

(DZOO21)

M.Sc. DEGREE EXAMINATION,
DECEMBER 2019.

Second Year

Zoology

ANIMAL PHYSIOLOGY

Time : Three hours

Maximum : 70 marks

Answer ALL questions.

1. (a) What is digestion? Give an account on the role of enzymes in digestion.

Or

(b) Write short notes on :

(i) Minerals

(ii) Carbohydrates.

2. (a) What is Respiration? Give a detailed account of respiration in animals.

Or

(b) Write short notes on :

(i) Transport of gases

(ii) Circulatory system.

3. (a) Describe the mechanism of nerve impulse transmission in animals.

Or

(b) Write short notes on :

(i) Heart

(ii) Brain.

4. (a) Describe the ionic and osmotic balance in animals.

Or

(b) Write short notes on :

(i) excretion

(ii) formation of urine.

5. (a) What is the role of hormones in respiration? Explain.

Or

(b) Write short notes on :

(i) Types of muscles

(ii) Intercellular Communication.

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AQUACULTURE

Time : Three hours

Maximum : 70 marks

Answer ALL questions.

1. (a) What is the criteria for the selection of species for culture?

Or

- (b) Write short notes on
(i) Hypophysation
(ii) Bundh breeding

2. (a) Describe the design and construction of fish pond.

Or

- (b) Write short notes on
(i) Stocking ponds
(ii) Exotic fishes

3. (a) Give an account on culture of chanos chanos.

Or

- (b) Write short notes on
(i) Penaeus monodon
(ii) Air breathing fishes

4. (a) Give an account on sewage-fed fish culture.

Or

- (b) Write short notes on
(i) Edible oysters
(ii) Sea weeds

5. (a) Describe the common diseases in culture ponds.

Or

(b) Write short notes on

(i) Androgenesis

(ii) Cryopreservation.

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PARASITOLOGY AND IMMUNOLOGY

Time : Three hours

Maximum : 70 marks

Answer ALL questions.

Each question carry equal marks.

1. (a) Give a detailed account on morphology and life cycle of Trypanosoma gambiense.

Or

- (b) Write short notes on

- (i) Giardia intestinalis
(ii) Entamoeba histolytica

2. (a) Describe the biology, life cycle and nature of infection of Diphyllobothrium latum.

Or

- (b) Write short notes on

- (i) Schistosoma mansoni
(ii) Opisthorchis sinensis

3. (a) Give an account on biology and life cycle of Ancylostoma duodenale.

Or

- (b) Write short notes on

- (i) Trichuris trichiura
(ii) Drawnwulus medinensis

4. (a) Give an account on structure and major class of antigens.

Or

- (b) Write short notes on

- (i) Overview of immunology
(ii) Acquired immunity

5. (a) Give an account on the organs of the immune system

Or

(b) Write short notes on

(i) IgG

(ii) Antigen

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BIOTECHNOLOGY

Time : Three hours

Maximum : 70 marks

Answer ALL questions.

1. (a) Give an account on the importance and applications of biotechnology.

Or

- (b) Write short notes on
(i) Different fields of biotechnology
(ii) Scope and overview of biotechnology

2. (a) Give an account on vectors used in genetic engineering.

Or

- (b) Write short notes on
(i) Gene cloning
(ii) r-DNA technology

3. (a) Give an account on cell suspension and single cell cultures.

Or

- (b) Write short notes on
(i) Callus culture
(ii) Sterilization of media

4. (a) Give a detailed account on applications of animal cell culture.

Or

- (b) Write short notes on
- (i) Techniques of animal tissue culture.
 - (ii) Growth of animal cell lines in laboratory.
5. (a) Give an account on the industrial production of alcohol.

Or

- (b) Write short notes on
- (i) Vaccines
 - (ii) Antibiotics
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