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BF—108—2016

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2016

ZOOLOGY

Paper XIII (A) : (Aquaculture—I)

Or

Paper XIII (B) : [Applied Parasitology (Parasitic Protozoa and
Platyhelminthes—I)]

Or

Paper XIII (C) : (Entomology—I)

Or

Paper XIII (D) : (Environmental Biology—I)

(Friday, 9-12-2016)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

Paper XIII (A) : (Aquaculture)

N.B. :- (i) Attempt *All* questions.

(ii) *All* questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. Write notes on any *four* of the following :

8

(a) Monoculture.

(b) Concept of intensive aquaculture.

(c) Use of sewage in fish culture.

(d) Biological control of aquatic weeds.

(e) Construction of aquarium.

(f) Freshwater prawn culture.

2. Write notes on any *two* of the following :

8

(a) Definition and importance of aquaculture

(b) Polyculture

(c) Paddy-cum fish culture

(d) Cattle-cum fish farming.

P.T.O.

3. Write notes on any *two* of the following : 8
- Pen culture
 - Cage culture
 - Industrial effluents
 - Domestic sewage.
4. Write notes on any *two* of the following : 8
- Advantages and disadvantages of aquatic weeds.
 - Types of aquatic weeds.
 - Culture of pearl oyster.
 - Culture of edible oyster culture.
5. Solve any *one* of the following : 8
- Physical and chemical properties of water.
 - Maintenance of aquarium and significance of aquarium keeping.

OR

Paper XIII (B) : [Applied Parasitology (Parasitic Protozoa and Platyhelminthes)]

- N.B.* :— (i) Attempt *All* questions.
(ii) *All* questions carry equal marks.
(iii) Draw well labelled diagrams wherever necessary.

1. Write notes on any *four* of the following : 8
- Parasitism
 - Endoparasite
 - Mechanical vector
 - Scolex of *Taenia saginata*
 - Onchosphere
 - Miracidium larva.
2. Write notes on any *two* of the following : 8
- General organization of parasitic Protozoa.
 - Structure of *Trypanosoma gambiense*.

- (c) Structure of *Giardia intestinalis*.
- (d) Life cycle and control measures of *Trichomonas vaginalis*.
3. Write notes on any *two* of the following : 8
- (a) Life cycle of *Balantidium coli*.
- (b) Structure of *Entamoeba coli*.
- (c) Morphology of *Sarcocystis cruzi*.
- (d) Pathogenicity and control measures of *Eimeria tenella*.
4. Write notes on any *two* of the following : 8
- (a) General organisation of cestodes.
- (b) Reproductive organs of Trematodes.
- (c) Morphology of *Taenia saginata*.
- (d) Life cycle of *Echinococcus granulosus*.
5. Write long answer on any *one* of the following : 8
- (a) Describe the morphology, life cycle and pathogenicity of *Paragonimus westermani*.
- (b) Give an account of parasitic adaptations with special references to Trematodes.

OR

Paper XIII (C) : (Entomology—I)

- N.B.* :— (i) Attempt *All* questions.
- (ii) *All* questions carry equal marks.
- (iii) Draw well labelled diagrams wherever necessary.

1. Write notes on any *four* of the following : 8
- (a) Define Entomology
- (b) Hand nets
- (c) Lemon butter fly
- (d) Holometabola
- (e) Mandible of cockroach
- (f) Larva in insect.

P.T.O.

2. Write notes on (any *two*) : 8
- Industrial entomology
 - Head in insects
 - Pinning of insects
 - Methods of insects collection.
3. Write notes on (any *two*) : 8
- Explain external morphology of cockroach.
 - Explain respiratory system of cockroach.
 - Explain nervous system of cockroach.
 - Explain digestive system of cockroach.
4. Write notes on (any *two*) : 8
- Explain salient features of order Diptera with suitable examples.
 - Explain salient features of order Isoptera with suitable examples.
 - Explain salient features of order Coleoptera with suitable examples.
 - Explain salient features of order Odonata with suitable examples.
5. Describe in detail any *one* of the following : 8
- Describe metamorphosis in insects.
 - Explain effect of humidity and food on insect life.

OR

Paper XIII (D) : (Environmental Biology—I)

- N.B.* :— (i) All questions are compulsory.
(ii) All questions carry equal marks.
(iii) Draw well labelled diagrams wherever necessary.

1. Answer any *four* of the following : 8
- Hydrosphere
 - Food web
 - Ex-situ conservation
 - Importance of wildlife
 - Intertidal habitat

2. Answer any *two* questions of the following : 8
- (a) What is lithosphere ? Describe process of soil formation.
 - (b) Carbon cycle
 - (c) Structure and composition of atmosphere.
 - (d) Physiochemical properties of water.
3. Answer any *two* questions of the following : 8
- (a) What is energy flow ? Describe the energy flow in ecosystem.
 - (b) Intertidal habitat.
 - (c) Food chain
 - (d) Components of ecosystem.
4. Answer any *two* questions of the following : 8
- (a) Biodiversity of India.
 - (b) In situ conservation
 - (c) Threats to biodiversity
 - (d) Importance of biodiversity.
5. Answer any *one* question of the following : 8
- (a) Management and conservation of wildlife.
 - (b) Aims of wildlife conservation.