SH ZOO–08

2019

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(BIOCHEMISTRY OF METABOLIC PROCESS)

SECTION – A

1. Answer the following : 2 × 6

(*a*) Glycogenesis

(*b*) Ketone bodies

(*c*) Allosteric enzymes

(*d*) Competitive inhibition

(*e*) Oxidative deamination

(*f*) Glucogenic amino acids.

SECTION – B

Answer **all** questions : 12 × 4

2. Give a detailed account of various steps of Glycolysis. 12

Or

Write notes on : 6 × 2

(*i*) Elaborate the pathway of Gluconeogenesis

(*ii*) Pentose phosphate pathway.

3. Elucidate the metabolic pathway of biosynthesis of palmitic acid. 12

Or

Write notes on : 6 × 2

(*i*) Ketogenesis and its regulation

(*ii*) β-oxidation of fatty acids.

4. Discuss catabolism of Amino-acids. 12

Or

Write notes on : 6 × 2

(*i*) Urea cycle

(*ii*) Ketogenic amino-acids.

5. Describe the mechanism of enzyme action. Add a note on inhibition of enzyme action. 12

Or

Write notes on : 6 × 2

(*i*) Respiratory chain

(*ii*) Elucidate Michaelis-Menten Kinetics.

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SH ZOO—09

2019

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(CELL BIOLOGY)

SECTION—A

1. Answer the following : 2×6

   (*a*) Plasmodesmata

   (*b*) Tight junctions

   (*c*) Peroxisomes

(*d*) Pinocytosis

(*e*) Metastasis

(*f*) Channel-linked receptors.

SECTION– B

Answer **all** questions : 12 × 4

2. Give an account of a Prokaryotic cell. List the major difference between Prokaryotic and Eukaryotic cell. 12

Or

Write notes on : 6 × 2

(*i*) Fluid mosaic model

(*ii*) Passive transport across cell membrane.

3. Describe ultrastructure of Golgi complex. Add a note on its functions. 12

Or

Write notes on : 6 × 2

(*i*) Lysosomes

(*ii*) Structure of mitochondria.

4. Explain the cell cycle and its regulation with suitable diagrammatic presentation. 12

Or

Write notes on : 6 × 2

(*i*) G-Protein coupled receptors

(*ii*) Enzyme-linked receptors.

5. Elucidate the extrinsic and intrinsic pathways of apoptosis. 12

Or

Write notes on : 6 × 2

(*i*) Classification of tumours

(*ii*) Characteristics of Cancer cells.

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2019

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(PRINCIPLE OF GENETICS)

SECTION–A

1. Answer the following : 2 × 6

(*a*) Test cross

(*b*) Pleiotropy

(*c*) Complete Linkage

(*d*) Induced Mutations

(*e*) Non-disjunction

(*f*) DNA repair mechanism.

SECTION–B

Answer all questions : 12 × 4

2. What is sex linked inheritance? Explain the phenomenon with reference to Drosophila giving suitable examples. 12

Or

Write notes on : 6 × 2

(*i*) Epistasis

(*ii*) Multiple alleles.

3. Describe the mechanism, types and significance of crossing over. 12

Or

Write notes on : 6 × 2

(*i*) Interference and Coincidence

(*ii*) Somatic Cell hybridization.

4. What is gene mutation? Give an account of substitution mutations. 12

Or

Write notes on : 6 × 2

(*i*) Deletion

(*ii*) Polyploidy.

5. Explain the chromosomal mechanism of sex determination in animals. 12

Or

Write notes on : 6 × 2

(*i*) Polygenic inheritance

(*ii*) Sex influenced and Sex limited characters.

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S/AA PHH–04

2019

(4th Semester)

Time : 2 hours

Full Marks : 40

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(PUBLIC HEALTH AND HYGIENE)

SECTION – A

1. Answer *all* the following questions : 2 × 4

(*a*) Name disorders caused by deficiency of vitamins.

(*b*) What is acid rain ?

(*c*) Write what are the health hazards.

(*d*) What is AIDS ? Mention mode of transmission of AIDS.

SECTION – B

Answer **all** questions : 8 × 4

2. Write short notes on :

(*i*) Malnutrition

(*ii*) Community health.

Or

What is food ? How food is classified. Describe their importance ?

3. Write short notes on :

(*i*) Ozone layer depletion

(*ii*) Greenhouse effect.

Or

Describe the sources, effect and prevention of water pollution.

4. Write short notes on :

(*i*) Occupational health hazards

(*ii*) Soil erosion.

Or

Discuss various sources of environmental degradation and explain how it is controlled.

5. Write short notes on :

(*i*) Rabies

(*ii*) Coronary heart diseases.

Or

Give an account of communicable diseases and add a note on their control measures.

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Total Pages—3

SHZOO(08)

2018

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer **all** questions

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(BIOCHEMISTRY OF METABOLIC PROCESS)

SECTION – A

1. Answer the following : 2×6

   (*a*) Glycogenolysis

   (*b*) Activation energy

   (*c*) Oxidative deamination

   (*d*) Uncouplers

(*e*) Ketone bodies

(*f*) Factors affecting enzyme action.

SECTION – B

Answer **all** questions : 12 × 4

2. Describe the steps of citric acid cycle with suitable presentation. Add a note on the enzymes involved in the regulation of the cycle. 12

Or

Write notes on : 6 × 2

(*i*) Shuttle systems

(*ii*) Glycolysis.

3. Explain β-oxidation of fatty acids in detail. 12

Or

Write notes on : 6 × 2

(*i*) Metabolic pathway of biosynthesis of Palmitic Acid.

(*ii*) Ketogenesis and its regulation.

4. Discuss catabolism of amino acids. 12

Or

Write notes on : 6 × 2

(*i*) Urea cycle

(*ii*) Ketogenic amino acids.

5. Give an account of oxidative phosphorylation in mitochondria. 12

Or

Write notes on : 6 × 2

(*i*) Michaelis-Menten equation

(*ii*) Inhibition of enzyme action.

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SHZOO(09)

2018

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer **all** questions

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(CELL BIOLOGY)

SECTION – A

1. Answer the following : 2×6

   (*a*) Mycoplasm

   (*b*) Gap junctions

   (*c*) Peroxisomes

   (*d*) Chemiosmotic hypothesis

(*e*) Check points in cell cycle

(*f*) Metastasis.

SECTION – B

Answer **all** questions :

2. Describe various models of plasma membrane. 12

Or

Write notes on : 6 × 2

(*i*) Prokaryotic cell

(*ii*) Desmosomes.

3. Briefly describe the ultrastructure and functions of endoplasmic reticulum. 12

Or

Write notes on : 6 × 2

(*i*) Golgi apparatus

(*ii*) Semi autonomous nature of mitochondria.

4. Explain the cell cycle and its regulation with suitable diagrammatic presentation. 12

Or

Write notes on : 6 × 2

(*i*) G protein-coupled receptors

(*ii*) Types of chemical signals.

5. Elucidate the extrinsic and intrinsic pathways of apoptosis. 12

Or

Write notes on : 6 × 2

(*i*) Classification of tumours

(*ii*) Characteristics of cancer cells.

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Total Pages—3

SHZOO(10)

2018

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer all questions :

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(PRINCIPLES OF GENETICS)

SECTION – A

1. Answer the following : 2×6

   (*a*) Back cross

   (*b*) Lethal alleles

   (*c*) Coupling and repulsion hypothesis

   (*d*) Inversion

(Turn Over)

(*e*) Chemical mutagens

(*f*) Barr body.

SECTION – B

Answer all questions

2. What are multiple alleles ? Discuss the phenomenon of multiple allelism with suitable examples. 12

Or

Write notes on :

(*i*) Incomplete dominance and co-dominance

(*ii*) Colourblindness.

3. What is Crossing Over? Describe the mechanism and significance of crossing over. 12

Or

Write notes on :

(*i*) Linkage

(*ii*) Somatic cell hybridization.

4. Give an account of chromosomal mutations involving changes in number and position of genes. 12

Or

Write notes on :

(*i*) Frame shift mutation

(*ii*) Polyploidy.

5. Discuss chromosomal mechanism of sex determination in animals. 12

Or

Write notes on :

(*i*) Sex-influenced and sex limited characters

(*ii*) Polygenic inheritance.

Total Pages—3

SGZOO(02)

2018

(4th Semester)

Time : $2\frac{1}{2}$ hours

Full Marks : 60

Answer **all** questions

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(ENVIRONMENT AND PUBLIC HEALTH)

SECTION – A

1. Answer the following : 2×6

   (*a*) Types of honey bee.

   (*b*) Honey.

   (*c*) Pests and parasites of Silkworm.

   (*d*) Fish diseases.

(e) Fishery by-products.

(f) Exotic breeds of Fowl.

SECTION – B

Answer **all** questions :

2. What is the modern method of Apiculture ? Give a brief description of various appliances used in modern method with different model of hives. 12

Or

Write notes on : 6×2

(i) Diseases of honey bee

(ii) Honey extraction techniques.

3. Describe the various tools and methodology involved in the rearing of 'Bombyx mori'. Add a note on the diseases of Silkworm. 12

Or

Write notes on : 6×2

(i) Silk reeling techniques

(*Continued*)

(ii) Types of silk and silkworms in India.

4. Give an outline idea of Induced breeding in Fishes. 12

Or

Write notes on : 6×2

(i) Preservation and processing of harvested fish

(ii) Role of water quality in aquaculture.

5. What is poultry farming ? Discuss the type of shelter, food and feeding in fowl. 12

Or

Write notes on : 6×2

(i) Commercial importance of Dairy farming

(ii) Poultry diseases and their control.

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S/AA PHH–04

2019

(4th Semester)

Time : 2 hours

Full Marks : 40

Answer from **both** the Sections as per direction

The figures in the right-hand margin indicate marks

Candidates are required to answer in their own words as far as practicable

(PUBLIC HEALTH AND HYGIENE)

SECTION – A

1. Answer *all* the following questions : 2 × 4

(*a*) Name disorders caused by deficiency of vitamins.

(*b*) What is acid rain ?

(*c*) Write what are the health hazards.

(*d*) What is AIDS ? Mention mode of transmission of AIDS.

SECTION – B

Answer **all** questions : 8 × 4

2. Write short notes on :

(*i*) Malnutrition

(*ii*) Community health.

Or

What is food ? How food is classified. Describe their importance ?

3. Write short notes on :

(*i*) Ozone layer depletion

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4. Write short notes on :

(*i*) Occupational health hazards

(*ii*) Soil erosion.

Or

Discuss various sources of environmental degradation and explain how it is controlled.

5. Write short notes on :

(*i*) Rabies

(*ii*) Coronary heart diseases.

Or

Give an account of communicable diseases and add a note on their control measures.

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