

Roll No. _____

[Total No. of Pages : 2

PGIIS-069-A-22
M.Sc. III Semester Degree Examination
ZOOLOGY
Environmental Biology
Paper - SCT - 3.1

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidate:

- i. All questions carry equal marks.
- ii. Illustrate your answers wherever necessary.

Answer the following in brief.

(8×2=16)

1.
 - a. Trophic level.
 - b. Tidal energy.
 - c. Biotic components.
 - d. Incineration.
 - e. Chemical treatment.
 - f. LC_{50} .
 - g. Natality.
 - h. Edge ecology.

2. Explain the biogeochemical cycle of carbon.

(16)

(OR)

Explain the sources, effects and control measures of water pollution.

3. Give a detailed account of molecular mechanism of toxicant action.

(16)

(OR)

Discuss the advantages and disadvantages of bioremediation.

4. Write an explanatory note on any **Two** of the following :

(2×8=16)

- a. Community structure and attributes.
- b. Biodiversity management approaches.
- c. Acute and chronic toxicity.

5. Write short notes on any Four of the following :

(4×4=16)

- i. Bio accumulation risk assessment.
 - ii. Waste water treatment methods.
 - iii. Global warming.
 - iv. Nuclear energy.
 - v. Characteristics of population.
 - vi. Soil pollution.
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Roll No. _____

[Total No. of Pages : 2

PGIIS-070-A-22
M.Sc. III Semester Degree Examination
ZOOLOGY
Human Physiology
Paper - OET - 3.1

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

- i. All questions carry equal marks.
- ii. Illustrate your answers wherever necessary.

1. Answer the following in brief.

(8×2=16)

- a) Cell.
- b) Smooth muscle.
- c) Vitamins.
- d) Digestion.
- e) Veins.
- f) ECG.
- g) Nerves.
- h) Cardiac arrest.

2. a) Explain Functional organization of human body.

(16)

(OR)

b) Describe physiology of digestion and absorption.

3. a) Give an account of composition of blood and blood groups.

(16)

(OR)

b) Explain structural and functional differentiation of brain.

4. Write explanatory note any Two of the following.

(2×8=16)

- a) Gastroenteritis.
- b) Cardiac arrhythmias.
- c) Central Nervous System.

5. Write short notes on any Four of the following.

(4×4=16)

- a) Atherosclerosis.
- b) Myocardial infarction.
- c) Hyperacidity.
- d) Balance Diet.
- e) Brain Waves.
- f) Physiology of Dream.

Roll No. _____

[Total No. of Pages : 2

PGIIS-068-A-22
M.Sc. III Semester Degree Examination
ZOOLOGY
Animal Physiology
Paper - HCT - 3.2

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

1. All questions carry equal marks.
2. Illustrate your answers wherever necessary.

1. Answer the following brief.

(8×2=16)

- a) Urine formation.
- b) Respiratory gases.
- c) Muscular dystrophy.
- d) Blood coagulation.
- e) Ionic channels.
- f) Rhythmite.
- g) Synapses.
- h) Alkaloids.

2. a) Describe the process involved in food digestion and absorption in mammals. (16)

(OR)

b) Explain the formation of various nitrogenous waste products.

3. a) Write role of neurotransmitters in synaptic transmission. (16)

(OR)

b) Explain the mechanism of molecular events of muscular contraction in detail.

4. Write explanatory notes on any Two of the following :

(2×8=16)

- a) Anatomy of mammalian kidney.
- b) Energetics of muscle contraction.
- c) Patch clamp.

5. Write short notes on any **Four** of the following :

(4×4=16)

- i) Henley's loop.
 - ii) Action potential.
 - iii) Types of neurons.
 - iv) Acidosis.
 - v) Respiratory quotient.
 - vi) Muscle proteins.
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