

10th Science Lesson 13 Questions in English**13] Structural Organisation Of Animals**

1. Kingdom Animalia is divided into_____ groups

- a) 3
- b) 2**
- c) 5
- d) 4

Explanation

The variety in nature and habits of animals in the biosphere are quite amazing and interesting. t
'**Kingdom Animalia**' is **divided into two groups**, Invertebrates and Chordates.

2. Which of the following is correctly matched?

- 1) Invertebrate - Leech
- 2) Vertebrate - Rabbit
- a) 1 alone
- b) 2 alone
- c) 1, 2**
- d) None

Explanation

Kingdom Animalia has a great diversity in the habit, habitat, structural organisation and mode of reproduction between the animals existing on earth. In this chapter, you will understand the structural morphology and anatomy of an **Invertebrate (Leech)** and a **Vertebrate (Rabbit)**.

3. The scientific name of the Indian cattle leech is_____

- a) Bos nomadicus
- b) Bos elephantis
- c) Hirudinaria granulosa**
- d) Oryctolagus cuniculus

Explanation

The scientific name of the **Indian cattle leech** is **Hirudinaria granulosa** which belongs to Phylum Annelida. Annelids are metamerically segmented worms with well-developed organ systems.

4. The scientific name of the common rabbit is_____

- a) Bos nomadicus
- b) Bos elephantis

- c) *Hirudinaria granulosa*
- d) ***Oryctolagus cuniculus***

Explanation

The scientific name of the common rabbit is ***Oryctolagus cuniculus***. It represents Phylum Chordata and Class Mammalia.

5. Which of the following statement about mammals is correct?

- 1) Mammals occupy the highest group in the animal kingdom and show advancement over the other groups of animals
 - 2) Mammary gland in females is the most striking feature of a mammal
 - 3) They are cold blooded and possess covering of hair on the body
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Mammals occupy the highest group in the animal kingdom and show advancement over the other groups of animals. **They are warm blooded** and possess covering of hair on the body. Mammary gland in females is the most striking feature of a mammal.

6. Match the Taxonomic Position of Indian Cattle Leech:

- | | |
|------------|-------------------|
| I. Phylum | 1. Hirudinaria |
| II. Order | 2. Annelida |
| III. Genus | 3. Hirudinea |
| IV. Class | 4. Gnathobdellida |

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

Explanation

Taxonomic Position	
Phylum	Annelida
Class	Hirudinea
Order	Gnathobdellida
Genus	<i>Hirudinaria</i>
Species	<i>granulosa</i>

7. Hirudinaria granulosa (Indian Cattle Leech) is found in_____

- a) India
- b) Pakistan
- c) Sri Lanka
- d) **All the above**

Explanation

Hirudinaria granulosa (Indian Cattle Leech) is found in **India, Bangladesh, Pakistan, Myanmar and Sri Lanka**. It lives in freshwater ponds, lakes, swamps and slow streams.

8. Indian Cattle Leech is_____

- a) Endoparasite
- b) **Ectoparasite**
- c) Omiparasite
- d) None

Explanation

Hirudinaria granulosa (Indian Cattle Leech) are **ectoparasitic** and feed on the blood of fishes, frogs, cattle and human. It is sanguivorous (blood sucking) in nature.

9. Which of the following statement about leech is correct?

- 1) The body of a leech is soft, vermiform, elongated and segmented.
 - 2) Dorsal surface is blue in colour and the ventral surface is orange yellow or orange red in colour
 - 3) It becomes ribbon shaped when extended and almost cylindrical when contracted
- a) 1, 2
 - b) **1, 3**
 - c) 2, 3
 - d) All the above

Explanation

The body of a leech is soft, vermiform, elongated and segmented. It becomes ribbon shaped when extended and almost cylindrical when contracted. Leeches may grow to a length of 35cm. **Dorsal surface is olive green in colour** and the ventral surface is orange yellow or orange red in colour.

10. The body of leech is metamerically divided into_____ segments

- a) 22
- b) **33**
- c) 19

d) 55

Explanation

Metamerism is the segmentation of the body. The **body of leech is metamerically divided into 33 segments**. The segments are arranged one behind the other.

11. How many pairs of eyes does leech have?

- a) 10
- b) 2
- c) 1
- d) 5

Explanation

On the **dorsal side there are five pairs of eyes on the first five segments**. Each segment bears a number of sensory projections called receptors.

12. A temporary clitellum is formed on which segment is meant to produce a cocoon?

- a) 10 – 11
- b) **9 – 11**
- c) 13 – 15
- d) 7 – 11

Explanation

Each segment is further superficially subdivided into rings or annuli. **A temporary clitellum is formed on segments 9-11**, which is meant to produce a cocoon during the breeding season.

13. Which of the following statement about leech is correct?

- 1) Leech has two suckers
 - 2) Posterior suckers help in attachment and locomotion.
 - 3) The sucker located at the anterior end is called anterior sucker or oral sucker
- a) 1, 2
 - b) **1, 3**
 - c) 2, 3
 - d) All the above

Explanation

Leech has two suckers. The sucker located at the anterior end is called anterior sucker or oral sucker which is ventral in position occupying the first five segments. The posterior sucker is formed by the fusion of the last seven segments. The **anterior sucker helps in feeding, while both the suckers help in attachment and locomotion**.

14. Anus of leech opens at ____ segment

- a) 12th
- b) 26th**
- c) 22nd
- d) 13th

Explanation

Mouth is located in the middle of anterior sucker. **Anus is a small aperture** that opens on the mid-dorsal side of **26th segment**.

15. Nephridia open to the exterior by ____ pairs of nephridiopores

- a) 25
- b) 17**
- c) 29
- d) 15

Explanation

Nephridia open to the exterior by 17 pairs of nephridiopores. They lie ventrally on the last annulus of each segment from 6 to 22.

16. Match the following with respective segments

- | | |
|----------------------|--|
| I. Cephalic region | 1. 27 th - 33 rd |
| II. Clitellar region | 2. 1 st - 5 th |
| III. Middle region | 3. 9 th , 10 th and 11 th |
| IV. Posterior sucker | 4. 12 th - 22 nd |
- a) 2, 1, 3, 4
 - b) 2, 3, 4, 1**
 - c) 3, 1, 2, 4
 - d) 4, 1, 2, 3

Explanation

Region	Segments
Cephalic region	1 st - 5 th
Pre-clitellar region	6 th , 7 th and 8 th
Clitellar region	9 th , 10 th and 11 th
Middle region	12 th - 22 nd
Caudal region	23 rd - 26 th
Posterior sucker	27 th - 33 rd

17. Which of the following statement about body wall of leech is correct?

- 1) Body wall of leech includes three layers
- 2) Cuticle is the outermost layer
- 3) Dermis which lies below the epidermis formed of connective tissue
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Body wall of leech includes **five layers**: (i) cuticle (outermost layer) (ii) epidermis which lies below the cuticle (iii) dermis which lies below the epidermis formed of connective tissue (iv) muscular layer formed of circular and longitudinal muscles (v) botryoidal tissue lies beneath longitudinal muscles and fills the entire coelom around the gut.

18. How many types of movements take place in leech?

- a) 2
- b) 4
- c) 5
- d) 3

Explanation

Locomotion in leech takes place by two methods: (i) looping or crawling movement (ii) Swimming movement.

19. Which of the following statement is correct?

- 1) Looping or Crawling movement is brought about by the contraction and relaxation of muscles
- 2) Leeches swim very actively and perform undulating movements in water.
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Looping or Crawling movement is brought about by the **contraction and relaxation of muscles**. The two suckers serve for attachment during movement on a substratum. Leeches swim very **actively and perform undulating movements in water**.

20. Mouth of leech is _____ aperture situated in the middle of the anterior sucker.

- a) Biradiated
- b) Triradiated**
- c) Monoradited
- d) Pentaradiated

Explanation

The alimentary canal of leech is a straight tube running from the mouth to the anus. Mouth is a **triradiate aperture** situated in the middle of the anterior sucker that leads into the small buccal cavity.

21. The wall of the buccal cavity of leech bears _____ jaws with single row of minute teeth

- a) 3**
- b) 4
- c) 7
- d) 2

Explanation

The **wall of the buccal cavity of leech bears three jaws with single row of minute teeth**. The jaws are provided with papillae which bear the openings of salivary glands. Mouth and buccal cavity occupy the first five segments.

22. Pharynx of leech leads into crop through a short and narrow_____

- a) Bronchus
- b) Larynx
- c) Oesophagus**
- d) Bronchioles

Explanation

The buccal cavity leads into muscular pharynx. It is surrounded by salivary glands. The secretion of saliva contains hirudin which prevents the coagulation of blood. **Pharynx leads into crop through a short and narrow oesophagus**

23. Which of the following statement is correct in leech?

- 1) The last chamber of crop opens into stomach.
 - 2) Crop is the largest portion of the alimentary canal.
 - 3) The rectum opens to the exterior by anus.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above**

Explanation

Crop is the largest portion of the alimentary canal. It is divided into a series of 10 chambers. The chambers communicate with one another through circular apertures surrounded by sphincters. The **last chamber of crop opens into stomach.** The stomach leads into intestine which is a small straight tube that opens into rectum. **The rectum opens to the exterior by anus.**

24. During feeding the leech attaches itself to its victim strongly by _____ sucker

- a) Anterior
- b) Posterior**
- c) Both a and b
- d) None

Explanation

The leech feeds by sucking the blood of cattle and other domestic animals. During feeding the leech attaches itself to its victim strongly by the **posterior sucker.**

25. In leech the blood is sucked by_____

- a) Jaw
- b) Pharynx**
- c) Larynx
- d) Tongue

Explanation

The leech makes a triradiate or Y shaped incision in the skin of the host by the jaws protruded through the mouth. The **blood is sucked by muscular pharynx** and the salivary secretion is poured.

26. Digestion in leech takes place in stomach by the action of_____ enzyme

- a) Lipase
- b) Proteolytic**
- c) Amylase
- d) Pepsin

Explanation

The blood passes from the crop into the stomach. **Digestion takes place in stomach by the action of proteolytic enzyme.** The digested blood is then absorbed slowly by the intestine. Undigested food is stored in rectum and egested through anus.

27. Leeches prevent blood clotting by secreting a protein called_____

- a) Lipase

- b) Leucocyte
- c) **Hirudin**
- d) Haemoglobin

Explanation

Leeches prevent blood clotting by secreting a protein called hirudin. They also inject an anaesthetic substance that prevents the host from feeling their bite.

28. Assertion(A): Leeches can sense vibrations through their skin.

Reason(R): Leeches do not have ear

- a) Both (A) and (R) are correct, but (R) does not explain (A)
- b) Both (A) and (R) are wrong
- c) **Both (A) and (R) are correct and (R) explains (A)**
- d) (A) is Correct and (R) is wrong

Explanation

Leeches **do not have ear**, hence can sense vibrations through their skin. Leeches have 2 to 10 tiny eyes, which helps them to locate their food.

29. Leeches can suck blood ____ times more than their body weight

- a) 9
- b) **5**
- c) 10
- d) 15

Explanation

Leeches can suck **blood five times more than their body weight**. It may take more than a year for the complete digestion and absorption of a full meal.

30. Respiration takes place through the ____ in leech

- a) Nostril
- b) Jaw
- c) Anus
- d) **Skin**

Explanation

Respiration takes place through the **skin in leech**. Dense network of tiny blood vessels called as capillaries containing the haemocoelic fluid extend in between the cells of the epidermis.

31. The exchange of respiratory gases in leech takes place by_____

- a) Osmosis
- b) Diffusion**
- c) Pressure
- d) None

Explanation

The **exchange of respiratory gases takes place by diffusion**. Oxygen dissolved in water diffuses through the skin into haemocoelic fluid, while carbon dioxide diffuses out. The skin is kept moist and slimy due to secretion of mucus which also prevents it from drying.

32. In leech, circulation is brought about by ____ system

- a) Respiratory
- b) Haemocoelic**
- c) Haemophrage
- d) None

Explanation

In leech, **circulation is brought about by haemocoelic system**. There are no true blood vessels. The blood vessels are replaced by channels called haemocoelic channels or canals filled with blood like fluid.

33. How many longitudinal channels are there in leech Circulatory System?

- a) 6
- b) 4**
- c) 1
- d) 3

Explanation

In leech, there are **four longitudinal channels**. One channel lies above (dorsal) the alimentary canal, one below (ventral) the alimentary canal. The other two channels lie on either (lateral) side of the alimentary canal which serve as heart and have inner valves. All the four channels are connected together posteriorly in the 26th segment.

34. In leech, excretion takes place by segmentally arranged paired tubules called_____

- a) Neurodia
- b) Nephridia**
- c) Nervodia
- d) None

Explanation

In **leech**, excretion takes place by segmentally arranged paired tubules called **nephridia**. There are 17 pairs of nephridia which open out by nephridiopores from 6th to 22nd segments.

35. Which of the following statement is correct?

- 1) Leech is hermaphrodite
- 2) They have male and female reproductive organs are present in the same animal
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Leech is **hermaphrodite** because **both the male and female reproductive organs are present** in the same animal.

36. How many pair of testes are there in leech?

- a) 7
- b) 11
- c) 13
- d) 14

Explanation

There are **eleven pairs of testes** in leech, one pair in each segment from 12 to 22 segments. They are in the form of spherical sacs called testes sacs.

37. Which of the following are contained in Female Reproductive System of leech?

- 1) Ovaries
- 2) Oviducts
- 3) Epididymis
- 4) Vagina
 - a) 1, 2, 4
 - b) 1, 3, 4
 - c) 2, 3, 4
 - d) All the above

Explanation

Female Reproductive System consists of **ovaries, oviducts and vagina**. There is a single pair of ovary in the 11th segment on the ventral side. Each ovary is a coiled ribbon-shaped structure.

38. In leech, vagina which lies mid-ventrally in the posterior part of the_____ segment

- a) 11th
- b) 12th
- c) 19th
- d) 21st

Explanation

The ova are budded off from the ovary. From each ovary runs a short oviduct. The oviducts of the two sides joins together, to form a common oviduct. **The common oviduct opens into a pear-shaped vagina which lies mid-ventrally in the posterior part of the 11th segment.**

39. Cocoon is also known as egg case which is formed around_____ segments

- 1) 3rd
 - 2) 9th
 - 3) 10th
 - 4) 11th
- a) 1, 2
 - b) 2, 3, 4
 - c) 2, 3
 - d) 1, 3, 4

Explanation

Internal fertilization takes place. This is followed by cocoon formation. **Cocoon is also known as egg case which is formed around the 9th, 10th and 11th segments.**

40. How many embryos are found in cocoon?

- a) 1 to 10
- b) 12 to 18
- c) 1 to 24
- d) 15 to 25

Explanation

Development is direct and proceeds in cocoon which contain **one to 24 embryos**. Young leech resembling the adult emerges.

41. Which of the following statement is incorrect?

- 1) Leeches are effective in increasing blood circulation and breaking up blood clots
- 2) Biochemical substances derived from leech saliva are used for preparation of pharmaceutical drugs that can treat hypertension

- a) 1 alone
- b) 2 alone
- c) 1, 2
- d) **None**

Explanation

Leeches are effective in increasing blood circulation and breaking up blood clots. It is surprising that they can be used to treat cardiovascular diseases. Biochemical substances derived from leech saliva are used for preparation of pharmaceutical drugs that can treat hypertension.

42. Match the following of Rabbit correctly:

- | | |
|------------|----------------|
| I. Phylum | 1. Oryctolagus |
| II. Order | 2. Chordata |
| III. Class | 3. Mammalia |
| IV. Genus | 4. Lagomorpha |

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

Explanation

Taxonomic Position	
Phylum	Chordata
Sub-phylum	Vertebrata
Class	Mammalia
Order	Lagomorpha
Genus	<i>Oryctolagus</i>
Species	<i>cuniculus</i>

43. The pygmy rabbit was listed as a threatened species in Washington in_____

- a) 1991
- b) **1990**
- c) 1970
- d) 1979

Explanation

The **pygmy rabbit was listed as a threatened species in Washington in 1990**, because of decline in its population size and distribution due to habitat loss. In March 2003, the Columbia Basin Pygmy Rabbit was federally listed as an endangered species.

44. Which of the following statement is correct about Rabbit?

- 1) It has an elongated and cylindrical body
- 2) They grow about 45 cm in length and weigh about 2.25 kg as adult.
- 3) Body is covered with fur which serves to keep it warm.
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Rabbit has an **elongated and cylindrical body**. Males and females are of the same size. They grow **about 45 cm in length and weigh about 2.25 kg as adult**. The colour varies from white to black and white. Body is covered with fur which serves to keep it warm.

45. Which of the following statement rabbit is correct?

- 1) The body of the rabbit is divisible into the head, neck, trunk and tail
- 2) Head is ovoid, flattened and bears a truncate snout
- 3) The mouth is a longitudinal slit-like bounded by upper lip and lower lip.
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

The body of the rabbit is divisible into the head, neck, trunk and tail. Head is ovoid, flattened and bears a truncate snout. It contains mouth, external nares, eyes, ears and vibrissae. The mouth is a **transverse slit-like bounded by upper lip and lower lip**. Just above the mouth are two oblique openings called nostrils. From each side of the upper lip tactile hairs or vibrissae (whiskers) project outwards.

46. The trunk of rabbit is divisible into an anterior _____ and a posterior_____

- a) **Thorax, Abdomen**
- b) Abdomen, Thorax
- c) Trachea, Thorax
- d) Thorax, Abdomen

Explanation

The trunk of rabbit is divisible into an **anterior thorax and a posterior abdomen**. In females, four or five teats or nipples are present on the ventral surface between the thorax and abdomen.

47. The trunk of rabbit bears two pairs of_____ limbs

- a) **Pentadactyl**
- b) Pectadactyl
- c) Hexactyl
- d) Tridactyl

Explanation

The trunk of rabbit bears two pairs of **pentadactyl limbs**. The forelimbs are shorter than the hind limbs. All the digits bear claws.

48. The anus of the rabbit is present at the_____ end of the abdomen at the base of tail

- a) Anterior
- b) **Posterior**
- c) Dorsal
- d) Ventral

Explanation

The **anus of the rabbit** is present at the **posterior end of the abdomen** at the base of tail. In females on the ventral side a slit like vulva is present. In males, penis is present in the ventral side of anus. The male has a pair of testes enclosed by scrotal sacs.

49. Which of the following are present in rabbit?

- a) Sweat gland
- b) Sebaceous gland
- c) Mammary glands
- d) **All the above**

Explanation

The integument forms the outer covering of the body. The structures of rabbit which are derived from it are hairs, claws, nails and glands like **sweat glands, sebaceous glands and mammary glands**.

50. Which of the following statement is correct?

- 1) Mammary glands are modified glands of the skin.
 - 2) They secrete milk and help in nourishing young ones.
 - 3) The sweat glands and sebaceous glands embedded in the skin regulate the body temperature
- a) 1, 2
 - b) 1, 3

- c) 2, 3
- d) **All the above**

Explanation

Mammary glands are modified glands of the skin. They secrete milk and help in nourishing young ones. The sweat glands and sebaceous glands embedded in the skin regulate the body temperature.

51. Which of the following statement is correct?

- 1) The body of rabbit is divisible into thoracic cavity and abdominal cavity
 - 2) Lungs and heart lie in the thoracic cavity
 - 3) Abdominal cavity encloses digestive and urinogenital system.
- a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) **All the above**

Explanation

Rabbit is a coelomate animal. The body is divisible into **thoracic cavity and abdominal cavity** separated by transverse partition called diaphragm. **Lungs and heart lie in the thoracic cavity**, whereas, **abdominal cavity encloses digestive and urinogenital system**.

52. _____ is the characteristic feature of mammals

- a) Arms
- b) Anus
- c) **Diaphragm**
- d) Bones

Explanation

Diaphragm is the characteristic feature of mammals. Breathing movements are brought by the movement of the diaphragm.

53. Which of the following is not included in alimentary canal?

- a) Pharynx
- b) Oesophagus
- c) **Larynx**
- d) Caecum

Explanation

The digestive system includes the alimentary canal and the associated digestive glands. The **alimentary canal consists of mouth, buccal cavity, pharynx, oesophagus, stomach, small intestine, caecum, large intestine and anus.**

54. Which of the following statement is correct?

- 1) Mouth is a longitudinal slit bounded by upper and lower lips
- 2) The floor of the buccal cavity is occupied by a muscular tongue.
- 3) Jaws bear teeth.
 - a) 1, 2
 - b) 1, 3
 - c) 2, 3
 - d) All the above

Explanation

Mouth is a transverse slit bounded by upper and lower lips. It leads into the buccal cavity. The floor of the buccal cavity is occupied by a muscular tongue. Jaws bear teeth.

55. In rabbit, Oesophagus opens into the stomach followed by_____

- a) Large intestine
- b) Caecum
- c) Anus
- d) **Small intestine**

Explanation

Oesophagus opens into the stomach followed by small intestine. Caecum is a thin-walled sac present at the junction of small intestine and large intestine. It contains bacteria that helps in digestion of cellulose. The small intestine opens into the large intestine which has colon and rectum. The rectum finally opens outside by the anus.

56. Which of the following glands are included in digestive glands?

- a) Liver
- b) Pancreas
- c) Salivary glands
- d) **All the above**

Explanation

The digestive glands are **salivary glands, gastric glands, liver, pancreas and intestinal glands.** The secretions of digestive glands help in digestion of food in the alimentary canal.

57. Which of the following statement is correct?

- 1) Teeth are hard bone-like structures used to cut, tear and grind the food materials
- 2) The existence of two sets of teeth in the life of an animal is called diphyodont dentition
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2
 - d) None

Explanation

Teeth are hard bone-like structures used to cut, tear and grind the food materials. The rabbit has two sets of teeth. The **existence of two sets of teeth in the life of an animal is called diphyodont dentition**. The two types of teeth are milk teeth (young ones) and permanent teeth (in adults).

58. How many kinds of teeth are there in mammal?

- a) 3
- b) 4
- c) 6
- d) 2

Explanation

In rabbit the teeth are of different types. Hence, the dentition is called heterodont. There are **four kinds of teeth in mammals** viz. the incisors (I), canines (C), premolars (PM) and molars (M). This is expressed in the form of a dental formula.

59. The gap between the incisors and premolar is called_____

- a) Precisors
- b) Molars
- c) Canines
- d) Diastema

Explanation

Canines are absent in rabbit. The **gap between the incisors and premolar is called diastema**. It helps in mastication and chewing of food in herbivorous animals.

60. Which of the following statement is correct?

- 1) Respiration takes place by a pair of lungs, which are light spongy tissues enclosed in the thoracic cavity
- 2) On the lower side of the thoracic cavity is the dome shaped diaphragm.
 - a) 1 alone
 - b) 2 alone
 - c) 1, 2

d) None

Explanation

Respiration takes place by a pair of lungs, which are light spongy tissues enclosed in the thoracic cavity. The thoracic cavity is bound dorsally by the vertebral column and ventrally by the sternum, laterally by the ribs. **On the lower side of the thoracic cavity is the dome shaped diaphragm.**

61. Each lung is enclosed by a double membranous_____

- a) Alveoli
- b) Pleura**
- c) Neuron
- d) None

Explanation

Each lung is enclosed by a double membranous pleura. Atmospheric air passes through the external nostril and nasal passages into the pharynx.

62. _____ is known as voice box

- a) Pharynx
- b) Larynx**
- c) Trachea
- d) Buccal cavity

Explanation

The anterior part of the wind pipe is enlarged to form the **larynx or voice box** with its wall supported by four cartilaginous plates. Inside the larynx lies the vocal cord and its vibrations result in the production of sound. The larynx leads into trachea or wind pipe.

63. _____ prevents the entry of food into the trachea through the glottis

- a) Larynx
- b) Trachea
- c) Bronchi
- d) Epiglottis**

Explanation

Tracheal walls are supported by rings of cartilage which help in the free passage of air. The **epiglottis prevents the entry of food into the trachea through the glottis.**

64. Inspiration is an _____ process

- a) **Active**
- b) Passive
- c) Both a and b
- d) None

Explanation

The respiratory events consist of inspiration (breathing in) and expiration (breathing out) allowing exchange of gases (oxygen and carbon dioxide). **Inspiration is an active process** while expiration is a passive process.

65. The heart is pear shaped and lies in the thoracic cavity in between_____

- a) Kidneys
- b) **Lungs**
- c) Pancreas
- d) None

Explanation

The circulatory system is formed of blood, blood vessels and heart. The **heart is pear shaped** and lies in the **thoracic cavity in between the lungs**. It is enclosed by pericardium, a double layered membrane.

66. The heart of rabbit is _____ chambered

- a) Three
- b) **Four**
- c) Two
- d) Five

Explanation

The **heart of rabbit is four chambered** with two auricles and two ventricles. The right and left auricles are separated by inter-auricular septum, similarly right and left ventricles are separated by interventricular septum.

67. The right auricle opens into the right ventricle by right auriculoventricular aperture, guarded by_____

- a) Bicuspid valve
- b) **Tricuspid valve**
- c) Pentacuspid valve
- d) Monocuspid valve

Explanation

The **right auricle opens into the right ventricle by right auriculoventricular aperture, guarded by a tricuspid valve**. The left auricle opens into the left ventricle by left auriculoventricular aperture guarded by a bicuspid valve or mitral valve.

68. The right auricle receives deoxygenated blood through_____

- a) Arteries
- b) Veins**
- c) Both a and b
- d) None

Explanation

The right auricle receives deoxygenated blood through two precaval (superior vena cava) and one post-caval (inferior vena cava) veins from all parts of the body. The left auricle receives oxygenated blood from the pulmonary veins from the lungs.

69. _____ carries the deoxygenated blood to the lungs

- a) Aorta**
- b) Pulmonary trunk
- c) Superior vena cava
- d) Inferior vena cava

Explanation

From the **right ventricle arises pulmonary trunk which carries the deoxygenated blood to the lungs and from the left ventricle arises the systemic arch (aorta)** which supplies oxygenated blood to all parts of the body.

70. PNS is formed of_____ pairs of cranial nerves

- a) 37
- b) 12**
- c) 18
- d) 24

Explanation

The nervous system in rabbit is formed of the central nervous system (CNS), peripheral nervous system (PNS) and autonomic nervous system (ANS). CNS consists of brain and spinal cord. **PNS is formed of 12 pairs of cranial nerves** and 37 pairs of spinal nerves. ANS comprises sympathetic and parasympathetic nerves

71. Brain is situated in the cranial cavity and covered by_____ membranes

- a) 3
- b) 5
- c) 2
- d) 6

Explanation

Brain is situated in the cranial cavity and covered by three membranes called an outer duramater, an inner pia mater and a middle arachnoid membrane.

72. Match the following

- | | |
|----------------|--------------------|
| I. Forebrain | 1. rhombencephalon |
| II. Midbrain | 2. prosencephalon |
| III. Hindbrain | 3. Mesencephalon |
- a) 2, 3, 1
 - b) 1, 2, 3
 - c) 3, 1, 2
 - d) 1, 3, 2

Explanation

The brain is divided into **forebrain (prosencephalon)**, **midbrain (mesencephalon)** and **hindbrain (rhombencephalon)**.

73. _____ consists of a pair of olfactory lobes, cerebral hemispheres and diencephalon

- a) **Forebrain**
- b) Midbrain
- c) Hindbrain
- d) All the above

Explanation

Forebrain consists of a **pair of olfactory lobes, cerebral hemispheres and diencephalon**. The right and left cerebral hemispheres are connected by transverse band of nerve tissue called corpus callosum.

74. _____ includes the optic lobes.

- a) Forebrain
- b) **Midbrain**
- c) Hindbrain
- d) All the above

Explanation

The **midbrain includes the optic lobes**. The hindbrain consists of the cerebellum, pons varolii and medulla oblongata. You will study about the details of mammalian brain in the chapter on nervous system.

75. Each kidney is made of several_____

- a) Alveoli
- b) Neurons
- c) **Nephrons**
- d) None

Explanation

Each kidney is made of several nephrons. It separates the nitrogenous wastes from blood and excretes it in the form of urea.

76. What is the colour of kidney in rabbit?

- a) Red
- b) Pale red
- c) **Dark red**
- d) Brown

Explanation

Kidneys in rabbit are dark red, bean shaped organs situated in the abdominal cavity. From each kidney arises the ureters which open posteriorly into the urinary bladder and leads into a thick-walled muscular duct called urethra.

77. Which of the following statement is correct?

- 1) Sexual dimorphism is exhibited in rabbits.
 - 2) The male and female sexes are separate and are morphologically different.
- a) 1 alone
 - b) 2 alone
 - c) **1, 2**
 - d) None

Explanation

Sexual **dimorphism** is exhibited in rabbits. The male and female sexes are separate and are morphologically different.

78. How many accessory glands are there in male rabbit?

- a) 2
- b) 4

- c) 3
- d) 5

Explanation

There are **three accessory glands in male rabbit namely prostate gland, cowper's gland and perineal gland**. Their secretions are involved in reproduction

79. The anterior part of the oviduct is_____

- a) Vestibule
- b) Vagina
- c) **Uterus**
- d) Vulva

Explanation

The **anterior part of the oviduct is the fallopian tube. It leads into a wider tube called the uterus.** The uterus join together to form a median tube called vagina. The common tube is formed by the union of urinary bladder and the vagina and is called the urinogenital canal or vestibule

80. How many pair of accessory glands are there in female rabbit?

- a) **2**
- b) 5
- c) 4
- d) 3

Explanation

A **pair of Cowper's gland and perineal gland** are the accessory glands present in the **female reproductive system**. The female reproductive system of rabbit consists of a pair of ovaries which are small ovoid structures.