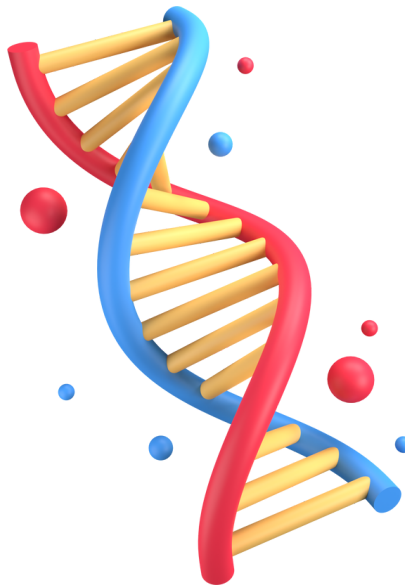


# ZOOLOGY

ENTHUSIAST | LEADER | ACHIEVER



**EXERCISE**

Cockroach (*Periplaneta americana*)

---

ENGLISH MEDIUM

---

## EXERCISE-I (Conceptual Questions)

## Build Up Your Understanding

## INTRODUCTION AND MORPHOLOGY

1. Zoological name of cockroach is :

- (1) *Glossina palpalis*
- (2) *Periplaneta americana*
- (3) *Musca nebulo*
- (4) *Apis indica*

AT0219

2. Diagnostic feature of insects is :

- (1) Segmented body
- (2) Chitin in body wall
- (3) Three pair of legs
- (4) One pair compound eyes

AT0220

3. Which are the two common indian cockroaches?

- (1) *Periplaneta americana* and *Blatta indica*
- (2) *Periplaneta indica* and *Blatta orientalis*
- (3) *Periplaneta orientalis* and *Blatta americana*
- (4) *Periplaneta americana* and *Blatta orientalis*

AT0221

4. Characteristic of group insecta is :

- (1) Joined appendages
- (2) 3 pair of jointed legs
- (3) Chitinous exoskeleton
- (4) Compound eyes

AT0222

5. Scientist who gave the name *Periplaneta* is:

- (1) Linneous
- (2) K.N. Bahel
- (3) Burmeister
- (4) D. Gir

AT0223

6. Tergum is joined on the sides by :

- (1) Pleuron
- (2) Sternum
- (3) Alimentary canal
- (4) Muscles

AT0224

7. The plate situated between the eyes and passing below that on the head of cockroach is called :

- (1) Vertex
- (2) Frons
- (3) Epicranium
- (4) Gena

AT0225

8. The dorsal plate of skeleton found on the abdomen of cockroach is called :

- (1) Pleuron
- (2) Sternum
- (3) Tergum
- (4) Vertex

AT0226

9. Outer border of tergum bends downwards in cockroach and attaches with :

- (1) Muscles
- (2) Sternum
- (3) Pleura
- (4) Fat body cells

AT0227

10. Mandibles of cockroach are :

- (1) Short with grinding teeth
- (2) Long and pointed
- (3) short without teeth
- (4) long and coiled

AT0228

11. Head of cockroach according to its position is known as :

- (1) Hypopharynx
- (2) Hypocerebral
- (3) Hypognathus
- (4) Supragnathus

AT0229

12. Number of visible sternum present at the abdomen of female cockroach is :

- (1) 6
- (2) 7
- (3) 8
- (4) 9

AT0230

13. Tongue like structure in *Periplaneta* is :

- (1) Maxilla
- (2) Hypopharynx
- (3) Labium
- (4) Labrum

AT0231

- 14.** Which structure is known as lower lip of cockroach ?  
 (1) Labrum (2) Labium  
 (3) Mantum (4) Submentum  
**AT0232**
- 15.** Wings of cockroach are mainly helpful in :  
 (1) Egg laying (2) Preying  
 (3) Finding the mate (4) Protection  
**AT0233**
- 16.** *Periplaneta americana* differs from *Blata orientalis* in :  
 (1) Well developed wings  
 (2) Wings absent  
 (3) Only first pair wings developed  
 (4) Second pair wing developed  
**AT0234**
- 17.** Number of segments in cockroach leg :  
 (1) 3 (2) 5 (3) 6 (4) 9  
**AT0235**
- 18.** Undeveloped wings are found in :  
 (1) Housefly (2) Cockroach  
 (3) Mosquito (4) Blatta  
**AT0236**
- 19.** Pseudopodia of *Amoeba* are similar to :  
 (1) Legs of cockroach  
 (2) Teeth in rabbit  
 (3) Spicules of *Leucosolenia*  
 (4) Suckers of *Taenia*  
**AT0237**
- 20.** Plantulae are found in cockroach upon :  
 (1) Pretarsus (2) Femur  
 (3) Trochanter (4) Coxa  
**AT0238**
- 21.** Most swollen segment in leg cockroach is :  
 (1) Tarsus (2) Coxa  
 (3) Femur (4) Trochanter  
**AT0239**
- 22.** In cockroach arolium is helpful in :  
 (1) In digestion (2) Respiration  
 (3) Locomotion (4) Reproduction  
**AT0240**
- 23.** Main character for the distinction between male and female cockroach :  
 (1) Antennae (2) Mandibles  
 (3) Anal cerci (4) Anal style  
**AT0241**
- 24.** Anal styles are found in :  
 (1) Housefly  
 (2) Female cockroach  
 (3) Male cockroach  
 (4) Both male & female cockroach  
**AT0242**
- 25.** Body segments are definite and well marked in :  
 (1) *Hydra* (2) *Taenia*  
 (3) *Ascaris* (4) Cockroach  
**AT0243**
- 26.** In cockroach the audioreceptors are situated on :  
 (1) On legs (2) Antenna  
 (3) Sensory receptor (4) Anal cerci  
**AT0244**
- 27.** The gynovalvular plates in female cockroach are modification of :  
 (1) 7th tergum (2) 7th sternum  
 (3) 8th Tergum (4) 8 sternum  
**AT0245**
- 28.** Stink glands are found in :  
 (1) Only in males  
 (2) Only in female  
 (3) In both  
 (4) None  
**AT0246**

29. Exoskeleton of cockroach is made up of :

- (1) Cartilage (2) Cuticle  
(3) Chitin (4) Amino acids

**AT0247**

30. Cockroach and other insects have exoskeleton made up of :

- (1) Keratin (2) Spongin  
(3) Chitin (4) Cuticle

**AT0248**

31. In which part of cockroach is present completely developed endoskeleton and exoskeleton both ?

- (1) In head region  
(2) Thoracic region  
(3) Abdominal region  
(4) In head & thoracic regions

**AT0249**

**BODY CAVITY, BODY WALL, DIGESTION, RESPIRATION, CIRCULATION AND EXCRETION**

32. The body cavity of cockroach is called :

- (1) Pseudocoel (2) Coelom  
(3) Hydrocoel (4) Haemocoel

**AT0250**

33. Which cells secrete wax located at the outer surface of body wall ?

- (1) Trophocytes (2) Oenocytes  
(3) Trichogen (4) Mycetocytes

**AT0251**

34. The fatbody of cockroach contains :

- (1) Oenocytes (2) mycetocytes  
(3) Trophocytes (4) All the above

**AT0252**

35. Hepatic caecae in cockroach are derived from :

- (1) Crop (2) Gizzard  
(3) Midgut (4) Proctodaeum

**AT0253**

36. Saliva of cockroach contains enzyme :

- (1) Lipase (2) Amylase  
(3) Pepsin (4) Trypsin

**AT0254**

37. Salivary glands of cockroach open on :

- (1) Maxilla (2) Hypopharynx  
(3) Labium (4) Labrum

**AT0255**

38. Mouth part of cockroach are suited for :

- (1) Piercing (2) Absorbing  
(3) Cutting & chewing (4) Drinking

**AT0256**

39. Cockroach is :

- (1) Omnivorous (2) Herbivorous  
(3) Carnivorous (4) Sanguivorous

**AT0257**

40. In cockroach food is crushed in which part :

- (1) Crop (2) Gizzard  
(3) Mesenteron (4) Oesophagus

**AT0258**

41. In which part of alimentary canal of cockroach is invagination of cuticle found ?

- (1) Anterior part  
(2) In midpart  
(3) In posterior part  
(4) Both in anterior and posterior part

**AT0259**

42. The inner layer of gizzard of cockroach is covered by :

- (1) By cuticle  
(2) By mucous membrane  
(3) By endoepithelium  
(4) By peritrophic membrane

**AT0260**

- 43.** Maximum digestion takes place in which part of cockroach ?  
 (1) In crop (2) In Gizzard  
 (3) In mesenteron (4) In oesophagous  
**AT0261**
- 44.** Oxygen is carried to the tissues of cockroach by which organ :  
 (1) Skin  
 (2) Trachea  
 (3) Plasma  
 (4) Respiratory pigment  
**AT0262**
- 45.** Allary muscles in cockroach are associated or connected with :  
 (1) Trachea (2) Heart  
 (3) Legs (4) Alimentary canal  
**AT0263**
- 46.** Number of pairs of spiracles in cockroach are :  
 (1) 4 (2) 6  
 (3) 8 (4) 10  
**AT0264**
- 47.** In cockroach  $O_2$  is carried to tissue by :  
 (1) Haemoglobin and haemocyanin  
 (2) Blood plasma  
 (3) Tracheal tubes  
 (4) Diffusion through integument  
**AT0265**
- 48.** Blood of cockroach does not contain haemoglobin because :  
 (1) It respire through atmosphere  
 (2) Respires through book lungs  
 (3) It does not respire  
 (4) It has some other means to carry oxygen direct into the tissues  
**AT0266**
- 49.** Give the name of blood vessel, which arises from first chamber of heart in cockroach :  
 (1) Nephrocyte  
 (2) Fenestrae  
 (3) Ostia  
 (4) Anterior aorta  
**AT0267**
- 50.** Number of chambers in the heart of cockroach :  
 (1) 5 (2) 9 (3) 13 (4) 16  
**AT0268**
- 51.** Blood circulation in insects :  
 (1) Flows in arteries and veins  
 (2) With red blood corpuscles  
 (3) Open type  
 (4) Absent  
**AT0269**
- 52.** Heart of cockroach is :  
 (1) Four chamberd  
 (2) Vertral to gut  
 (3) Longitudinal & beaded  
 (4) Three chambered  
**AT0270**
- 53.** The colour of haemolymph of cockroach is :  
 (1) Yellow (2) Red  
 (3) Green (4) Colourless  
**AT0271**
- 54.** Physiologically the heart of cockroach is :  
 (1) Neurogenic (2) myogenic  
 (3) Epigenic (4) Agenic  
**AT0272**
- 55.** Main excretory product of cockroach is :  
 (1) Urea (2) Ammonia  
 (3) Uric acid (4) Amino acid  
**AT0273**

56. Function of Malpighian tubules of cockroach :

- (1) Digestion (2) Respiration  
(3) Excretion (4) Reproduction

AT0274

57. Excretory organs of cockroach are :

- (1) Trachea  
(2) Kidney  
(3) Nephridia  
(4) Malpighian tubules

AT0275

**NERVOUS SYSTEM, COMPOUND EYE, REPRODUCTION AND DEVELOPEMENT**

58. The nerve cord of cockroach is :

- (1) Double, ventral and solid  
(2) Double dorsal and hollow  
(3) Single, dorsal and solid  
(4) Single, ventral and hollow

AT0276

59. In cockroach which is helpful in sexual attraction?

- (1) Hormone ecdyson (2) Pheromone  
(3) Juvenile hormone (4) Anal cerci

AT0277

60. Ommatidia are found in :

- (1) Eyes of birds (2) Eye of frog  
(3) Eye of insects (4) Eye of rabbit

AT0278

61. Structural units found in the compound eye of cockroach are called :

- (1) Rhabdom (2) Cone cells  
(3) Ommatidia (4) Simple eye

AT0279

62. What type of vision is found in cockroach ?

- (1) Mosaic (2) Super position  
(3) Binocular (4) None of them

AT0280

63. Ommatidia are units in the eyes of :

- (1) Amphibians (2) Mammals  
(3) Insects (4) Fishes

AT0281

64. Apposition image in eye of insects is formed in :

- (1) Dim light  
(2) Bright Light  
(3) ocelli  
(4) None

AT0282

65. Eggs which have yolk in the centre surrounded by cytoplasm are called :

- (1) Centrolecithal  
(2) Homolecithal  
(3) Microlecithal  
(4) Alecithal

AT0283

66. Ootheca is formed in cockroach by :

- (1) Phallic Gland  
(2) Conglobate gland  
(3) Utricular gland  
(4) Collateral Gland

AT0284

67. Ootheca of Cockroach has fertilized eggs, this numbers is :

- (1) 6 (2) 8 (3) 16 (4) 24

AT0285

68. From egg laying to the development of adult cockroach. How many molting occur?

- (1) 13 times (2) 9 times  
(3) 6 times (4) 3-4 times

AT0286

69. The type of egg in cockroach is called :

- (1) Microlecithal
- (2) Centrolecithal
- (3) Isolecithal
- (4) Telolecithal

AT0287

70. Sexual dimorphism is distinct in :

- (1) *Hydra* (2) Earthworm
- (3) Sponge (4) Cockroach

AT0288

71. Conglobate gland is found in the reproductive organs of :

- (1) Earth worm
- (2) Housefly
- (3) Male cockroach
- (4) Female cockroach

AT0289

72. Number of moultings in cockroach after hatching and development of complete animal are :

- (1) Less than 7
- (2) Upto 8
- (3) Upto 9
- (4) more than 10

AT0290

73. How many ovarioles are found in each ovary of cockroach ?

- (1) 3 (2) 6 (3) 8 (4) 16

AT0291

74. Collateral glands of cockroach help in :

- (1) Fertilization
- (2) Formation of ootheca
- (3) Copulation
- (4) Formation of oothecal chamber

AT0292

75. In the life history of cockroach (*Periplaneta*) there is:

- (1) No Metamorphosis
- (2) Gradual metamorphosis
- (3) Complete metamorphosis
- (4) Anamorphosis

AT0293

76. Juvenile of cockroach is known as :

- (1) Tadpole (2) Amocyte
- (3) Nymph (4) Naid

AT0294

77. Life time of cockroach in general is :

- (1) Approximately 1 year
- (2) 3 to 3.5 years approx
- (3) 5 to 7.5 years approx
- (4) 10 years approx

AT0295

78. In which of the following moulting is not found ?

- (1) *Hydra* (2) Mosquito
- (3) Housefly (4) Cockroach

AT0296

79. Life history of cockroach represents :

- (1) Ametaboly (2) Holometaboly
- (3) Paurometaboly (4) Hypermetaboly

AT0297

80. Common feature between cockroach and earthworm is :

- (1) Hermaphroditism
- (2) Moulting of cuticle
- (3) Excretion by nephridia
- (4) Ventral nerve cord

AT0298

81. Which has/have chitinous exo-skeleton ?

- (1) Cockroach (2) Mosquito
- (3) Butterfly (4) All of the above

AT0299

82. Cockroach is :

- (1) Nocturnal and omnivorous
- (2) Diurnal and omnivorous
- (3) Nocturnal and carnivorous
- (4) None

AT0300

EXERCISE-I (Conceptual Questions)

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	2	3	4	2	3	1	2	3	3	1	3	2	2	2	4
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	1	2	4	1	1	2	3	4	3	4	4	2	3	3	3
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	1	4	2	4	3	2	2	3	1	2	4	1	1	2	2
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	4	3	4	4	3	3	3	4	1	3	3	4	1	2	3
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	3	1	3	2	1	4	3	1	2	4	3	4	3	2	2
Que.	76	77	78	79	80	81	82								
Ans.	3	2	1	3	4	4	1								



## EXERCISE-II (Previous Year Questions)

## AIPMT/NEET

## AIPMT 2009

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

- (1) Frog
- (2) Man
- (3) Earthworm
- (4) Cockroach

AT0301

## AIPMT 2011

2. Which of the following correctly state as it happens in the common cockroach ?

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

AT0302

## AIPMT 2015

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

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

AT0305

## Re-AIPMT 2015

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

- (1) Calcium carbonate
- (2) Ammonia
- (3) Potassium urate
- (4) Urea

AT0306

## NEET 2017 (Regional)

5. Select the incorrect option with respect to features present in three animals :

	Characters	Cockroach	Earth worm	Frog
(1)	Blood vascular body	Open	Closed	Closed
(2)	Body surface	Dry	Moist	Moist
(3)	Eyes	Compound	Absent	Simple
(4)	Development	Direct	Indirect	Indirect

AT0309

6. Which of the following structures does not open into the genital chamber of female cockroaches?

- (1) A single median oviduct
- (2) Spermatheca
- (3) A pair of anal cerci
- (4) A pair of collateral glands

AT0310

## NEET(UG) 2018

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

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

AT0311

## NEET(UG) 2019

8. Select the correct sequence of organs in the alimentary canal of cockroach starting from mouth:

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

AT0374

## NEET(UG) 2020

9. If the head of cockroach is removed, it may live for few days because:
- (1) the head holds a  $\frac{1}{3}^{\text{rd}}$  of a nervous system while the rest is situated along the dorsal part of its body.
  - (2) the supra-oesophageal ganglia of the cockroach are situated in ventral part of abdomen.
  - (3) the cockroach does not have nervous system.
  - (4) the head holds a small proportion of a nervous system while the rest is situated along the ventral part of its body.

AT0379

## NEET (UG) 2020 (COVID-19)

10. In cockroach, identify the parts of the foregut in correct sequence :-
- (1) Mouth → Oesophagus → Pharynx → Crop → Gizzard
  - (2) Mouth → Crop → Pharynx → Oesophagus → Gizzard
  - (3) Mouth → Gizzard → Crop → Pharynx → Oesophagus
  - (4) Mouth → Pharynx → Oesophagus → Crop → Gizzard

AT0380

11. Match the following columns with reference to cockroach and select the correct option :

## Column - I

## Column - II

- |                                    |                               |
|------------------------------------|-------------------------------|
| (a) Grinding of the food particles | (i) Hepatic caecal            |
| (b) Secrete gastric juice          | (ii) 10 <sup>th</sup> segment |
| (c) 10 pairs                       | (iii) Proventriculus          |
| (d) Anal cerci                     | (iv) Spiracles                |
|                                    | (v) Alary muscles             |

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

AT0381

## NEET(UG) 2021

12. Which of the following characteristics is **incorrect** with respect to cockroach?
- (1) A ring of gastric caeca is present at the junction of midgut and hind gut.
  - (2) Hypopharynx lies within the cavity enclosed by the mouth parts.
  - (3) In females, 7<sup>th</sup> - 9<sup>th</sup> sterna together form a genital pouch.
  - (4) 10<sup>th</sup> abdominal segment in both sexes, bears a pair of anal cerci.

AT0382

## NEET(UG) 2021 (Paper-2)

13. Select the correct statement about *Periplaneta*.
- (1) Grinding of food is carried out by gizzard and mandibles.
  - (2) Six to eight hepatic caecae occurs at the junction of midgut and hindgut.
  - (3) A pair of anal cerci are found only in males.
  - (4) All of the above.

AT0514

## NEET(UG) 2022

14. Tegmina in cockroach, arises from:
- (1) Mesothorax
  - (2) Metathorax
  - (3) Prothorax and Mesothorax
  - (4) Prothorax

AT0515

## NEET(UG) 2022 (OVERSEAS)

15. Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**

**Assertion (A)** : With the help of several ommatidia, a cockroach can perceive several images of an object, ie, mosaic vision.

**Reason (R)** : Mosaic vision gives more sensitivity but less resolution.

In the light of the above statements, choose the **most appropriate** answer from the option given below :

- (1) **(A)** is not correct but **(R)** is correct  
 (2) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**  
 (3) Both **(A)** and **(R)** are correct but **(R)** is not the correct explanation of **(A)**  
 (4) **(A)** is correct but **(R)** is not correct

AT0516

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

<b>List-I</b>	<b>List-II</b>
(a) Crop	(i) grinding the food particles
(b) Proventriculus	(ii) secretion of digestive juice
(c) Hepatic caecae	(iii) removal of nitrogenous waste
(d) Malpighian tubules	(iv) storage of food

Choose the **correct answer** from the options given below:

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

AT0517

17. Excretion in cockroach is performed by all, EXCEPT :

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

AT0518

## EXERCISE-II (Previous Year Questions)

## ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	4	2	3	4	3	2	1	4	4	1	1	1	1	2
Que.	16	17													
Ans.	1	4													

EXERCISE-III

Master Your Understanding

EXERCISE-III(A) (NCERT Based QUESTIONS)

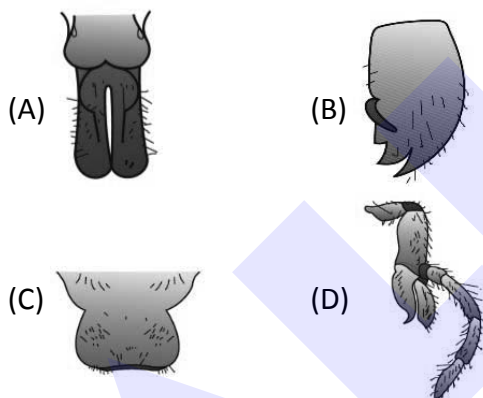
- Which of the following incorrect statement about cockroach  
 (1) Nymph grows by moulting about 13 times to reach the adult form  
 (2) Next to last nymphal stage has wing pad  
 (3) Many species of cockroaches are wild and are no economic importance  
 (4) Have pair of compound eyes and two pair of antenna

AT0383

- How many filamentous malpighian tubules are in cockroach?  
 (1) 100 – 150 (2) 50 – 100  
 (3) 150 – 200 (4) 200 – 250

AT0384

- Identify the A, B, C and D in the given diagram and choose the correct option :



	A	B	C	D
1	Hypopharynx	Mandible	Labrum	Maxilla
2	Labrum	Maxilla	Mandible	Hypopharynx
3	Hypopharynx	Labrum	Maxilla	Mandible
4	Mandible	Hypopharynx	Labrum	Maxilla

AT0385

- Choose the correct statement regarding cockroach  
 (1) Sperms are store in the ootheca  
 (2) fertilization occurs in seminal vessicles  
 (3) Anal style found in female cockroach  
 (4) Pair of spermatheca present in 6<sup>th</sup> segment

AT0386

- A pair of testis in cockroach lie in -  
 (1) 2 – 6 abdominal segment  
 (2) 4 – 7 abdominal segment  
 (3) 4 – 6 abdominal segment  
 (4) 6 – 8 abdominal segment

AT0387

- Exo-skeleton plates of cockroach are connected by thin flexible membrane that is known as  
 (1) Arthrodial membrane  
 (2) Peritoneal membrane  
 (3) Pleural membrane  
 (4) Perichordial membrane

AT0388

- Match the column I and II correctly.

	Column-I		Column-II
(A)	Ovary	(i)	10 <sup>th</sup> segment
(B)	Gizzard	(ii)	Excretory organ
(C)	Malpighian tubules	(iii)	Grinding of food
(D)	Anal cerci	(iv)	2-6 <sup>th</sup> abdominal segment

- (1) A-i, B-ii, C-iii, D-iv  
 (2) A-ii, B-iii, C-iv, D-i  
 (3) A-iv, B-iii, C-ii, D-i  
 (4) A-iii, B-iv, C-i, D-ii

AT0389

- How many oothecae are produced by female cockroach?  
 (1) 14 – 16 (2) 9 – 10  
 (3) 12 – 13 (4) 1 – 4

AT0390

EXERCISE-III(B) (ANALYTICAL QUESTIONS)

- Conglobate gland in present in :  
 (1) Female cockroach (2) Earthworm  
 (3) male cockroach (4) honey bee

AT0315

10. Alary muscle is associated with
- (1) Heart and circulation
  - (2) Malpighian tubules and excretion
  - (3) Mandibles
  - (4) Maxilla

AT0316

11. Common feature in earthworm and cockroach is :
- (1) Cuticle (exoskeleton)
  - (2) Solid and ventral nerve cord
  - (3) Nephridia
  - (4) Malpighian tubules

AT0317

12. The peculiar pungent smell of cockroach is produced by the secretions of :
- (1) Pheromones
  - (2) Flame cells
  - (3) Abdominal glands
  - (4) Cervical glands

AT0318

13. The genus *Blatta* is associated with called :
- (1) Cockroach
  - (2) Butterfly
  - (3) Mosquito
  - (4) Earthworm

AT0319

14. Male cockroach and female cockroach can be differentiated by :
- (1) Ocelli
  - (2) Anal cerci
  - (3) Anal styles
  - (4) Compound Eye

AT0320

15. Stink gland is found in :
- (1) 4<sup>th</sup> and 5<sup>th</sup> terga of cockroach
  - (2) 5<sup>th</sup> and 6<sup>th</sup> terga of cockroach
  - (3) 5<sup>th</sup> and 6<sup>th</sup> sterna of cockroach
  - (4) 4<sup>th</sup> and 5<sup>th</sup> sterna of cockroach

AT0321

## EXERCISE-III

## ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	4	1	1	4	3	1	3	2	3	1	2	1	1	3	2