

19/TDC/ODD/SEM/200SEC-301T/042

TDC (CBCS) Odd Semester Exam., 2019

ZOOLOGY

(3rd Semester)

Course No. : ZOOSEC-301T

(Apiculture)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer all questions

UNIT—I

1. Answer any two of the following questions :

2×2=4

- (a) What is apiculture?
- (b) Write the scientific names of two honey-bee species that are cultured in India.
- (c) Write a short note on bee-dance.

(2)

2. Answer any *one* of the following questions : 6

- (a) Give an account of different castes of a honeybee colony.
- (b) Describe the structural morphology of honeybee with a neat diagram.

UNIT—II

3. Answer any *two* of the following questions :
2×2=4

- (a) Write a short note on bee pasturage.
- (b) Name different beekeeping equipments used in apiculture.
- (c) Write two important criteria used for the selection bee species.

4. Answer any *one* of the following questions : 6

- (a) Describe the Langstroth type of beehive.
- (b) Describe the modern method of extraction of honey.

UNIT—III

5. Answer any *two* of the following questions :
2×2=4

- (a) Name some viral diseases of honeybee.

(3)

- (b) Mention some bacterial diseases of honeybee.
- (c) Mention different enemies of honeybee.

6. Answer any *one* of the following questions : 6

- (a) Write the causes and management of various viral diseases of honeybee.
- (b) Describe the process of management of various enemies of honeybee.

UNIT—IV

7. Answer any *two* of the following questions :
2×2=4

- (a) Enlist the products of apiculture industry.
- (b) Write a short note on pollen.
- (c) What is propolis?

8. Answer any *one* of the following questions : 6

- (a) Describe the chemical composition, storage and uses of honey.
- (b) What is beeswax? Write the process of collection and uses of beeswax.

(4)

UNIT—V

9. Answer any *two* of the following questions :

2×2=4

- (a) What is cross-pollination?
- (b) What is horticulture?
- (c) Why are bees important for cross-pollination?

10. Answer any *one* of the following questions : 6

- (a) Write the recent efforts employed in beekeeping industry.
- (b) Describe the modern methods of bee-keeping used for cross-pollination in horticulture.

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**2019/TDC/ODD/SEM/ZOODSC/
ZOOGE-301T/041**

TDC (CBCS) Odd Semester Exam., 2019

ZOOLOGY

(3rd Semester)

Course No. : ZOODSC/ZOOGE-301T

(Physiology and Biochemistry)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

UNIT—I

1. Answer any *three* of the following questions :

1×3=3

- (a) What is neuron?
- (b) Define resting membrane potential.
- (c) Name the metal associated with muscle contraction.
- (d) What do you mean by I-band?

(2)

2. Answer any *one* of the following questions : 2

(a) How myelinated nerve fibre differ from non-myelinated nerve fibre?

(b) Why is striated muscle fibre called skeletal muscle fibre?

3. Draw and describe the structure of a typical neuron. Add a note on its function. 5

Or

Discuss the biochemistry of muscle contraction. 5

UNIT—II

4. Answer any *three* of the following questions : 1×3=3

(a) Define digestion.

(b) What is tidal volume?

(c) Name the end product of lipid hydrolysis.

(d) Name the enzyme associated with carbonic acid formation.

5. Answer any *one* of the following questions : 2

(a) State the function of bile.

(b) Define simple protein. Give examples.

(3)

6. Describe how food is digested in stomach. Add a note on the absorption of protein. 5

Or

What is pulmonary ventilation? Discuss the process of transportation of CO₂ in the blood. 5

UNIT—III

7. Answer any *three* of the following questions : 1×3=3

(a) Define homeostasis.

(b) Name the respiratory pigment found in human blood.

(c) What are lymphocytes?

(d) Name the chamber of the human heart which receives deoxygenated blood.

8. Answer any *one* of the following questions : 2

(a) State the composition of urine.

(b) Write a note on cardiac cycle.

9. Discuss the countercurrent mechanism of urine formation. 5

Or

Describe the origin and conduction of cardiac impulse with proper illustration. 5

(4)

UNIT—IV

10. Answer any *three* of the following questions :

1×3=3

- (a) Name the male sex hormone.
- (b) Which gland is known as the master gland of the body?
- (c) Name the endocrine part of pancreas.
- (d) What is epinephrine?

11. Answer any *one* of the following questions : 2

- (a) Differentiate between endocrine and exocrine glands.
- (b) Write the functions of adrenal gland.

12. Discuss the process of spermatogenesis in man. Add a note on the hormonal control of spermatogenesis.

5

Or

Describe the structure of pituitary gland with a labelled diagram and mention the hormones secreted by anterior pituitary stating their functions.

5

(5)

UNIT—V

13. Answer any *three* of the following questions :

1×3=3

- (a) Define enzyme.
- (b) Who proposed the lock and key theory of enzyme action?
- (c) After a complete TCA cycle, how many numbers of ATP are produced?
- (d) Define glycolysis.

14. Answer any *one* of the following questions : 2

- (a) Name the different classes of enzyme as per IUB classification with example.
- (b) Write a note on gluconeogenesis.

15. Describe the different mechanisms of enzyme action with illustrative diagram.

5

Or

Write notes on the following :

5

- (a) Urea cycle
- (b) Biosynthesis and β -oxidation of palmitic acid

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