) By splitting of embryonic mesoderm and filled with the blood
 4) From the blastocoel
(EAMCET 2006)
09. Lepas, Limulus, Lepisma and Scolopendra have jointed appendages. Which of the below given set of organisms are aquatic and respire through gills :
 1) Lepas and Lepisma 2) Lepas and Limulus
 3) Limulus and Scolopendra 4) Scolopendra and Lepas
10. The animal as an adult secondarily acquires radial symmetry when its bilaterally symmetrical larva metamorphoses, is :
 1) Polygordius 2) Gorgonia 3) Gorgonocephalus 4) Pila
11. Match the following : (EAMCET 2007)
- | | |
|----------------|----------------------|
| Set - I | Set - II |
| (a) Petromyzon | 1. Planula larva |
| (b) Holothuria | 2. Axolotl larva |
| (c) Ambystoma | 3. Auricularia larva |
| (d) Polychaeta | 4. Ammocoetes larva |
| (e) Cnidaria | 5. Trochophore larva |
- The **correct** set is
 (1) a-4, b-2, c-3, d-1, e-5 (2) a-2, b-4, c-2, d-1, e-5
 (3) a-4, b-3, c-2, d-5, e-1 (4) a-1, b-3, c-2, d-5, e-4
12. Which of the following animals is not only a living fossil but also considered as connecting link ?
 (1) Sphenodon (2) Limulus (3) Neopilina (4) Latimeria
13. Which of the following possesses a hard exoskeleton formed by calcium carbonate ?
 (1) Physalia (2) Aurelia (3) Corallium (4) Halimeda
(EAMCET 2008)
14. **Statement (S) :** In many gastropods, the anus and the mantle cavity are placed anteriorly above the head.
Reason (R) : During embryonic development, in many gastropods one side of the visceral mass grows faster than the other side. This uneven growth rotates the visceral organs upto 180° in many gastropods.
 The correct answer is
 1) Both (S) and (R) are true and (R) explains (S) 2) Both (S) and (R) are true but (R) cannot explain (S)
 3) Only (S) is correct but (R) is wrong 4) Both (S) and (R) are wrong.
15. The bilateria member that exhibits pentaradial symmetry is
 1) Neomenia 2) Nautilus 3) Neometra 4) Neopilina
16. The animal in which the space between the gut and the body wall is filled with mesenchyme is
 1) Echinodiscus 2) Enterobius 3) Eunice 4) Echinococcus
(EAMCET - 2009)
17. In ophiuroidea branched arms are seen in
 1) Gorgonocephalus 2) Clypeaster 3) Salmacis 4) Gorgonia

18. Note the following :
- a) It is a fresh water metamerically segmented protostome
 - b) The clitellum is absent
 - c) it is unisexual
 - d) Its larval form is Trochophore
 - e) The nervous system is found in the epidermis
- Which of the above is true of "Paddle worm"
- 1) a,b and c
 - 2) b,c and e
 - 3) b,c and d
 - 4) c,d and e

19. Match the following

List – I

- A) Green glands
- B) Amphids and phasmids
- C) Ctenidia
- D) Poison claw
- E) Concholin

List – II

- I) Scolopendra
- II) Respiratory organ
- III) Shell protein
- IV) Excretory organs
- V) Sense organs

	A	B	C	D	E		A	B	C	D	E
1)	IV	V	II	I	III	2)	I	III	IV	V	II
3)	II	IV	V	III	I	4)	III	IV	V	II	I

UNIT - III

(EAMCET-2005)

20. Contractile tissues have the following features :
- I) Mesodermal in origin
 - II) They contain stretch receptors
 - III) Rhythmic contractions are seen in them
 - IV) They do not fatigue during the life of the animal
- Which of the above are characteristic of sphincters ?
- 1) All the four
 - 2) Only I, II and III
 - 3) Only I, II, and IV
 - 4) Only I, III, and IV

(EAMCET - 2006)

21. Match the following :

Set - I

- a) Columnar epithelium
- b) Ligaments
- c) Chondroblast
- d) Acidophils
- e) Uninucleated spindle

Set-II

- 1) Larynx
- 2) Eosino philia
- 3) Elastic tissue
- 4) Urinary bladder
- 5) Microvilli shaped muscle fibers

The **correct** set is :

- 1) a - 5, b - 3, c - 1, d - 2, e - 4
- 2) a - 5, b - 1, c - 3, d - 2, e - 4
- 3) a - 1, b - 5, c - 3, d - 2, e - 4
- 4) a - 5, b - 3, c - 1 d - 4, e - 2

(EAMCET-2007)

22. In understanding different types of symmetry, the term used as principal axis means
- (1) An imaginary straight line joining two opposite points at the ends.
 - (2) An imaginary straight line joining the mid point at one end and the mid point at the opposite end
 - (3) A flat area that runs through any axis.
 - (4) An animal having its body parts arranged in such a manner to exhibit symmetry.

23. Match the following :

Set - I

- (a) astrocytes
- (b) Microglia
- (c) Oligodendrocytes
- (d) dependymal

Set - II

- 1. Resting macrophases
- 2. Precursors of Myelin sheath
- 3. Set up currents in cerebrospinal fluid
- 4. Protects neurons cells of brain from toxins

The **correct** match is

- (1) a-2, b-3, c-4, d-1
- (2) a-1, b-3, c-2, d-4
- (3) a-3, b-2, c-4, d-1
- (4) a-4, b-1, c-2, d-3

(EAMCET-2008)

24. The proteins involved in the movement of chromosomes towards the poles during cell division are
 1) Actin 2) Myosin 3) Tubulin 4) Elastin

(EAMCET-2009)

25. The type of connective tissue that is associated with the Umbilical cord is
 1) Areolar connective tissue 2) Jelly – like connective tissue
 3) Adipose connective tissue 4) Reticular connective tissue

26. Note the following:
 a) It forms the lining of the cavities of alveoli of the lungs.
 b) It forms the lining of wet surfaces like buccal cavity and oesophagus
 c) It occurs in the ducts of sweat glands.
 d) It forms the lining of salivary glands and sweat glands
 e) It is a loose connective tissue

Which of the above are associated with simple epithelial tissue ?

- 1) a and d 2) b and c 3) c and a 4) d and e
27. In coelomates the problem of diffusion of food from gut to tissues is solved by:
 1. The presence of coelomic fluid. 2. Churning the food within the body cavity
 3. Developing a circulatory system 4. Developing gut associated glands

UNIT - IV

(EAMCET 2005)

28. The number of daughter Vorticellas formed after the second series of post conjugation fissions is:
 1) 7 2) 6 3) 4 4) 2
29. Folding and unfolding of actin and myosin leads to Amoeboid movement. This is hypothesized by:
 1) Allen 2) Goldacre and Larsch
 3) Berthold 4) Jennings

(EAMCET 2006)

30. Identify the correct statements regarding the nuclei of vorticella :
 a) Both macro and micro nuclei are diploid b) Macro nucleus is diploid and micro nucleus is haploid
 c) The male and female pro-nuclei are haploid d) Both pronuclei are diploid
 e) Zygote is diploid
 1) a, b, c 2) b, c, e 3) a, b, e 4) a, c, e

(EAMCET 2007)

31. **Statemet (S) :** Conjugation is a temporary union between two ciliates belonging to two different mating types for the exchange and reconstitution of nuclear materials.

Reason (R) : Conjugation occurs between two inactive individuals which have gained their vigour and vitality due to chromosomal imbalance in their macronuclei, caused by repeated amitotic division.

The correct answer is

- (1) Both (S) and (R) are true and (R) explains (S).
 (2) Both (S) and (R) are true but (R) cannot explain (S).
 (3) Only (S) is correct but not (R) (4) Both (S) and (R) are wrong.
32. Which are the sites of ATP ase activity in the cilia and flagella ?
 (1) Base of cilia and flagella (2) Doublets
 (3) Basal granules of cilia and flagella (4) Dynein arm

(EAMCET 2008)

33. Identify the type of flagellum in Monas, Urceolus and Polytoma in their sequential order from the following:
- A. The flagellum is stichonematic
 B. Two or more rows of lateral appendages on the axonemes
 C. The flagellum is pantacronematic
 D. Lateral appendages are absent and axoneme ends as naked axial filament.
- 1) A, B, D 2) A, C, D 3) B, A, C 4) B, C, D

UNIT - VI

(EAMCET 2005)

34. The following are associated with Pheretima. Match them :
- | | | | | | | | |
|-----------------|------------------------|----|--------------------------|----------------|--|--|--|
| List - I | | | | List-II | | | |
| 1. | Yellow cells | A) | Primordial germ cells | | | | |
| 2. | Oval sphinctered pores | B) | Totipotent | | | | |
| 3. | Basal cells | C) | Deamination | | | | |
| 4. | Parietal layer | D) | The septum between 14/15 | | | | |
- | | | | | | | | | | |
|----|----------|----------|----------|----------|----|----------|----------|----------|----------|
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 |
| 1) | C | D | B | A | 2) | C | D | A | B |
| 3) | B | C | D | A | 4) | D | B | C | A |

35. The number of pairs of valves in each lateral oesophageal heart of pheretima is :
- 1) 1 2) 2 3) 3 4) 4
36. The gland whose secretion facilitates the attachment of two earth worms during copulation is located in this segment :
- 1) 14th 2) 18th 3) 19th 4) 22nd

(EAMCET 2006)

37. In pheretima, the lateral hearts that connect the supraoesophageal blood vessel with ventral blood vessel are located in these segments :
- 1) 7 and 9 2) 18 and 19 3) 14 and 15 4) 12 and 13

38. Match the following with reference to Pheretima :

Set-I					Set-II				
a)	Spermiducal funnels				1.	200-250			
b)	Ring vessels				2.	17 and 19th segments			
c)	Exo-nephric nephridia				3.	12 and 13th segment			
d)	accessory gland				4.	10, 11, 12 and 13th segments			
e)	Ovary				5.	10th and 11th segments			

	A	B	C	D	E		A	B	C	D	E
1)	5	4	2	1	3	2)	5	4	1	2	3
3)	4	5	2	1	3	4)	3	2	1	4	5

39. The enteronephric nephridia in Pheretima consists of the following parts :
- a) A nephrostome b) Terminal nephridial duct
 c) Septal excretory canal d) Supra-intestinal excretory canal
 e) Long thick walled excretory canal

Which of the above are found in the enteronephric nephridia in 4, 5 and 6th segments ?

- 1) b, c 2) a, c, d, c 3) c, d, e 4) a, c, d

(EAMCET 2007)

40. Each male genital opening of pheretima has separate opening of
- (1) 2 ducts (2) 3 ducts (3) 5 ducts (4) 4 ducts

41. A transverse section of Pheretima taken through the 10th segment is observed in microscope. Which of the following structures can be observed in the section ?
 (1) Stomach, Dorsal blood vessel, Ventral blood vessel, Supraoesophageal vessel, Anterior loops, Ring vessels and Micronephridia.
 (2) Stomach, Dorsal blood vessel, Ventral blood vessel, Lateral hearts, Ring Vessels and Pharyngeal nephridia.
 (3) Intestine, Dorsal blood vessel, Ventral blood vessel, Supra oesophageal vessel and Septal nephridia.
 (4) Stomach, Dorsal blood vessel, Sub neural blood vessel and Lateral hearts.
42. During the development of zygote of Earthworm macromeres develop into
 (1) Mesoderm (2) Endoderm
 (3) Ectoderm (4) All the three germinal layers
43. Arrange the external openings and their segmental numbers of Pheretima.

Set - I

Set - II

- | | |
|----------------------------|-----------------------------------|
| (a) Male genital apertures | (1) Between 12/13 to last segment |
| (b) Dorsal pores | (2) Form 3rd to last segment |
| (c) Spermathecal | (3) 18th segment |
| (d) Nephridiopores | (4) From 5/6 to 8/9 segments |

The correct match is

- | | |
|---------------------|---------------------|
| (1) a-2 b-1 c-3 d-4 | (2) a-3 b-1 c-4 d-2 |
| (3) a-3 b-4 c-2 d-1 | (4) a-2 b-3 c-1 d-4 |

EAMCET 2008

44. Match the following

List - I

List - II

(Pheretima)

(Cell features)

- A. Phagocytes
 B. Chloragogen cells
 C. Circular cells
 D. Mucocytes

1. small cells having yellowish granules
 2. elongated cells
 3. largest cells with membranous folds
 4. cells with characteristic markings on the surface

The correct set is

- | | |
|----------------------------|----------------------------|
| 1) A - 3 B - 4 C - 1 D - 2 | 2) A - 2 B - 1 C - 4 D - 3 |
| 3) A - 4 B - 3 C - 2 D - 1 | 4) A - 3 B - 1 C - 4 D - 2 |

45. Study the following in Pheretima :

- | | |
|-----------------------------------|-----------------------------------|
| A. Dorso intestinal blood vessels | B. External intestinal plexus |
| C. Internal intestinal plexus | D. Ventro intestinal blood vessel |

Arrange the blood vessels in the correct sequence of blood flow from ventral blood vessel to dorsal blood vessel

The correct sequence is

- | | |
|--------------|------------|
| 1) D → B A C | 2) C A B D |
| 3) B C D A | 4) D B C A |

(EAMCET-2009)

46. In pheretima, gizzard , buccal cavity , pharynx, oesophagus, pharyngeal nephridia receive the blood from this blood vessel
 1) Supra oesophageal (2) Lateral oesophageal
 3) Dorsal blood (4) Subneural
47. The location of lymph glands in Pheretima is:
 1) 4th , 5th and 6th segments (2) 10th to 20th segments
 3) 26th to the last segments (4) 13th segments

UNIT - VII

(EAMCET-2005)

48. The number of segments on the anal cerci of cockroach is :
 1) 12 2) 15 3) 18 4) 10
49. In the insect which feeds on Nectar the proboscis is formed by :
 1) Hypopharynx 2) Mandibles 3) Galea 4) Labium
50. The labrofrontal nerves in Cockroach originate from :
 1) Sub oesophageal ganglia 2) Supra oesophageal ganglia
 3) Antennary nerves 4) Frontal ganglia

(EAMCET-2006)

51. The sclerite that covers the top of the head and the space between the two compound eyes in *Periplaneta* is:
 1) Clypeus 2) Labrum 3) Vertex 4) Genae
52. The type of mouth parts found in the insect that is known to spread Myiasis is :
 1) Sponging and suking 2) Piercing and suking 3) Biting and chewing 4) Siphoning
53. Abdominal ganglion in cockroach is not found in this segment (s)
 1) 2 and 3 2) 4 3) 5 4) 6
54. Match the following :
- | Set-I | Set-II |
|-------------------------|--------------------|
| a) Olfactory sensillae | 1. Ommatidium |
| b) Peritrophic membrane | 2. Diurnal insects |
| c) Cibarium | 3. Food bolus |
| d) Rhabdome | 4. Hypopharynx |
| e) Apposition image | 5. Maxillary palp |

The correct set is :

- 1) a - 3, b - 4, c 5, d - 2, e - 1 2) a - 3, b - 5, c - 4, d - 1, e - 2
 3) a - 5, b - 3, c - 1, d - 4, e - 2 4) a - 5, b - 3, c - 4, d 1, e - 2
55. The water soluble protein associated with silk thread is :
 1) Fibroin 2) Sericin 3) Chitin 4) Mucin
56. Phallomeres in male *Periplaneta* arise from :
 1) 8 and 9th sterna 2) 7th sternum 3) 8th sternum 4) 9th sternum

(EAMCET-2007)

57. *periplaneta americana* has thermoreceptor sensillae on
 (1) 1st, 2nd and 3rd segments of tarsus of legs.
 (2) 3rd, 4th and 5th segments of tarsus of legs.
 (3) Pedicel of antenna. (4) 15th segment of anal cerci
58. Efferent salivary ducts in *Periplaneta* open into
 (1) Stomach (2) Base of pharynx
 (3) Base of Hypopharynx (4) Base of Oesophagus
59. Which of the following have biting and chewing type of mouth parts ?
 (a) Cimex (b) larvae of silk moth (c) Tse-Tse fly
 (d) larvae of butterfly (e) Grass hopper
- The correct pair is
 (1) b,d,e (2) b,c,d (3) a,b,d (4) c,d,e

(EAMCET-2008)

60. **Statement (S)** : Arthropoda are the most successful of all the known animal groups.
Reason (R) : Arthropoda exhibit the greatest adaptive radiation and have adapted to diverse habitats.
 1) Both (S) and (R) are true and (R) explains (S)
 2) Both (S) and (R) are true but (R) cannot explain (S)
 3) Only (S) is correct but (R) is wrong 4) Both (S) and (R) are wrong.
61. **Statement (S)** : Super position images are formed in the nocturnal insects
Reason (R) : The retinulae lie immediately below the vitellae and crystalline cone, these are surrounded by retinal sheath which absorb the light rays, hence, super position images are formed in nocturnal insects.
 The correct answer is
 1) Both (S) and (R) are true and (R) explains (S)
 2) Both (S) and (R) are true but (R) cannot explain (S)
 3) Only (S) is correct but (R) is wrong 4) Both (S) and (R) are wrong.
62. Match the following
- | | |
|-------------------------|-------------------|
| Set - I | Set -II |
| A. Pollen basket | 1. Butterfly |
| B. Pseudotracheae | 2. Laccifer lacca |
| C. Shellac | 3. Mosquito |
| D. Dutton's membrane | 4. Musca |
| E. Well developed galea | 5. Worker bee |
- The correct match is
 1) A - 5 B - 4 C - 2 D - 3 E - 1 2) A - 4 B - 5 C - 3 D - 2 E - 1
 3) A - 1 B - 5 C - 3 D - 4 E - 2 4) A - 3 B - 2 C - 4 D - 5 E - 1
63. The larval stage of a harmful insect causing a cavity like pathological condition in human subcutaneous tissue is
 1) Naiad 2) Nymph 3) Maggot 4) Wriggler
 (EAMCET-2009)
64. Note the following:
 a) Fenestra b) Pedicel c) Lacinia
 d) Flagellum e) Galea f) Mentum
 g) Palpifer h) Cardo i) Glossa
 Which of the above found in the first pair of maxillae in the case of Cockroach ?
 1) c,e,g and h 2) a,c,e and i 3) a,f,g and i 4) b,e,g and i
65. Note the following :
 An insect whose mouthparts are biting and chewing type in the larval condition, while they are siphoning type in the adult and this insect gives an economically important substance during yet another stage of its development.
 The insect is :
 1) Anopheles 2) Laccifer 3) Bombyx 4) Apis
66. Note the following
 a) Monocytes b) Trophocytes c) Lymphocytes
 d) Mycetocytes e) Leucocytes f) Oenocytes
 g) Urate cells
 Which of the above are fat cells in Periplanata ?
 1) a,c,e and h 2) b,d,f and g 3) c,e,f and g 4) a,c,e and f
67. In cockroach which of the following is the principal motor centre:
 1) Supraoesophageal ganglia 2) Suboesophageal ganglia
 3) Metathoracic ganglia 4) Abdominal ganglia