

U.G. 4th Semester Examination - 2022

ZOOLOGY

[HONOURS]

Skill Enhancement Course (SEC)

Course Code : ZOOL-H-SEC-T-02(A&B)

Full Marks : 40 Time : 2 Hours

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

ZOOL-H-SEC-T-02A

1. Answer any **five** questions of the following:
2×5=10

- a) What is silk?
- b) What is chandraki?
- c) What is moriculture?
- d) What do you mean by a Danier?
- e) Why do you stifle the cocoon?
- f) Explain the composition of silk.

- g) Write the causative agents of court and pebrine of silk moth.
 - h) Name two host plants of tasar moth.
2. Answer any **two** questions of the following:
5×2=10
- a) i) What are the environmental conditions required for seed cocoon preservation?
 - ii) What do you by latkoa, matka, reeled silk and spun silk? 2+3
 - b) i) Write down the name of the indigenous races of silkworm with their distribution and characteristics.
 - ii) What is the correct age of eggs for hot acid treatment? 4+1
 - c) Describe the structure of silk gland and mention the function of each part. 5
 - d) i) Write down the characteristic features of matured larva of *Bombyx mori*.
 - ii) Distinguish between male and female moth of *Bombyx mori*. 3+2
3. Answer any **two** questions of the following:
10×2=20
- a) i) Explain in detailed about the life-cycle of *Bombyx mori*.

- ii) Distinguish between hibernating and non-hibernating eggs of silkworm. 8+2
- b) i) What is spinning? Discuss in brief the process of spinning the cocoon. 1+5
- ii) Write down the symptoms and preventive measures of any two diseases of Mulberry plants. 4
- c) Briefly state the symptoms and prevention of different bacterial and fungal diseases in different stages of mulberry silkworm. 5+5
- d) i) What is voltinism? Distinguish among uni, bi and multivoltine races of silkworm. 1+2
- ii) Briefly discuss about the useful by-products of the silk industry. 3
- iii) Write down the characteristics of fertilized eggs of silkworm. 3
- iv) What do you mean by Rendita? 1

OPTION-B
ZOOL-H-SEC-T-02B

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

2×5=10

- a) What is the normal value of ESR? What does it indicate if ESR value is higher than normal range?
- b) Make a list of disorders that can be diagnosed by urine analysis.
- c) Write the symptoms of hyperglycemia.
- d) How is ELISA used for diagnosis of infectious diseases?
- e) What do you mean by 'good' and 'bad' cholesterol?
- f) Mention the four mechanisms of antibiotic resistance.
- g) What is the basic difference between PET scan and CT scan?
- h) What is meant by pathology lab?

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

5×2=10

- a) Discuss briefly about the possible microscopic findings from urine sample. What is the difference between urinalysis and a urine culture? 3+2=5

b) What are the normal differential count values for WBCs in a healthy person? Which conditions are indicated by an increase in neutrophils and decrease in lymphocytes?

$$3+2=5$$

c) What are the five tests that are included in lipid profiling? What are the optimal level for each of the standard tests in a lipid panel?

$$2\frac{1}{2}+2\frac{1}{2}=5$$

d) Prepare a table presenting definition and cut off value for diabetes of fasting blood glucose tests, random blood sugar test and oral glucose tolerance test. How do you differentiate between type 1 and type 2 diabetes? 3+2=5

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

$$10\times 2=20$$

a) What is metastasis? Add a note on role of PET scan in detection of metastasis. Discuss the mechanism by which an MRI scan produce an image. What is the difference between T1 and T2 MRI?

$$1+3+4+2=10$$

b) What is sandwich ELISA? Discuss the principle by which hepatitis B surface antigen (HbsAg) is detected by ELISA. Write a note on Microscopy as a diagnostic tool in pulmonary tuberculosis.

$$2+4+4=10$$

c) In which situation a liver function test is recommended by doctor? Make a list of substances that are often checked from blood sample during LFT. Give a brief idea about the following LFT – ALT, AST, ALP, LD. State the diagnostic result of the situation– elevated alkaline phosphatase + GGT + bilirubin out of proportion to AST and ALT. 2+2+4+2=10

d) Write short notes on: $2\frac{1}{2}\times 4=10$

i) P.C.V.

ii) Bence-Joncs protein urine test

iii) Uses of Antibiotic sensitivity testing

iv) CT Scan
