

U.G. 4th Semester Examination - 2021

ZOOLOGY

[HONOURS]

Skill Enhancement Course (SEC)

Course Code : ZOOLOGY-H-SEC-T-2(A)&(B)

Full Marks : 20

Time : 1 Hour

*The figures in the right-hand margin indicate marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

**Answer all the questions from selected Option.**

OPTION-A

ZOOLOGY-H-SEC-T-2(A)

1. Answer any **five** of the following :  $1 \times 5 = 5$
- a) Define Silk.
  - b) Write the biological name of Muga silkworm and its primary host plant.
  - c) What is stifling?
  - d) What is non-hibernating egg of silkworm?
  - e) Mention the location and function of labial gland in silkworms.
  - f) What is meant by Chandrika?

- g) Name the causative agent of hanging disease in silkworm.
- h) State the function of formalin as disinfectant in rearing room.

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

$5 \times 1 = 5$

- a) What is voltinism? Write with example what you know about exotic races of silkworm. In the life cycle of *Bombyx mori* duration of which larval instar is longest and which one is shortest?  $1 + 2 + 2 = 5$
- b) Discuss the process of harvesting and storage of cocoon.  $2 \frac{1}{2} + 2 \frac{1}{2} = 5$
- c) What is NPV? Name the disease caused by NPV. State the symptoms and prevention of this disease.  $1 + 1 + 2 + 1 = 5$

3. Answer any **one** question of the following:

$10 \times 1 = 10$

- a) i) State the characteristic features of a fertilized egg of *Bombyx mori*. What is spinneret? Distinguish between male and female pupa.  $2 + 1 + 2 = 5$
- ii) Describe the structure of model rearing house with its merits and demerits. What are the uses of rearing tray and leaf chamber?  $3 + 2 = 5$

- b) What is spinning? Give an account of the process of spinning the cocoon and the care taken during spinning?  $1+5+4=10$
- c) i) Name the transovarial disease of silkworm and why it is so called? Mention the nature of damage caused by Dermestid beetle in silkworm and their preventive measures.  $1+1+2+2=6$
- ii) Write the name of the indigenous races of silkworm with their distribution and characteristics. 4

### OPTION-B

#### ZOOL-H-SEC-T-2(B)

1. Answer any **five** of the following :  $1 \times 5 = 5$
- a) What is indicated by a high differential leukocyte count?
- b) What is Bence Jones protein?
- c) What are the normal values of lipid profile?
- d) How biopsy is related to detection of metastasis?
- e) From serological findings how will you interpret chronic HBV infection?
- f) What is the basic difference between CT scan and MRI?

- g) Why LDL is considered the 'bad' cholesterol?
- h) Write the name of a radiotracer that is used for cancer detection.
2. Answer any **one** question of the following:  $5 \times 1 = 5$
- a) Why are both a thick and thin blood smear examined for diagnosis of malaria? How *P. falciparum* can be differentiated from *P. vivax* during microscopic diagnosis of malarial parasite? Which ELISA is used for diagnosis of Hepatitis B?  $2+2+1$
- b) Why is antibiotic sensitivity analysis done? How the results of antibiotic sensitivity analysis are reported?  $2+3$
- c) Write the names of any two common LFT mentioning what they measure and what does an abnormal value mean? 5
3. Answer any **one** question of the following:  $10 \times 1 = 10$
- a) Prepare a chart representing the composition of human whole blood for an individual weighing 70kg. What is The Packed Cell Volume (PCV) Test? Mention the uses of PCV test. When does a low PCV reading occur? What is the unit for measurement of ESR test results?  $3+2+2+2+1$

- b) What are the indications for which one should go for urine analysis? What is dipstick test of urine analysis? Which abnormalities can be checked by the dipstick test ? What indicates a UTI on dipstick? 2+2+4+2
- c) What is the working principle of glucometer device in measuring the blood glucose level? Add a note on glucometer test strip. What is A1C Test? How is this used to diagnose type2 diabetes and prediabetes? 2+3+2+3
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