

NEET STRUCTURAL ORGANISATION IN ANIMALS — COCKROACH: MORPHOLOGY AND ANATOMY (OLD SYLLABUS) — PYQS

Max. Marks: 84

Questions: 21

Section A (MCQ) — 21 questions

Q.1 In both sexes of cockroach, a pair of jointed filamentous structures called anal cerci are present on [NEET (UG) 2024]

- (1) 5th segment (2) 10th segment
(3) 8th and 9th segment (4) 11th segment

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Q.2 Match **List I** with **List II** related to digestive system of cockroach.

List - I		List - II	
A.	The structures used for storing of food	I.	Gizzard
B.	Ring of 6-8 blind tubules at junction of foregut and midgut.	II.	Gastric Caeca
C.	Ring of 100-150 yellow coloured thin filaments at junction of midgut and hindgut.	III.	Malpighian tubules
D.	The structures used for grinding the food.	IV.	Crop

Choose the correct answer from the options given below: [NEET (UG) 2024]

- (1) A-IV, B-II, C-III, D-I (2) A-I, B-II, C-III, D-IV
(3) A-IV, B-III, C-II, D-I (4) A-III, B-II, C-IV, D-I

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Q.3 Which of the following is/are present in female cockroach?

- A. Collateral gland B. Mushroom gland
C. Spermatheca D. Anal style
E. Phallic gland

Choose the most appropriate answer from the options given below: [RE-NEET (UG) 2024]

- (1) B and D only
(3) A only

- (2) B and E only
(4) A and C only

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Q.4 In cockroach, excretion is brought about by –
A. Phallic gland B. Uricose gland
C. Nephrocytes D. Fat body
E. Collateral glands

Choose the correct answer from the options given below: [NEET (UG) 2023]

- (1) A, B and E only (2) B, C and D only
(3) B and D only (4) A and E only

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Q.5 Which of the following is characteristic feature of cockroach regarding sexual dimorphism? [NEET (UG) 2023]

- (1) Presence of anal styles
(2) Presence of sclerites
(3) Presence of anal cerci
(4) Dark brown body colour and anal cerci

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Q.6 Tegmina in cockroach, arises from

[NEET (UG) 2022]

- (1) Prothorax
(2) Mesothorax
(3) Metathorax
(4) Prothorax and Mesothorax

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Q.7 Match **List-I** with **List-II** regarding the organs of Cockroach:

List - I		List - II	
a.	Crop	i.	Grinding the food particles
b.	Proventriculus	ii.	Secretion of digestive juice
c.	Hepatic caecae	iii.	Removal of nitrogenous waste

List - I		List - II	
d.	Malpighian tubules	iv.	Storage of food

Choose the correct answer from the options given below :

[NEET (UG) 2022 (Phase 2)]

- (1) (a) - (i), (b) - (iv), (c) - (iii), (d) - (ii)
 (2) (a) - (iv), (b) - (i), (c) - (ii), (d) - (iii)
 (3) (a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)
 (4) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii)

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Q.8 Excretion in cockroach is performed by all, EXCEPT:

[NEET (UG) 2022 (Phase 2)]

- (1) Hepatic caeca (2) Uricose glands
 (3) Malpighian tubules (4) Fat body

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Q.9 Which of the following characteristics is incorrect with respect to cockroach?

[NEET (UG) 2021]

- (1) 10th abdominal segment in both sexes, bears a pair of anal cerci
 (2) A ring of gastric caeca is present at the junction of midgut and hind gut
 (3) Hypopharynx lies within the cavity enclosed by the mouth parts
 (4) In females, 7th-9th sterna together form a genital pouch

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Q.10 If the head of cockroach is removed, it may live for few days because

[NEET (UG) 2020]

- (1) the cockroach does not have nervous system.
 (2) the head holds a small proportion of a nervous system while the rest is situated along the ventral part of its body.
 (3) the head holds a 1/3rd of a nervous system while the rest is situated along the dorsal part of its body.
 (4) the supra-oesophageal ganglia of the cockroach are situated in ventral part of abdomen.

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Q.11 Select the **correct** sequence of organs in the alimentary canal of cockroach starting from mouth:

[NEET (UG) 2019]

- (1) Pharynx → Oesophagus → Gizzard → Ileum → Crop → Colon → Rectum
 (2) Pharynx → Oesophagus → Ileum → Crop → Gizzard → Colon → Rectum
 (3) Pharynx → Oesophagus → Crop → Gizzard → Ileum → Colon → Rectum
 (4) Pharynx → Oesophagus → Gizzard → Crop → Ileum → Colon → Rectum

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Q.12 Which of the following features is used to identify a male cockroach from a female cockroach?

[NEET 2018]

- (1) Forewings with darker tegmina
 (2) Presence of caudal styles
 (3) Presence of anal cerci
 (4) Presence of a boat-shaped sternum on the 9th abdominal segment

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Q.13 In male cockroaches, sperms are stored in which part of the reproductive system ?

[NEET 2016 (Phase 2)]

- (1) Vas deferens (2) Seminal vesicles
 (3) Testes (4) Mushroom glands

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Q.14 The terga, sterna and pleura of cockroach body are joined by :

[AIPMT 2015 (Cancelled)]

- (1) Cartilage (2) Cementing glue
 (3) Arthroal membrane (4) Muscular tissue

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Q.15 What external changes are visible after the last moult of a cockroach nymph ?

[NEET 2013]

- (1) Both fore wings and hind wings develop
 (2) Mandibles become harder
 (3) Labium develops
 (4) Anal cerci develop

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Q.16 Which one of the following is one of the paths followed by air or O₂ during respiration in the adult male *Periplaneta americana* as it enters the animal body?

[NEET 2013 (Karnataka)]

- (1) Spiracle in metathorax, trachea, tracheoles, oxygen diffuses into cells
- (2) Mouth, bronchial tube, trachea, oxygen enters cells
- (3) Spiracles in prothorax, tracheoles, trachea, oxygen diffuses into cells.
- (4) Hypopharynx, mouth, pharynx, trachea, tissues

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Q.17 Select the correct option with respect to Cockroaches :- [NEET 2013 (Karnataka)]

- (1) Nervous system comprises of a dorsal nerve cord and ten pairs of ganglion
- (2) The fore wings are tegmina which are used in flight
- (3) Malpighian tubules convert nitrogenous wastes into urea
- (4) Males bear short anal styles not present in females

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Q.18 Select the correct statement from the ones given below with respect to *Periplaneta americana*

[AIPMT 2012 (Prelims)]

- (1) Males bear a pair of short thread like anal styles
- (2) There are 16 very long Malpighian tubules present at the junctions of midgut and hindgut
- (3) Nervous system located dorsally, consists of segmentally arranged ganglia joined by a pair of longitudinal connectives
- (4) Grinding of food is carried out only by the mouth parts

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Q.19 Which of the following is correctly stated as it happens in the common cockroach?

[AIPMT 2011 (Prelims)]

- (1) Oxygen is transported by haemoglobin in blood
- (2) The food is ground by mandibles and gizzard
- (3) Nitrogenous excretory product is urea
- (4) Malpighian tubules are excretory organs projecting out from the colon

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Q.20 Which one of the following is the true description about an animal concerned? [AIPMT 2008]

- (1) Frog — Body divisible into three regions-head, neck and trunk
- (2) Rat — Left kidney is slightly higher in position than the right one
- (3) Earthworm — The alimentary canal consists of a sequence of pharynx, oesophagus, stomach, gizzard and intestine
- (4) Cockroach — 10 pairs of spiracles (2 pairs on thorax and 8 pairs on abdomen)

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Q.21 Ommatidia serve the purpose of photoreception in [AIPMT 2003]

- (1) cockroach
- (2) frog
- (3) humans
- (4) sunflower.

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	2	1	4	2	1	2	2	1	2	2	3
Ques.	12	13	14	15	16	17	18	19	20	21	
Ans.	2	2	3	1	1	4	1	2	4	1	