

2022

ZOOLOGY (Honours)

Paper Code : ZOOL-H-SEC-2 (A/B)

(Aquarium Fish Keeping/Medical Diagnostics Techniques)

(CBCS)

Full Marks: 40

Time: Two hours

*The figure in the margin indicates full marks.
Candidates are required to give answers
(by selecting either SEC-2A: Aquarium Fish Keeping
Or SEC-2B: Medical Diagnostics Techniques)
with their own words as far as practicable*

SEC-2A : Aquarium Fish Keeping

1. Answer any *twelve* questions from the following : $\frac{1}{2} \times 12 = 6$

- a) Guppies are happiest in the tropical environment. (True/False)
- b) Name one larvicidal fish.
- c) Ornamental fishes are very easy to breed. (True/False)
- d) Which country is known as the “sleeping giant” of global ornamental fish trade?
- e) Mention the function of masking tape.
- f) The temperature in a tropical aquarium should be maintained at 18-29°C.
(True/False)
- g) What is the gestation period in Guppy fish?
- h) The food habit of Molly fish is _____. (Fill in the blank)
- i) What is gonopodium?
- j) Give the scientific name of “Angel fish”.
- k) Give an example of egg laying ornamental fish.
- l) Pterophyllum means _____. (Fill in the blank)
- m) Fishes should be bathed in _____ solution before putting them in aquarium.
(Fill in the blank)
- n) For healthy growth, aquarium fishes should be provided with more than the required food. (True/False)
- o) Which fish is referred to as ‘mosquito fish’?
- p) Write the scientific name of Blue morph.

(2)

- q) The kissing gourami is native of _____. (Fill in the blank)
- r) Write down an example of 'egg scatterers' in aquarium fish keeping.

2. Answer any *four* questions from the following : 2½×4=10

- a) Give a brief idea about "Living Jewels".
- b) Write a short note on stocking density of aquarium.
- c) Write briefly on invasive species.
- d) Classify the natural live feed organisms with examples.
- e) Write about common characteristics of gold fishes.
- f) Write a short note on sexual dimorphism of Angel fish.
- g) Mention the factors associated with fish transport.

3. Answer any *six* questions from the following : 4×6=24

- a) What are ornamental fishes? Mention the reason for keeping them in aquarium culture. 1+3
- b) Write scientific names of two exotic and two endemic species of aquarium fishes.
- c) Give an account of the function of aquarium filters.
- d) Analyse the potential of aquarium fishes as larval predators.
- e) Write a short note on physico-chemical properties essential for the maintenance of an aquarium.
- f) Give a brief account on the potential scope of aquarium fish keeping industry as a cottage industry.
- g) Mention the characteristics of an aquarium fish tank.
- h) What are the basic requirements to start ornamental fish farming business?
- i) Mention the techniques of transportation of brood fish.
- j) Write a short note on formulative fish feed.

SEC-2B : Medical Diagnostics Techniques

1. Attempt any *twelve* questions from the following : $\frac{1}{2} \times 12 = 6$
- a) Heparin and histamine released by which blood cell?
 - b) Glomerular filtration rate can be used to control homeostasis and blood pressure.
(True/False)
 - c) Thrombocytes are called as _____.(Fill in the blank)
 - d) What is anuria?
 - e) Which diabetes type is most common in children?
 - f) TB infection is usually treated with rifampin and ethambutol. (True/False)
 - g) Which organ is usually affected by Hepatitis B infection?
 - h) Methicillin resistance is detected by _____ test.(Fill in the blank)
 - i) Serum differs from plasma as it lacks _____. (Fill in the blank)
 - j) Name the process by which a malignant cell spreads amongst normal cells.
 - k) The type of sample usually taken for liver function test is _____. (Fill in the blank)
 - l) Expand ELISA.
 - m) What is the full form of PP in sugar test?
 - n) Plasmin is a proteolytic enzyme capable of dissolving blood clot. (True/False)
 - o) Blood in urine sample can be detected by _____ test. (Fill in the blank)
 - p) The infective stage of malarial parasite in human is _____. (Fill in the blank)
 - q) Acid fast test is done to detect _____. (Fill in the blank)
 - r) Powerful magnets used to polarise and excite hydrogen nuclei in water molecules in human tissue involves _____ scan. (Fill in the blank)
2. Attempt any *four* questions from the following : $2\frac{1}{2} \times 4 = 10$
- a) Discuss in brief about hypertension.
 - b) Mention the functions of platelets.
 - c) Discuss briefly about minimum inhibitory concentration.
 - d) What is blood? State its composition. $1 + 1\frac{1}{2}$
 - e) Write a short note on hyperglycaemia.
 - f) What do you mean by systolic and diastolic blood pressure?
 - g) Differentiate between X-Ray and CT scan.

3. Attempt any *six* questions from the following :

4×6=24

- a) What physical characteristics are considered for urine analysis? Name some abnormal constituents of urine. 2+2
 - b) Mention the principle of E.S.R determination.
 - c) Write the full form of HDL. State its clinical significance. 1+3
 - d) What is PCV? State the composition and use of Leishman's stain. 1+3
 - e) Write a short note on minimum bactericidal concentration.
 - f) Distinguish between type 1 and type 2 diabetes.
 - g) Write down the procedure of differential leucocytes count test.
 - h) Write the name of the causative agent of tuberculosis. Mention the symptoms of the disease. 1+3
 - i) What is meant by PET scan? How does PET works? 2+2
 - j) Write down the name of causative agent of malignant malaria. Give a brief idea about the preventive measures of the disease.
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