BIOLOGY

NEET & AIIMS

STRUCTURAL ORGANISATION IN ANIMALS (CONTD . . .)

(ANIMAL MORPHOLOGY)

Example

1. Earthworms belong to which phylum of invertebrates?

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2. Name the segment in which mouth is located.

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3. Name the part of alimentary canal where food is grinded or pulverised.

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4. How is humic acid present in soil neutralised in earthworm stomach?

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5. How many pairs of heart are present in the earthworm?

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6. What is closed circulatory system?

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7. Which organ is responsible for respiration in earthworm?

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8. How gaseous exchange takes place in earthworm?

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9. Which organ is responsible for eliminating wastes from earthworm's body?

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10. Where are septal nephridia found in the body of earthworm?

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11. Give the names of two main parts comprising nervous system of earthworms?

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12. Name the receptors which are sensitive to touch.

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13. Where does fertlisation take place in earthworms?

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14. Where does development of worm embryos take place?

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15. How is cocoon produced in the earthworm?

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16. Which part of cockroach helps in detecting the presence of food at a place?

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17. Which type of mouth parts are found in cockroach?

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18. Write the function of crop.

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19. Where are the heptaic caecase located in the alimentary canal of cockroach?

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20. Which type of blood vascular system is found in cockroach?

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21. What is haemocoel?

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22. Name various parts of respiratory system in cockroach.

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23. Where does gaseous exchange takes place in cockroach?

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24. Name the various excretory organs present in cockroach.

Watch Video Solution

Watch Video Solution

25. What are nephrocytes?

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26. Name the various parts of the nervous system in cockroach.

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27. How many hexagonal ommatidia are present in each compound eye of cockroach?

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28. How is 7^{th} sternum modified in female cockroach?

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29. What are phallomeres?

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30. What do you mean by peurometabolous type of development?

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31. What do you mean by aestivation.

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32. Write any one function of skin in frogs.

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33. Write a function of hindlimbs in frogs.

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34. Name the gland which helps in maintaning skin in moist condition.

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35. Name the various parts of alimentary canal in frog.

Watch Video Solution

36. Write the function of liver in frog's digestive system.

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37. Name the types of respiration which occur in frogs.

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38. Which type of respiration occurs in frog if it is (i) on land or (ii) in water?

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39. How frog respires under water?

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40. Which type of blood vascular system is found in frog?

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41. What is sinus venosus?

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42. Name the various parts of excretory system in frog.

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43. Why are ureters in frog also known as urinogenital ducts?

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44. Which endocrine gland is associated with the brain in frogs?

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45. Which hormone is required for metamorphosis in frogs?

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46. Name the two parts of central nervous system in frog.

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47. Which part of nervous system in frogs is mainly concerned with reflex actions?

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48. Where tests located in male frog?

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49. Which kind of fertilisation occurs in frog?

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Try Yourself

1. Morphology is the study of

A. Externally visible features

B. External appearance of the organ

C. Body wall

D. Both 1 and 2

Answer: D

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2. Earthworms do not possess

A. mouth

B. anus

C. distinct head

D. genital pore

Answer: C

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3. The body of earthworm is divided into similar segments called

A. peristomium

B. clitellum

C. setae

D. metameres

Answer: D

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4. In earthworm, 14^{th} to 16^{th} segments are covered by a prominent dark band of glandular tissue called

A. Typhlosole

B. Gizzard

C. Prostomium

D. Clitellum

Answer: D

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5. Alimentary canal of earthworm is

A. Incomplete and straight

B. complete but coiled

C. complete and straight

D. Incomplete and highly branched

Answer: C

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6. The intestine gives off a pair of short conical outgrowths known as

A. setae

B. calciferous glands

C. gizzard

D. Intestinal caeca

Answer: D

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7. Characteristic feature of intestine is the presence of

A. Anus

B. Gizzard

C. Typhlosole

D. Muscular pharynx

Answer: C

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8. A pair of intestinal caecae in the alimentary canal of earthworm arise from

A. 16th segment

B. 26th segment

C. 36th segment

D. 6th segment

Answer: B

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9. Blood corpuscles are produced by

A. Lateral heart

B. Blood glands

C. Anterior loops

D. Blood vessels

Answer: B

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10. Largest blood vessel of earthworm's body is

A. Ventral blood vessel

B. Dorsal blood vessel

C. Sub-neural blood vessel

D. Lateral oesophageal vessel

Answer: B

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11. The colour of blood in earthworm is

A. Blue

B. Red

C. Brown

D. Colourless

Answer: B

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12. Lateral hearts are present in

A. 7th and 9th segments

B. 12th and 13th segments

C. 8th and 10th segments

D. 4th and 5th segments.

Answer: A

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13. Respiration in earthworm occurs by

A. Lungs

B. Blood vessels

C. Body surfaces

D. Typhlosole

Answer: C

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14. The oxygen carrier in blood of earthworm is

A. Absent

B. Leucocytes

C. Blood cells

D. haemoglobin

Answer: D

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15. In earthworm, haemoglobin is present in the dissolved state in

A. Blood corpuscles

B. Both blood corpuscles and plasma

C. Plasma

D. Absent

Answer: C

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16. Blood vascular system of earthworm is of

A. Open type

B. Closed type

C. Without heart

D. Without capillaries.

Answer: B

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17. Integumentary nephridia are found in

A. 4th, 5th and 6th segments only

B. inner surface of body wall

C. first and second segments only

D. Intersegmental septum

Answer: B

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18. Extraction of waste material from the blood takes place in

A. Funnel-shaped part of nephridium

B. Tubular part of nephridium

C. Nephridiopore

D. Coelomic chamber

Answer: B

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19. Waste material is discharged to outer body surface, directly by

A. Pharygeal nephridia

B. Septal nephridia

C. Intergumentary nephridia

D. All of these

Answer: C

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20. The nephridia which are found in region of intestine are

A. Integumentary nephridia

B. Phryngeal nephridia

C. Septal nephridia

D. Both 1 and 3

Answer: D

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21. Ventral nerve cord in cockroaches arises from

A. Supra-pharygeal ganglion

B. Circum pharyngeal connectives

C. Sub-pharyngeal ganglion

D. All of these

Answer: C

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22. Earthworm have

A. Well-developed special sense organs

B. eyes and ears

C. receptor cells only

D. complex sense organs.

Answer: C

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23. Intensity and duration of light in earthworm's body is perceived by

A. Photoreceptors

B. Epidermal receptors

C. Buccal receptors

D. Eyes

Answer: A

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24. Earthworm is

A. Monoecious

B. Protandrous

C. Unisexual

D. Both 1 and 2

Answer: D

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25. Which of the following does not occur in earthworm?

A. Self-fertilisation

B. Cross-fertilisation

C. Copulation

D. Cocoon formation

Answer: A

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26. In Earthworm, testes occur in segments

A. 10th and 11th segments

B. 5th and 6th segment

C. 12th and 13th segment

D. 8th and 9th segment

Answer: A

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27. In earthworm, the sperms mature in

A. Testis sacs

B. testes

C. seminal vesicle

D. vasa deferentia

Answer: C

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28. Cockroach belong's to phylum :-

A. Annelida

B. Arthropoda

C. Platyhelminthes

D. Porifera

Answer: B

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29. Which of the following is cockroach?

A. Pheretima posthuma

B. Rana tigrina

C. Periplaneta americana

D. Lumbricus

Answer: C

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30. Dorsal sclerite in cockroach in known as

A. Sternum

B. Pleurite

C. Tergum

D. More than one option is correct

Answer: C

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31. Head of cockraoch is

A. Triangular

B. Hypognathous

C. Formed by fusion of six segments

D. All of these

Answer: D

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32. How many hepatic caecae are present at the junction foregus and midgut in alimentary canal of cockroach?

A. $4 - 6$

B. $2 - 4$

C. $6 - 8$

D. $10 - 12$

Answer: C

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33. In cockroach, oesophagus continues into the

A. Gizzard

B. Crop

C. Lleum

D. Mesenteron

Answer: B

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34. In cockroach, food is crusted into fine particles inside

A. Midgut

B. Colon

C. gizzard

D. Pharynx

Answer: C

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35. In cockroach, absorption of digested food occurs inside the

A. Gizzard

B. crop

C. midgut

D. hindgut

Answer: C

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36. In cockroach, heart comprises of

A. 4 chambers

B. 2 chambers

C. 8 chambers

D. 13 chambers

Answer: D

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37. Haemolymph in cockroach is devoid of

A. plasma

B. haemocytes

C. amino acids

D. respiratory pigment

Answer: D

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38. The heart receives blood from the sinuses through

A. Haemocoel

B. Alary muscles

C. Ostia

D. Aorta

Answer: C

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39. Alary muscles play an important role in

A. Circulation of blood

B. Respiration

C. Body movement

D. Peristaisis

Answer: A

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40. In cockroach, air from atmosphere enters by

A. Trachea

B. Tracheoles

C. Spiracles

D. Chitin

Answer: C

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41. How many paris of spiracles are found in cockroach?

A. 10

B. 20

C. 5

D. 25

Answer: A

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42. The process through which air in tracheoles and dissolved gases I blood are exchanged is

A. Osmosis

B. Diffusion

C. Active transport

D. Facilitated diffusion.

Answer: B

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43. Opening of spiraclees is regulated by the

A. Ostia

B. Bristles

C. Sphincters

D. Valves

Answer: C

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44. Malpighian tubules are present at the junction of

A. Foregut and midgut

B. Midgut and hindgut

C. Crop and gizzard

D. lleum and colon

Answer: B

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45. Cockroach is

A. ammonotelic

B. uricotelic

C. ureotelic

D. All of these

Answer: B

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46. The central nervous system of cockroach includes

A. Brain and ganglionated dorsal nerve cord

B. Brain and ganglionated ventral nerve cord

C. Brain and hollow nerve cord

D. Dorsal solid nerve cord only

Answer: B

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47. Brain of cockroach supplies nerves to

A. Antennae

B. Compound eyes

C. Anal cerci

D. Both 1 and 2

Answer: D

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48. Sense organs of cockroach include

A. Compound eyes

B. Johnston's organ

C. osphradium

D. spiracles

Answer: A

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49. Vision of Cockroach is

A. Mosaic

B. Having more resolution

C. Diurnal

D. Superposition.

Answer: A

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50. Female cockroack lacks___

A. anal cerci

B. Genital pouch

C. wings

D. anal styles

Answer: D

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51. In male cockroach, sperms are stored in part of reproductive system

A. Gollaterial glands

B. Mushroom glands

C. Genital chamber

D. Seminal vesicles

Answer: D

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52. Rana tigrina belongs to the phylum

A. Annelida

B. Arthropoda

C. Mollusca

D. Chordata

Answer: D

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53. The forelimb of mole frog is distinct from female frog due to the presence of

A. Forearm

B. Thumb

C. Web

D. Copulatory pad

Answer: D

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54. Frogs are

A. herbivorous

B. Carnivorous

C. Producers

D. Decomposers

Answer: B

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55. The third eyelid in frog is called

A. Pineal eye

B. Nictitating membrane

C. Lower eyelid

D. Upper eyelid

Answer: B

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56. The length of alimentary canal in adult frog is

A. Longer as it is a carnivore

B. longer as it is herbivore

C. shorter as it is a carnivore

D. shorter as it is a herbivore

Answer: C

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57. Alimentary canal in frog terminates into

A. Rectum

B. Cloaca

C. Ileum

D. Duodenum

Answer: B

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58. The liquefied semi-digested acidic food is known as

A. Bile

B. Bolus

C. Chyme

D. Faeces

Answer: C

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59. Pancreatic juice helps in digestion of

A. Fats

B. Carbohydrates

C. Nucleic acid

D. All of these

Answer: D

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60. Skin helps in exchange of gases because

A. It is kept moist by the mucus and water

B. It is thin

C. It is richly supplied with blood

D. All of these

Answer: D

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61. Which of the following acts as an respiratory organ in frog on land?

A. Skin

B. Buccal cavity

C. Lungs

D. All of these

Answer: D

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62. Lungs are

A. Thin-walled and elastic

B. Thick-walled and inelastic

C. Thick-walled and elastic

D. Thin-walled and inelastic.

Answer: A

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63. Air enters into the lungs through the

A. Skin

B. Buccal cavity

C. Mouth

D. cloaca

Answer: B

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64. Hearth of frog is

A. two-chambered

B. three-chambered

C. Four-chambered

D. Six-chambered

Answer: B

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65. Pericardium is a

A. Thin-transparent and two-layered sac

B. Thick, cuticular and two-layered sac

C. Thick, transparent and three-layered sac

D. Thin, opaque and four-layers sac.

Answer: A

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66. The flow of blood in one direction in hearth of frog is ensured by the presence of

A. Pericardium

B. Ostia

C. Valves

D. Sinus venosus

Answer: C

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67. Truncus arteriousus is present in___side of heart of frog.

A. Dorsal

B. Lateral

C. Ventral

D. Dorso-lateral

Answer: C

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68. Frog mainly excretes

A. Ammonia

B. Uric acid

C. Citrulline

D. Urea

Answer: D

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69. Kidneys in adult frog are

A. Pronephric

B. Metanephric

C. Mesonephric

D. All of these

Answer: C

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70. Ureters in frog open into

A. Kidneys

B. Cloaca

C. Urinary bladder

D. Anus

Answer: B

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71. In frogs, urine is temporarily stored in

A. Kidneys

B. Urinary bladder

C. Ureters

D. Cloaca

Answer: B

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72. Autonomic nervous system cosists of

A. Brain and spinal cord

B. Cranial and spinal nerves

C. Sympathetic and parasympathetic nervous system

D. Brain and cranial nerves

Answer: C

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73. Spinal cord extends from medulla oblongata through

A. Cerebellum

B. Foremen magnum

C. Cranial nerves

D. Diencephalon

Answer: B

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74. The number of cranial nerves found in frogs are

A. 10 pairs

B. 20 pairs

C. 5 pairs

D. 12 pairs

Answer: A

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75. In frogs, heart-beat is controlled by

A. Cerebellum

B. Spinal cord

C. Medulla oblongata

D. Mid-brain.

Answer: C

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76. Vasa efferentia in male frog opens into

A. Vas deferens

B. Bidder's canal

C. Cloaca

D. Urinogenital duct

Answer: B

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77. Urinogenital duct receives

A. sperms

B. urine

C. faecal matter

D. both 1 and 2

Answer: D

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78. A mature female from can lay

A. 2500 to 3000 ova

B. 25 to 30 ova

C. 250 to 300 ova

D. 125 to 130 ova

Answer: A

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79. Fertilised eggs of frog develop into

A. Adult frogs

B. Tadpoles

C. Nymph

D. Both 1 and 2

Answer: B

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Exercise

1. All the following statemnts are correct about the reproductive system of earthwrom, but one is wrong. Which one is wrong?

A. There are two pairs of testes one pair in the 10th and one pair of 11th segment

B. One pair of ovaries attached at the inter-segmental septum of the 12th and 13th segment

C. Two pairs of accessory glands one pair each in 18th and 19th segments

D. Four pairs of spermatheca are located in 6th-9th segments, one pair in each segments.

Answer: C

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2. The main function of clitellum is

A. cocoon formation

B. locomotion

C. excretion

D. copulation

Answer: A

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3. Given below are four statements A to D, select the option in which two statements are correct?

A: In earthworms deelopment is indirect and the larva is trochophore larva.

B: A mutual exchange of sperms occurs between two worms during mating.

C: Fertilisation is internal occurs within the cocoon deposited in soil

D: About 3 weeks are required for development, each cocoon produces two to twenty baby worms with an average of four.

A. A & B

B. B & C

C. B & D

D. C & D

Answer: C

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4. On the basis of nitrogenous waste, the earthworm is

A. Ureotelic

B. ammonotelic

C. uricotelic

D. aminotelic

Answer: A

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5. Earthworm has a central nerve cord which is

A. single

B. ventral and solid

C. dorsal and hollow

D. double and dorsal

Answer: B

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6. Which of the following statement is incorrect about the circulatory system of earthworm?

A. It exhibits a closed type of blood vascular system

B. Blood glands are present in 4th, 5th, and 6th segments

C. Haemoglobin is the respiratory pigment which is dissolve in plamsa

D. Ventral vessel is the largest distributing vessel in which the blood flows from posterior to anterior side.

Answer: D

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7. Which of the following is not a correct match of the part of alimentary canal in earthworm, its location and function?

A.

Part of Alimentary canal	Location	Function
Stomach	9-14 segments	Calciferous glands present

B.

Part of Alimentary canal	Location	Function
Typhlosole	26-95 segments	increases the effective ar

C.

Part of Alimentary canal	Location	Function
Gizzard	8-9 segments	Helps in grinding soil parti

D.

Part of Alimentary canal	Location	Function
Intestinal caecae	15-26 segments	Produce proteolytic enzy

Answer: D

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8. Mark the incorrect statement about the body wal of earthworm

A. Body wall is covered externally by a thin non-cellular cuticle

B. Below the cuticle epidermis is present which is made up of compound columnar epithelium

C. The epidermis contains secretory gland cells which produce mucus

D. Both circular and longitudinal muscles are present and an innermost lining of intersegmental grooves

Answer: B

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9. In earthworm spermathecal sperture are sitated on the ventro-lateral sides of intersegmental grooves of

A. 4th of 9th segments

B. $\frac{5}{6}, \frac{6}{7}, \frac{7}{8}, \frac{8}{9}$

C. 6th, 7th, 8th and 9th segments

D. both 1 and 2 are correct

Answer: B

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10. Which of the following is mismatched?

A. Clitellum - 14-16th segments in mature earthworm

B. Female genital aperture-Mid-ventral line of 14th segment

C. Pair of male genital pore- Dorso- lateral sides of the 18th segments

D. Setae- segments

Answer: C

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11. Which of the following structure is present only in male cockroach?

A. Anal cerci, pair of jointed filamentous structure which arise from 10^{th} segment

B. a pair of short thread like anal styles

C. Arthrodial membrane

D. Chitinous exoskeleton

Answer: B

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12. In cockroach the wings that help in flying are

A. Fore wings

B. Mesothoracic wings

C. The hind wings which are transparent and memberanous

D. Tegmina

Answer: C

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13. Mark the false statement w.r.t. cockroach

A. Excretion is performed by Malpighian tubules which occur at the junction of midgut and hindgut

B. Cockroach is uricotelic

C. Blood vascular system of cockroach is closed type

D. Respiratory system consists of a network of trachea, that open through 10 pairs of spiracles

Answer: C

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14. The development of Periplaneta americana is

A. Holometabolous

B. Paurometabolous

C. Hemimetabolous

D. Ametabolous

Answer: B

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15. Conglobate glands are also called

A. Phallic glands

B. Mushroom glands

C. Collaterial glands

D. Utricular glands

Answer: A

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16. In cockroach, the ootheca is formed by the secretion of

A. Collaterial glands

B. Phallic glands

C. Conglobate glands

D. Muschroom glands

Answer: A

Watch Video Solution

17. Mark the false statement w.r.t the reproductive system of female cockroach (Periplaneta americana)

A. Pair of spermatheca present in the 6th segment

B. Two large ovaries lying laterally in the 2nd-6th abdominal segments

C. Each ootheca contains 9-10 eggs

D. The nymph grows by moulting about 13 times to reach the adult form

Answer: C

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18. In Cockroach, conglobate gland occurs in

A. Females

B. Males

C. Nymph

D. Ootheca

Answer: B

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19. Mark the false statement regarding the heart of cockroach

A. heart is present along the mid-dorsal line of thorax and abdomen

B. it is 13-chambered

C. it is neurogenic

D. it is myogenic

Answer: D

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20. The longest bone of leg of cockroach is

A. Tibia

B. Trochanter

C. Femur

D. Tarsus

Answer: A

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21. All the statement are correct about the external morphology of frog but one is wrong. Which one is wrong?

A. Body is divisible into head and trunk. A neck and tail are absent

B. In the hind limbs five digits are present. They are webbed and help in swimming

C. Male frogs have sound producing vocal sacs and a copulatory pad on the first digit of the forelimbs

D. The forelimbs have four webbed digits.

Answer: D

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22. In frog, jelly around the eggs is deposited in

A. In water after fertlisation

B. In water during fertilisation

C. In oviduct

D. In the ovary

Answer: C

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23. The length of alimentary canal in adult frog is

A. Long because frogs are herbivorous

B. Short because frogs are herbivorous

C. Long because frogs are carbnivorous

D. Short because frogs are carnivorous

Answer: D

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24. On land the respiratory organs of frogs are

A. Buccal cavity

B. Skin

C. Lungs

D. All of these

Answer: D

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25. Which is the triangular structural associated with heart of frog present on dorsal side and receives the blood through major veins called vena cava?

A. Conus arteriosus

B. Sinus venosus

C. Right atrium

D. Ventricle

Answer: B

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26. Which of the following is mismatched w.r.t. rana tigrina?

A. Hepatic portal system : Special venous connection between liver and intestine

B. Renal portal system : Special venous connection between kidneys and lower parts of the body

C. RBCs : Oval and nucleated

D. Lymph : Has proteins and RBCs

Answer: D

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27. Mark the false statement

A. Frog is a ureotelic animal

B. There are ten pairs of cranial nerves arising from brain

C. Forebrain includes cerebellum and medulla oblangata

D. Forebrain includes cerebellum and medulla oblongata

Answer: C

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28. Mark the statement which is not true regarding the reproductive system of frog

A. Ovoid testes are adhered to the upper part of kidneys by a double fold of peritoneum called mesorchium

B. Bidder's canal is a longitudinal canal present inside the kidneys carrying sperms

C. Ureters of frog carry both sperms and urine

D. In female frogs are ovaries are both structurally and functionally associated with kidneys.

Answer: D

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29. Mark the false statement w.r.t. frog

A. A mature female frog can lay 2500 to 3000 ova at a time

B. Fertilisation is external and takes place on land

C. Thyroxine hormone is required for metamorphosis of tadpole to form the adult

D. Tadpole larva has a long coiled spring like instestine.

Answer: B

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30. Given below are four statement A to D regarding frog. Choose the option in which all the statement are correct?

A- Salivary galnds are absent in frog, so digestion starts in stomach.

B- The skull of frog is dicondylic

C- Frogs never dring water but absorb it through the skin.

D- Eyes of frogs exhibit binocular vision.

A. A & B only

B. A, B & C

C. C & D only

D. A,B,C & D

Answer: B

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Assignment Section A

1. Earthworms are commonly found in

A. Deep water

B. Saline water

C. Upper layer of the soil

D. Air

Answer: C

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2. Dorsal surface of earthworm is recognised by

A. Genital sapertures

B. setae

C. Dark mid-dorsal line

D. cuticle

Answer: C

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3. In earthworm, small fleshy lobe hung over mouth is known as

A. Peristomium

B. Nephridiospores

C. Clitellum

D. Prostomium

Answer: D

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4. In earthworms, sperms are received during copulation inside special apertures known as

A. Female genital pore

B. Clitellum

C. Spermathecal apertures

D. Coelomic epithelium

Answer: C

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5. Earthworm body is covered externally by a thin, non-cellular layer called

A. Body wall

B. Epidermis

C. Coelomic epithelim

D. Cuticle

Answer: D

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6. Egg case in earthworms is formed by the secretion of a material which is secreted from

A. peristomium

B. Prostomium

C. Clitellar region

D. Post-clitellar region

Answer: C

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7. Buccal cavity in earthwrom extends from

A. 1th to 3rd segment

B. 1st to 7th segment

C. 3rd to 5th segment

D. 5th to 7th segment

Answer: A

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8. In earthworm, the humic acid present in humus part of soil is neutralised in stomach by secretion of

A. Prostate glands

B. Blood glands

C. Calciferous glands

D. Gizzard

Answer: C

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9. The surface area of intestine in earthwrom is greatly increased by the presence of

A. Gizzard

B. Typhlosole

C. Buccal cavity

D. Calciferous glands

Answer: B

Watch Video Solution

10. In earthworm, haemoglobin is present in the dissolved state in

A. Lymph

B. bile

C. Plasma

D. Blood corpuscles

Answer: C

Watch Video Solution

11. In earthworm, blood glands are present in the

A. 4th, 5th and 6th segments only

B. 3rd and 4th segments

C. 5th, 6 th and 7th segments

D. 7th and 9th segments

Answer: A

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12. In earthworm, 10th and 11th segments bear loop-like broad vessel without valves, such vessels are known as

A. Lateral hearts

B. Latero-oesophageal hearts

C. Anterior loops

D. Dorsal-blood vessel

Answer: C

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13. In earthworm, CO_2 diffuses out to surrounding atmosphere through

A. Spiracles

B. Nephridiopores

C. Body surface

D. Setae

Answer: C

Watch Video Solution

14. In earthworm, enrve ring lies in

A. 2nd segment

B. 4th segment

C. 1st segment

D. 7th segment

Answer: B

Watch Video Solution

15. In earthworm, nerve cord runs posteriorly in

A. Mid-dorsal line

B. Mid-ventral line

C. Either dorsal or ventral side

D. Pharyngeal region only

Answer: B

Watch Video Solution

16. Earthworms can feel the vibrations of the gound by presence of

A. Buccal receptors

B. Photoreceptors

C. Epidermal receptors

D. Chemoreceptors

Answer: C

Watch Video Solution

17. Spermatophores are

A. Spermathecae

B. Packets of sperms

C. Spermathecal apertures

D. Egg capsule

Answer: B

Watch Video Solution

18. Exoskeleton of each segment in cockroach consists of

A. Dorsal tergum and a ventral sternum

B. Dorsal sternum and a ventral tergum

C. Sternum only

D. Tergum only

Answer: A

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19. Which of the following mouth part act as tongue in cockroach?

A. Labium

B. Hypopharynx

C. Maxilae

D. Labrum

Answer: B

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20. Hind wings in cockroach arises from

A. Prothorax

B. Mesothorax

C. Metathrorax

D. Pronotum

Answer: C

Watch Video Solution

21. Fore wings in cockroach arises from

A. Hypopharynx

B. Metathorax

C. Mesothorax

D. Prothorax

Answer: C

Watch Video Solution

22. In cockroach, foregut comprises of

A. Pharynx, oesophagus, crop and gizzard

B. Mesenteron, crop and gizzard

C. ileum, colon and rectum

D. Pharynx, oesophagus and rectum

Answer: A

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23. Hepatic caecase are found at the junction of

A. Midgut and hindgut

B. Crop and gizzard

C. Midgut and gizzard

D. Midgut and ileum

Answer: C

Watch Video Solution

24. In cockroach, spiracles are present on the

A. Dorsal side of the body

B. Ventral side of the body

C. Lateral side of the body

D. Anterior region of body

Answer: C

Watch Video Solution

25. Thin tubes that carry oxygen from the air to all the parts in cockroach constitute

A. Tacheal system

B. Haemolymph

C. Lungs

D. Gills

Answer: A

Watch Video Solution

26. Malpighian tubule are lined by

A. Glandular epithelium with ciliated cells

B. Simple epithelium and non-ciliated cells

C. Cutinised epithelium

D. Simple squamous epithelium

Answer: A

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27. In cockroach, eye consists of visual units called

A. Ostia

B. Ommatidia

C. Gonapophyses

D. Spiracles

Answer: B

Watch Video Solution

28. External genitalia in cockroach consist of small irregular chitinous plates known as

A. Seminal vesicles

B. Collaterial gland

C. Phallomeres

D. Abdominal scierites

Answer: C

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29. Frogs can protect itself from enemies by

A. Clawed toes

B. Spiny skin

C. Camouflage

D. Sharp teeth

Answer: C

Watch Video Solution

30. Stomach in frogs contains

A. Calciferous glands

B. Hepatic caecae

C. Collaterial glands

D. Oxyntic and gastric glands

Answer: D

Watch Video Solution

31. In frog, oxygen dissolved in water can be taken by

A. External nares

B. Spiracles

C. Buccal cavity

D. skin

Answer: D

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32. In frog, heart is enclosed within two-layered sac called

A. Mesorchium

B. Pericardium

C. Pleura

D. Conus arteriosus

Answer: B

Watch Video Solution

33. A thin-walled, triangular chamber attached dorsally to heart of frog is known as

A. Truncus arterisus

B. Sinus venosus

C. Atrium

D. Ventricle

Answer: B

Watch Video Solution

34. In frog, deoxygenated blood is received by

A. Sinus venosus

B. Left atrium

C. Ventricle

D. Truncus arteriosus

Answer: A

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35. Renal portal vein carries blood to

A. Liver

B. Kidney

C. Heart directly

D. Brain

Answer: B

Watch Video Solution

36. In frog, RBCs are

A. Nucleated and biconcave

B. Enucleated and biconvex

C. Nucleated and biconvex

D. Non-nucleated and biconcave

Answer: C

Watch Video Solution

37. In frogs, cloaca receives

A. Faecal matter

B. Gametes

C. Urine

D. All of these

Answer: D

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38. The part of frog's brain which is continuous with the spinal cord is

A. Cerebelium

B. Medulla oblongata

C. Mid-brain

D. Diencephalon

Answer: B

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39. Frog's eye are protected under water by the presence of

A. Retina

B. Upper eyelid

C. Nictitating membrane

D. Lower eyelid

Answer: C

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40. In frogs, testes are attached to kidneys by a double fold of peritoneum as

A. Pericardium

B. Mesorchium

C. Urinogenital duct

D. Vasa efferentia

Answer: B

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Assignment Section B

1. Which of the following statements is not correct about earthworm?

A. It shows metamerism, and the number of segments varies from 100-120

B. The first segment at the anterior end of the body is called as the 'buccal segment' for peristomilus

C. The first segment is prostomium

D. the skin of earthworm is brown due to the presence o porphyrin

Answer: C

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2. The earthworms move with the help of

A. Setae, muscles and hydristatic skeleton

B. Setae alone

C. Muscles alone

D. Parapodia

Answer: A

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3. In earthworm, there is a ring of S-shaped setae, embedded in the epidermal pit at the middle of each segment except

A. first

B. last

C. Clitellar region

D. First, last and clitellar segments

Answer: D

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4. There are four pairs of spermathecal pores in pheretima which are located in intersegmental grooves between segments

A. 5/6, 6/7, 7/8, 8/9

B. 6/7, 7/8, 8/9, 9/10

C. 14/15, 15/16, 16/17, 17/18

D. 1/2, 2/3, 3/4, 4/5

Answer: A

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5. Tick mark the wrong match (in earthworm).

A. Female genital aperture-Midventral line of 14th segment

B. A pair of male genital apertures- ventrolateral sides of 18th segment

C. Genital papillae- ventral surface of 17th & 19th segments

D. Clitellum or cingulum-9th to 14th segment

Answer: D

Watch Video Solution

6. Which of the following are analogous to vertebrate liver cells ?

A. Chromophil cells

B. Chlorogogen cells

C. Calciferous glands cells

D. Albumen cells

Answer: B

Watch Video Solution

7. In earthworm, typhlosole extends between 26th and 35th segments. Its function is

A. Excretion

B. Enchances effective area of absorption after digestion

C. Respiration

D. Locomotion

Answer: B

Watch Video Solution

8. Which of the following statements is incorrect about the circulatory system of earthworm?

A. Pheretima represents a closed type of blood vascular sysmte

B. Blood glands are present in 4th, 5th, and 6th segments, they produce blood cells and haemoglobin dissolved in plasma

C. There are fours pairs of hearts in earthworm present in 7,9,12 and 13 segment

D. in dorsal vessel blood flows in forward direction and is without valves

Answer: D

Watch Video Solution

9. Tastes in earthworm are present in the segments

A. 11 & 12

B. 12 & 13

C. 14 & 15

D. 10 & 11

Answer: D

Watch Video Solution

10. During copulation in earthworms, sperms are transferred between copulating individuals from

A. Female genital pore of sperrmathecae

B. Male genital pores to spermathecae

C. Spermathecae to cocoon

D. Male genital pores to outside

Answer: B

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11. All the following statements are correct about the reproductive system of earthworm except

A. Fertilization is external and cross fertilization

B. There are two pairs of testes in 10th and 11th segments and one pair of varies attached at the intersegmental septum of 12th and 13th segment

C. Accessory glands are present on the ventral surface of 17th and 19th segments

D. Earthworm is unisexual

Answer: D

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12. The dorsal blood vessel in Pheretima is

A. Distributing in whole body

B. Collecting in whole body

C. Distributing in first 13 segments

D. Collecting in first 13 segments

Answer: C

Watch Video Solution

13. In Pheretima, clitellum is primarily meant for

A. Burrowing

B. Fertilisation

C. Producing cocoons

D. Locomotion

Answer: C

Watch Video Solution

14. Lateral oesophageal hearts in earthworm connect

A. Supra-oesophageal and dorsal essel to ventral vessel

B. Dorsal vessel to sub-oesophageal vessel

C. Lateral oesophageal vessel to subneural vessel

D. Dorsal vessel to subneural vessel

Answer: A

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15. Flow of blood in the ventral vessel of earthworm is

A. forwards

B. backwards

C. backwards in half of it and forwards in another half

D. none of these

Answer: B

Watch Video Solution

16. The ventral surface of mature earthworm can be distinguished from dorsal surface by

A. Absence of middorsal line

B. Presence of clitellum

C. Presence of genital papillae

D. None of these

Answer: C

Watch Video Solution

17. Which of the following parts of gut occupies most part of the 8th segment?

A. Oesophagus

B. Gizzard

C. Stomach

D. Intestine

Answer: B

Watch Video Solution

18. Photoreceptors (phaosomes) in earthworm occur in

A. Epidermis of dorsal body wall and prostomium

B. Epidermis of ventral body wall

C. both 1 and 2

D. Epidermis of prostomium only

Answer: A

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19. By which of the following nephridia excretion is exonephric?

A. Pharyngeal nephridia

B. Septal nephridia

C. Intergumentary nephridia

D. Integumentary and pharyngal nephridia

Answer: C

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20. Earthworm is

A. Ammonotelic

B. Ureotelic

C. Uricotelic

D. Ureotelic and ammonotelic

Answer: D

Watch Video Solution

21. In earthworm, pharyngeal nephridia occur in segments

A. 3,4,5

B. 4,5,6

C. 5,6,7

D. 6,7,8

Answer: B

Watch Video Solution

22. periplaneta americana and blatta orientalis differ mainly from each other in

A. body shape

B. wing length

C. length of antenna

D. life-history

Answer: B

Watch Video Solution

23. In cockroach, the body in spite of being covered by an exoskeleton of strong chitinous cuticle remains flexible due to

A. Tergites

B. Sternites

C. Pleurites

D. Arthrodial membranes

Answer: D

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24. Vestigial wings are found in

A. Male blatta

B. Female blatta

C. Male periplaneta

D. Female periplaneta

Answer: B

Watch Video Solution

25. In cockroach, elytra are ariticulated to the tergites of

A. Prothorax

B. Mesothorax

C. Metathorax

D. Abdomen

Answer: B

Watch Video Solution

26. Which mouth part of cockroach acts as upper lip?

A. Labium

B. Labrum

C. First mazilla

D. Hypopharynx

Answer: B

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27. Position of head in relation to body axis of cockroach is known as

A. Epignathous

B. Hypognathous

C. Prognathous

D. None of these

Answer: B

Watch Video Solution

28. Endoskeletal structure present in the head is

A. Apodeme

B. Tentorium

C. Fenestra

D. Clypeus

Answer: B

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29. Periplaneta has mosaic vision. Each ommatidium is composed of following parts except

A. Corneal lens

B. Refractive crystalline cone

C. Rhabdome

D. Phaosome

Answer: D

Watch Video Solution

30. Which of the following is a wrong match in cockroach?

A. head- Hypognathous

B. heart- 13 chambered

C. Anal styles- Female cockroach

D. Excretion- Malpighian tubules

Answer: C

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31. Movement of which muscles can alter the pericardial space in cockroach ?

A. Circular

B. Longitudinal

C. alary

D. Ciliary

Answer: C

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32. Number of segments in cockroach leg :

A. five

B. three

C. six

D. nine

Answer: A

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33. The main function of blood vascular system in cockroach is

A. Distribution of oxygen

B. Distribution of absorbed nutrients

C. Distributio of heat

D. All of these

Answer: B

Watch Video Solution

34. The correct sequence of arrangements of segments in the leg of cockroach is

A. Trochanter, coxa, femur, tibia, tarsus

B. Coxa, trochanter, femur, tibia, tarsus

C. coxa, femur, trochanter, tibia, tarsus

D. trochanter, femur, coxa, tibia, tarsus

Answer: B

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35. Structure that helps the cockroach to walk on smooth surfaces is

A. Trochanter

B. Plantulae

C. Cardo

D. Space

Answer: B

Watch Video Solution

36. The number of spiracles in Periplaneta americana is

A. Ten

B. Twenty

C. Eight

D. Six

Answer: B

Watch Video Solution

37. The function of stomodaeal valve in the gut of the cock.-roach is to prevent the regurgitation of partially digested food from

A. Mid-gut into crop

B. Preoral cavity

C. Mid-gut into hind-gut

D. None of these

Answer: A

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38. Which of the two parts in cockroach are fundamentally similar in structure?

A. Anal styles and labrum

B. Wings and anal cerci

C. Maxillae and legs

D. Mandibles and antennae

Answer: C

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39. Ootheca in periplanata americana is secreted by

A. Collaterial glands

B. Conglobate glands

C. Mushroom glands

D. Gynatrium

Answer: A

Watch Video Solution

40. The number of eggs contained in an ootheca of cockroach is

A. 8

B. 16

C. 32

D. 4

Answer: B

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41. Conglobate organ is a part of male reproductive system of

A. Prawn

B. Cockroach

C. Earthworm

D. Frog

Answer: B

Watch Video Solution

42. The number of ganglia in the abdominal nerve-cord of cockroach is

A. 6

B. 9

C. 10

D. 12

Answer: A

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43. The frog 's body is divisible into

A. Head, neck, abdomen

B. Head, neck, trunk

C. head, trunk

D. None of these

Answer: C

Watch Video Solution

44. Which of the following statement is not true?

A. The body colour offers it protective colouration

B. Summer sleep of frog is called aestivation

C. Tail is present in the life cycle of frog

D. Mouth is bounded by a pair of lips

Answer: D

Watch Video Solution

45. Which of the following is present in the skin of frog?

A. Serous gland

B. Mucus gland

C. Chromatophore cells

D. All of these

Answer: D

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46. Total number of vertebrae in frog is

A. 12

B. 10

C. 26

D. 33

Answer: B

Watch Video Solution

47. Which of the following vertebra is amphicoelous type in frog?

A. 3rd

B. 8th

C. 9th

D. 10th

Answer: B

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48. The digital formula for the hind limbs of frog is

A. 0,2,2,3,3

B. 2,2,3,3,3

C. 2,2,3,4,3

D. 0,2,1,2,3

Answer: C

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49. Frog is

A. Homoeothermic

B. Poikilothermic

C. Homeostatic

D. Warm-blooded

Answer: B

Watch Video Solution

50. Capacity of amphibians to change colour is called

A. Synchronous

B. Metachronous

C. Metachrosis

D. None of these

Answer: C

Watch Video Solution

51. Which is not true about frog?

A. Salivary glands are absent

B. Maxillary teeth are arranged along the margin of upper jaw and the lower jaw is ttothless

C. Muscular tongue is bilobed at tip and free from behind

D. Tadpole larva of frog has a short alimentary canal

Answer: D

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52. Bidder's canal in frog is present in

A. Testes

B. Kidney

C. Ovary

D. Brain

Answer: B

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53. During active period, maximum respiratory activity is through

A. Cutaneous respiration

B. Brachial respiration

C. Pumonary respiration

D. Buccopharyngeal respiration

Answer: C

Watch Video Solution

54. How many lymph hearts are present in frog?

A. Single

B. One pair

C. Two pairs

D. Three pairs

Answer: C

Watch Video Solution

55. Which of the following is not true chamber of frog's heart?

A. Pylangium

B. Sinus venosus

C. Right atrium

D. Both 1 and 2

Answer: D

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56. The middle ear of Rana tigrina has

A. Three ear ossicles i.e. malleus, incus and stapes

B. One earh ossicles columella auris

C. Two ear ossicles columella auris and stapedial plate

D. No ear ossicle

Answer: B

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57. Cerebrum is the part of

A. Forebrain

B. Midbrain

C. Hindbrain

D. Rhombencephalon

Answer: A

Watch Video Solution

58. The number of cranial nerves and spinal nerves in frog is

A. 10 and 20

B. 10 and 10

C. 20 and 10

D. 20 and 20

Answer: D

Watch Video Solution

59. Which of the following is true?

A. Frog has monocular vision

B. Frog has scale-less moist, slimy skin

C. Frog is myopic (short sighted) on land

D. All of these are true

Answer: D

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60. Spawning is termed as

A. Release of sperms in male

B. release of ova by female

C. other term of fertilization

D. None of these

Answer: B

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61. Which of the following systems undergoes maximum changes in frog during metamorphosis?

A. Digestive system

B. Circulatory system

C. Reproductive system

D. Nervous system

Answer: B

Watch Video Solution

62. Respiration in the tadpole of frog takes place by

A. Lungs

B. Gills

C. Buccal cavity

D. Skin

Answer: B

Watch Video Solution

63. The skull of frog is

A. Noncondylic

B. Dicondhylic

C. Monocondylic

D. None of these

Answer: B

Watch Video Solution

64. On removing the thyroid from the tadpole of frog

A. metamorphosis will stop

B. It grows into a giant frog

C. it grows ito a dwarf frog

D. Normal metamorphosis occurs

Answer: A

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65. Find out the incorrect match w.r.t. intestine of earthworm

A. Muscular gizzard -8-9th segments

B. oesophagus- 9-14th segments

C. Intestine - 15th segment onward

D. Typhlosole-27-95th segment

Answer: B

Watch Video Solution

66. Forests of intergumentary nephridia are present in

A. Pharyngeal region

B. Clitellar region

C. Pre clitellar region

D. Post clitellar region

Answer: B

Watch Video Solution

67. Which of the following structure is related to formation of middle layer of spermatophore in periplaneta?

A. Utriculi majores

B. Utriculi breviores

C. Ejaculatory duct

D. Conglobate gland

Answer: C

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68. Earthworm and cockroach both have

A. Dorsal nerve cord

B. Unsegmented body

C. Malpighian tubule

D. Ventral nerve cord

Answer: D

Watch Video Solution

69. Find out the incorrect statement w.r.t. frog-

A. Only tympanum can be seen externally

B. Columnae carnaeae are present in ventricle

C. bidder's canal communicates with the oviduct

D. vasa efferentia are 10-12 in number

Answer: C

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70. Which of the following statement is incorrect about development of periplaneta americana?

A. On an average female produces 9-10 oothecae each containing 14-16 eggs

B. The development is paurometabolous

C. The nymph grows by moulting about 7-8 times to reach adult form

D. The next to last nymphal stage has wing pads but only adult cockroach has wings

Answer: C

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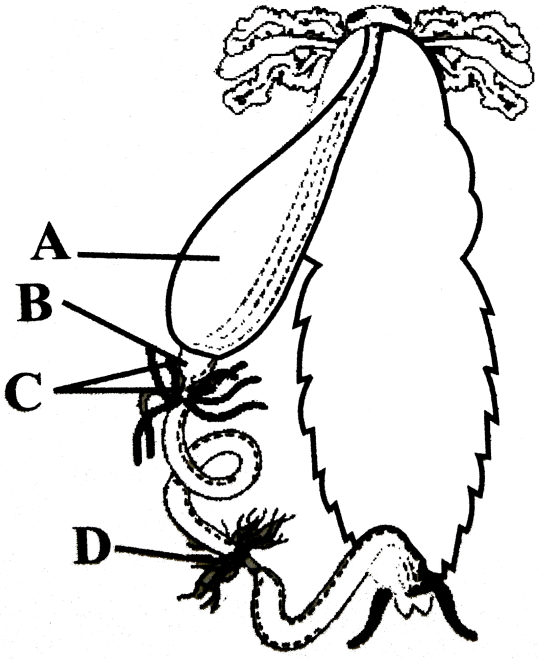
71. The given figure shows alimentary cancal of cockroach. Identify the parts labelled as A to D and select the correct option



A. Stomach, ileum, hepatic caecae, malpighian tubules

B. Gizzard, crop, hepatic caecae, malpighian tubules

C. Crop, gizzard, malpighian tubules, hepatic caecae

D. Crop, gizzard, hepatic caecae, malpighian tubules

Answer: D

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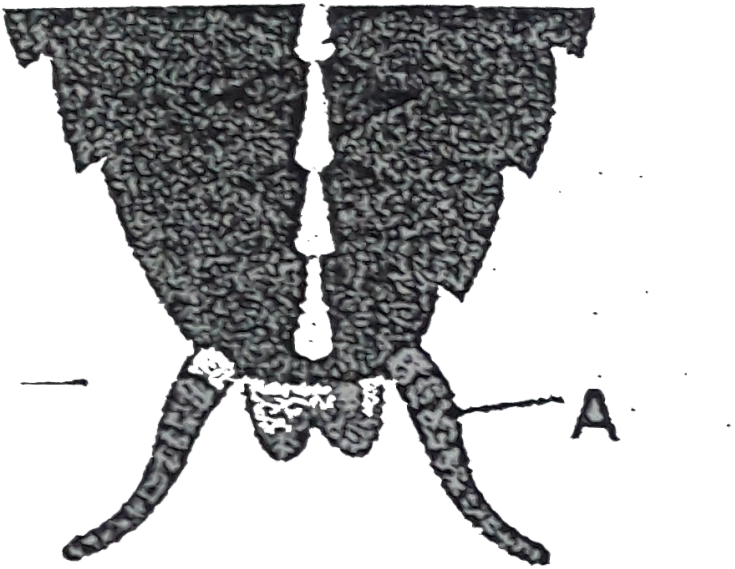
72. Which of the following is the correct statement of the structure labelled 'A' in the diagram?



A. A pair of anal styles absent in females

B. A pair of anal cerci, arise from 10^{th} segment present in both the sexes

C. Phallomere, external genitalia of male

D. Ovipositor in female

Answer: B

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73. Which of the following statements is incorrect w.r.t. reproductive system of earthworm?

A. There are two pairs of testes present in 10th and 11th segments. Their ducts i.e., vas deferens run upto the 18th segment where they join the prostatic duct

B. Accessory glands are present on the ventral side of the 17th and 19th segments.

C. One pair of ovaries is attached at the intersegmental septum of the 13th and 14th segments

D. Four pairs of sac like structures called spermathecae are found one pair each in 6th to 9th segments

Answer: C

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74. Which of the following statement is false?

A. The ovaries in frog are structurally and functionally connected with kidneys

B. A mature female from an lay 2500 to 3000, unfertilised ova at a time.

C. In male frog there are 10-12 vasa efferentia arise from testes and enter kidneys on their side and open into bidder's canal

D. The eggs of frog are mesolecithal and telolecithal

Answer: A

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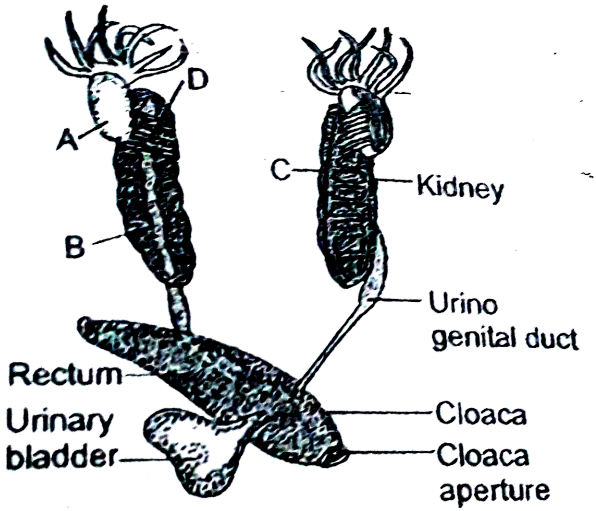
75. Following is the diagram of the male reproductive system of frog select the correct set of names labelled A,B,C and D.



A. A-Fat bodies, B-Ureter, C-Bladder's canal, D-Vasa efferentia

B. A-Fat bodies, B-Bidder's canal, C-Ureter, D-Vasa efferentia

C. A-Adrenal gland, B-Bidder's canal, C-ureter, D-Vasa efferentia

D. A-Testes, B-Adrenal gland, C-Bidder's canal, D_Vasa efferentia

Answer: D

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Assignment Section C

1. In male cockroaches, sperms are stored in which part of the reproductive system

A. Seminal vesicles

B. Mushroom glands

C. Testes

D. Vas deferens

Answer: A

Watch Video Solution

2. Which of the following features is not present in Periplaneta americana?

A. Metamerically segmented body

B. Schizocoelom as body cavity

C. Indeterminate and radial cleavage during embryonic development

D. Exoskeleton composed of N-acetylglucosamine

Answer: C

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3. The body cells in cockroach discharge their nitrogenous waste in the haemolymph mainly in the form of

A. Calcium carbonate

B. Ammonia

C. Potassium urate

D. Urea

Answer: C

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4. The targa, sterna and pleura of cockroach body are joined by

A. Cartilage

B. Cementing glue

C. Muscular tissue

D. Arthorodial membrane

Answer: D

Watch Video Solution

5. What external changes are visible after the last moult of a cockroach nymph

A. Anal cerci develop

B. Both fore wings and hind wings develop

C. Labium develops

D. Mandibles become harder

Answer: B

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6. Select the correct statement from the ones given below with respect to Periplaneta americana.

A. Grinding of food is carried out only by the mouth parts

B. Nervous system located dorsally, consists of segmentally arranged ganglia joined by a pair of longitudinal connectives

C. Males bear a pair of short thread like anal styles

D. There are 16 very long malpighian tubules present at the junctions of midgut and hindgut

Answer: C

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7. Pheretima and its close relatives derive nourishment from

A. Small pieces of fresh fallen leaves of maize, etc.

B. Sugarcane roots

C. Decaying fallen leaves and soil organic matter

D. Soil insects

Answer: C

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8. Compared to those of humans, erythrocytes of Frog are

A. Nucleated and without haemoglobin

B. Without nucleus but with haemoglobin

C. Nucleated and with ahemoglobin

D. Very much smaller and fewer

Answer: C

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9. What is common between humans and adult Frog

A. Ureotelic mode of excretion

B. Four-chambered heart

C. Internal fertilisation

D. Nucleated RBCs

Answer: A

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10. Which of the following is correct for the common cockroach ?

A. The food is ground by mandibles and gizzard

B. Malpighian tubules are excretory organs projecting out from the colon.

C. Oxygen is transported by haemoglobin in blood

D. Nitrogenous exretory product is urea.

Answer: A

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11. One very special feature in the earthworm pheretima is that

A. it has a long dorsal tubular heart

B. Fertilisation of eggs occurs inside the body

C. The typholosole greatly increases the effective absorption area of the digested food in the intestine

D. The S-shaped setae embedded in the integument are the defensive weapons used against the enemies.

Answer: C

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12. Frogs differ from humans in possessing

A. Nucleated red blood cells

B. Paired cerebral hemispheres

C. Hepatic prtal system

D.

Answer: A

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13. Consider the following four statements $(A - D)$ related to the common frog rane tigrina and select the correct option stating which ones are true (T) and which ones are false (F)

Statements :

(A) On dry land it would die due to lack of O_2 of its mouth is farcibly kept closed for a few days

(B) It has four-chambered heart

(C) ON dry land it turns uricotelic from ureotelic

(D) Its life-history is carried out in pond water

A. A-F,B-F,C-T,D-T

B. A-F,B-T,C-T,D-F

C. A-T,B-F,C-F,D-T

D. A-T,B-T,C-F,D-F

Answer: C

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14. Which one of the following structures in Pheretima is correctly matched with its function

A. Setae _ Defence against predators

B. Typhlosole - Storage of extra nutrients

C. Clitellum _ Secretes cocoon

D. Gizzard - Absorbs digested food

Answer: C

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15. Uric acid is the chief nitrogenous component of the excretory products of :

A. Earthworm

B. Cockroach

C. Frog

D. Man

Answer: B

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16. Which one of the following correctly describes the location of some body parts in the earthworm Pheretima

A. Four pairs of spermathecae in 4-7 segments

B. One paiir of ovaries attached at intersegmental septum of 14th and 15th segments

C. Two pairs of testes in 10th and 11th segments

D. Two pairs of accessory glands in 16th-18th segments.

Answer: C

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17. Earthworms have no skeleton but during burrowing, the anterior end becomes turgid and acts as a hydrauluc skeleton. It is due to

A. Setae

B. Coelomic fluid

C. Blood

D. Gut peristalsis

Answer: B

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18. Earthworms are commonly found in

A. Ureotelic, when plenty of water is available

B. Uricotelic when plenty of water is available

C. Uricotelic under conditions of water scarcity

D. Ammonotelic when plenty of water is available

Answer: D

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19. Which one of the following has an open circulatory system ?

A. Pheretima

B. Periplaneta

C. Hirudinaria

D. Octopus

Answer: B

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20. Primary function of enteronephric nephridia of Pheretima is

A. Osmoregulation

B. Excretion of nitrogenous wastes

C. Respiration

D. Locomotion

Answer: B

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21. Select the correct option w.r.t. cockroaches

A. The fore wings are tegmina which are used in flight

B. Malpighian tubules convert nitrogenous wastes into urea

C. Males bear short anal styles not present in females

D. Nervous system comprises of a dorsal nerve cord and ten pairs of ganglion

Answer: C

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22. Which one of the following is one of the paths followed by air/O_2 during respiraton in an adult male Periplaneta americana as it enters the animal body.

A. Hypopharynx, mouth, pharynx, trachea, tissues

B. Spiracle in metathorax, trachea, tracheoles, oxygen diffuses into cells

C. Mouth, bronchial tube, trachea, oxygen enters cells

D. Spiracles in prothorax, tracheoles, trachea, oxygen diffuses into cells

Answer: B

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23. Ureters act as urinogenital ducts in

A. Frog's both males and females

B. Frog's males

C. Human males

D. Human females

Answer: B

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24. The breakdown of detritus into smaller particles by earthworm is a process called

A. Mineralisation

B. Catabolism

C. Humification

D. Fragmentation

Answer: D

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25. Which one neutralises humic acid present in humans in the body of Earthworm

A. Typhosole

B. calciferous glands

C. Intestinal caecum

D. Gizzard

Answer: B

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26. Fertilized eggs of Periplaneta americana are encased in

A. Ootheca

B. Cocoon

C. Genital chamber

D. Phallomere

Answer: A

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27. Which one of the following is the true description about an animal concerned

A. Cockroach-10 pairs of spiracles (2 pairs on thorax and 8 pairs on abdomen)

B. Earthworm- The alimentary canal consists of a sequence of pharynx, oesophagus, stomach, gizzard and intestine

C. Frog- body divisible into three regions-head, neck and trunk

D. Rat- Left kidney is slightly higher in positio than the right one.

Answer: A

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28. In adult Frog, the kidney is

A. Metanephros

B. Opisthonephros

C. Pronephros

D. Mesonephros

Answer: D

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Assignment Section D

1. Assertion: In cockroach, inspiration is an active process.

Reason: It is due to the contraction oftergosternal muscle.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: D

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2. A: In frog, sinus-venosus is present.

R: In mammals and birds are remnant of sinus venosus has taken part in the formation of SA node.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: B

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3. Assertion: Septal nephridia take part in osmoregulation.

Reason: They are enteronephric.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: A

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4. Assertion: In Periplaneta, only superposition or overlappmg images are formed.

Reason: Retinal pigment sheath remains contracted throughout the life.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: D

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5. Assertion: The pharyngeal gland of earthworm includes chromophil cells, which secrete sativa.

Reason: Salivary amylase of earthworm is essential to digest carbohydrates.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: C

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6. A: In cockroach, each segment is covered by three hardened plates called sclerites.

R: These sclerites are dorsal tergite, ventral sternite and lateral pleurite.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: D

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7. A: During copulation, two earthworms mutually exchange sperms.

R: the sperms are stored temporarily in the spermathecae.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: B

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8. A: Typhlosole is the characteristic dorsal median fold in the intestine of earthworm.

R: Typhlosole secretes intestinal juice containing digestive enzymes.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: C

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9. A: Make frogs have copulatory/nuptial pad on the pollex of forelimbs.

R: it helps in amplexus.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: D

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10. A: Urine, faeces and gametes pass through a common passage in frog.

R: Frog have cloaca in which alimentary canal and urinogenital ducts open.

A. IF both assertion & Reason are true and the reason is the correct explanation of the assertion, then mark (1).

B. If both assertion & reason are true but the reason is not the correct explanation of the assertion, then mark (2).

C. If assertion is true statement but reason is false, then mark (3).

D. If both assertion and reason are false statements, then mark (4).

Answer: A

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