U.G. 4th Semester Examination - 2020

ZOOLOGY

[HONOURS]

Skill Enhancement Course (SEC)

Course Code : ZOOL(H)SEC-T-2(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-2(A)

1. Answer any **five** of the following : 2×5=10
   a) Mention the name of three layers found in a cocoon.
   b) How we can distinguish a male 5th instar larva from a female larva?
   c) Mention the location and function of Filippi's gland.
   d) What is mildew? How it can be controlled?
   e) Mention the scientific name of two non-mulberry silkworms.
   f) Write down the name of four indigenous races of silkworm.

   g) Mention the chemical formula of Fibroin and Sericin.
   h) Name the causal organism of Flacherie disease of silkworms.

2. Answer any **two** of the following: 5×2=10
   a) Mention the symptoms appear due to infestation of Uzi fly in silkworm and mention the methods of its control. 2½+2½=5
   b) Write a short note on the structure of silk gland. 5
   c) Mention the steps required prior to rearing the silkworm and name the appliances required for this purpose. 2½+2½=5
   d) Name the disease caused by *Nosema bombycis*, mention its effects on egg, larva and pupa. 1+4=5

3. Answer any **two** of the following: 10×2=20
   a) Distinguish among uni, bi and multivoltine races of silk moth. Describe the life history of mulberry silk moth. 2+8=10
   b) What do you mean by Reeling? Describe the procedure prior to reeling of silk from cocoons. 1+9=10
   c) Describe the structure of different types of mountages commonly used for spinning cocoon. Mention merits and demerits of their uses. 8+2=10

d) Briefly state the symptoms and prevention of different bacterial and fungal diseases in different stages of mulberry silkworm. 5+5=10

OPTION-B

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

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

a) Mention of the pre-meal and post-meal markers used in Glucometer.

b) Why Leishman stain is used in Differential Leucocytes Count?

c) The color of urine is determined mainly by (choose the correct answer)

i) diet

ii) filtration rate

iii) byproducts of red blood cell breakdown

iv) filtration efficiency

d) Which media is used in Kirby-Bauer disk diffusion method for antimicrobial susceptibility tests (AST)?

e) What are the most common investigations covered in a Liver Function Test?

f) Mention any two serological markers for detection of acute hepatitis.

g) What are the three major functions of platelets? What happens when your platelet count is high?

h) Write the full form of HDL and LDL and mention their normal value in a healthy person.

2. Answer any **two** of the following: 5×2=10

a) i) What do you mean by FBS test? When and how often the blood sugar is tested in Type 1 diabetes cases?

ii) Give a chart of target ranges of blood sugar levels for people without diabetes and people with diabetes according to timing of test. 3+2=5

b) i) Write the principle and mention the reagents needed for platelet count using haemocytometer.

ii) What is an Erythrocyte Sedimentation Rate (ESR)? (1½+1½)+2=5

c) i) Mention the symptoms and signs for pulmonary tuberculosis diagnosis.

ii) What are the roles of tuberculin skin testing and chest radiography in pulmonary tuberculosis? 2+3=5

d) i) Write the full form of PET with its importance in detection of bone metastasis.

ii) How useful is PCR in the diagnosis of malaria? 3+2=5

3. Answer any **two** of the following: 10×2=20

a) Why are proteins considered as the major abnormal constituents of human urine? Mention the probable cause of such abnormalities. 4+6=10

b) Write the importance of Antibiotic Sensitivity Test. Elucidate briefly any two Antibody sensitivity tests commercially used in laboratory. 2+8=10

c) What do you mean by "Good Cholesterol" and "Bad Cholesterol"? How are Cholesterol and triglyceride related? Describe briefly the procedure of measurement blood cholesterol in the laboratory. 1+2+7=10

d) What does medical imaging means? What types of imaging techniques are referred for severe fractures caused by a high-impact trauma and for pathologic fractures? Discuss briefly the constituents of MRI scanner. State the differences between X-ray and MRI. 2+2+3+3=10

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