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PGIS-N 1039 B-2K13

M.Sc. Ist Semester (CBCS) Degree Examination

Zoology

(Computer Applications and Methods in Biology)

Paper - SCT-1.1

(New)

Time : 3 Hours Maximum Marks : 80

Instructions to candidates:

*Answer **all** questions and illustrate your answer wherever necessary.*

1. Answer the following in brief: **(8×2=16)**

a) Witi connection

b) Cloud printing

c) Principle of spectroscopy

d) CPCSEA

e) Standard deviation.

f) Vital stain.

g) Corel Draw

h) Auto radiography.

2. a) Write an essay on computer assisted teaching in biology. **(16)**

OR

b) What is Chromatography? Explain its principles, types and applications. **(16)**

3. a) Write an essay on networking connections and its application. **(16)**

OR

b) Explain different types of tracer techniques and add a note on their application. **(16)**

4. Write explanatory note on any **two** of the following: **(2×8=16)**

   a) Care and handling of laboratory animals.

   b) Histo chemical techniques.

   c) Principle and application of centrifugation.

5. Write short note on any **four** of the following: **(4×4=16)**

   a) Bio telemetry

   b) Scanning electron microscope

   c) Writing of science report.

   d) Programming languages.

   e) Gradient centrifugation.

   f) Bio informatics

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PGIS-N 1037 B-2K13

M.Sc. Ist Semester (CBCS) Degree Examination

Zoology

(Biology of Non-Chordatas)

Paper - HCT-1.2

(New)

Time : 3 Hours Maximum Marks : 80

Instructions to candidates:

*Answer **all** questions and illustrate your answer wherever necessary.*

1. Answer the following in brief: **(8×2=16)**

a) Syngammy
b) Tube feet
c) Nephridia
d) Lophophore
e) Coelom ducts
f) Structure of flagella.
g) Haemo cyanin.
h) Setae.

2. a) Describe principle of hydrostatic movements in invertebrate locomotion with suitable examples. **(16)**

OR

b) Explain the respiratory organs, and mechanism in invertebrates with suitable examples. **(16)**

3. a) Give a detail account on mode of Reproduction in non-chordates with suitable examples. **(16)**

OR

b) Explain food and feeding habits and mechanism in Mollusca. **(16)**

4. Write explanatory notes on any **two** of the following: **(2×8=16)**

   a) Mechanism of excretion in Echinoclermata.

   b) Free lavval forms.

   c) General characters and affinitie of phoronida.

5. Write short note on any **four** of the following: **(4×4=16)**

   a) Sense organs.

   b) Malphigian tubules.

   c) Ctenophora

   d) Respiratory pigments.

   e) Veliger

   f) Symbiotic nutrition.

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PGIIIS-N 1035 B-2K13

M.Sc. Ist Semester (CBCS) Degree Examination

Zoology

(Animal Systematics)

Paper - HCT-1.1

(New)

Time : 3 Hours Maximum Marks : 80

Instructions to candidates:

*Answer **all** questions and illustrate your answer wherever necessary.*

1. Answer the following in brief: **(8×2=16)**

a) Priory Weighting
b) Beta Taxonomy
c) HMS Beagle
d) Cestoda
e) Define Genotype
f) Proto Chordata
g) Species
h) Cataloging

2. a) Present a detailed account of the taxonomic procedures. **(16)**

OR

b) Classify phylum porifera with examples and mention the general characters of the group. **(16)**

3. a) Present a detailed account on theories of biological classification. **(16)**

OR

b) Mention the general characters and give the classification of phylum Mollusca. **(16)**

4. Write explanatory notes on any **two** of the following: **(2×8=16)**

a) Cladistic Approach.

b) General characters of Arthropoda.

c) Importance of taxonomy.

5. Write short notes on any **four** of the following: **(4×4=16)**

a) Bionominal nomenclature.

b) phylogenetic interrelationship.

c) Sporozoa.

d) Family

e) Lophophorate.

f) Linnaeus.

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PGIS-O 1037-A B-2K13

M.Sc. Ist Semester (Non-CBCS) Degree Examination
Zoology
(Biology of nonchordatas)
Paper - 1.2
(Old)

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates:

Answer all questions and illustrate wherever necessary

1. Answer the following in brief **(8×2=16)**

   a) Asexual reproduction.

   b) Spongeo ceol

   c) Moulting

   d) Cilia

   e) Polyp

   f) Statocyst

   g) Hydrozoa

   h) Coelome

2. a) Explain patterns of reproduction in Coelenterata add a note on alternation of generations. **(16)**

   OR

   b) Discuss organization of respiratory organs in Mollusca **(16)**

3. a) Give a account on coclome and its derivatives in Echinodermata **(16)**

   OR

   b) Explain adaptive radiation in polychaetes **(16)**

4. a) Write explanatory notes on any two of the following **(2×8=16)**

   a) Canal system in porifera

   b) Larval forms in crustacea

   c) Mechanism of respiration in Arthropoda

5. Write short notes on any **four** of the following **(4×4=16)**

   a) Metamorphosis

   b) Hemichordata

   c) Regeneration in porifera

   d) Harmful insects

   e) Commercially important mollucs

   f) Phylogenetic significance

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PGIS-O 1036 B-2K13

M.Sc. Ist Semester (Non-CBCS) Degree Examination

Zoology

(Animal Systematics)

Paper - 1.1

(Old)

Time : 3 Hours Maximum Marks : 80

Instructions to candidates:

*Answer **all** questions and illustrate your answer wherever necessary.*

1. Answer the following in brief: **(8×2=16)**

a) Beta taxonomy

b) Define phenotype

c) Scyphozoa

d) Curating

e) Species

f) HMS Beagle

g) Taxon

h) Passeriformes.

2. a) Discuss in detail the importance of systematics in biology **(16)**

OR

b) Give the classification of Reptiles with examples and enlist the general characters of the Phylum. **(16)**

3. a) Explain the taxonomic procedures. **(16)**

OR

b) Classify phylum Mollusca with examples and mention the general characters of the group. **(16)**

4. Write explanatory notes on any **two** of the following: **(2×8=16)**

a) Uniqueness of sponges.

b) Phoronida.

c) Species concepts.

5. Write short note on any **four** of the following: **(4×4=16)**

a) Trematoda

b) Sporozoa.

c) Binomial nomenclature.

d) Modren trends in taxonomy

e) Hexactinellida.

f) Protochordata.

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PGIS-O 1038-A B-2K13

M.Sc. Ist Semester (Non-CBCS) Degree Examination

Zoology

(Molecular Cell Biology)

Paper - 1.3

(Old)

Time : 3 Hours Maximum Marks : 80

Instructions to candidates:

*Answer **all** questions and illustrate your answer wherever necessary.*

1. Answer the following in brief: **(8×2=16)**

a) Central dogma.

b) Peptide bond

c) Nucleotide

d) Chromatid

e) Replication force.

f) Active port

g) Cilia

h) Telomere

2. a) Describe the molecular organization and functions of Endoplasmic reticulum. **(16)**

OR

b) Explain in detail about Biomembrane. **(16)**

3. a) Give a account on molecular events during different stages of cell cycle. **(16)**

OR

b) Describe the molecular organization of cytoskeleton. **(16)**

4. Write explanatory notes on any **two** of the following: **(2×8=16)**

a) Chromosomal nomenclature

b) Biology of Aging.

c) Structure of Nucleic Acids.

5. Write short note on any **four** of the following: **(4×4=16)**

a) Histones

b) Lysosomes.

c) Chloroplast

d) T cells

e) Carcinogenesis

f) Scope of modern cell biology.

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PGIS-O 1039- A B-2K13

M.Sc. Ist Semester (Non-CBCS) Degree Examination
Zoology
(Molecular Genetics)
Paper - 1.4
(Old)

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates:

Answer all questions and illustrate wherever necessary

1. Answer the following in brief **(8×2=16)**

a) Gene

b) Polyadenylation

c) Polycistronic mRNA

d) Vector

e) Replication for K

f) Mutation

g) Splicing

h) Helicase

2. a) Explain in detail about methods of DNA Replication **(16)**

or

b) Give an account of DNA as genetic material with a suitable examples **(16)**

3. a) Describe Genetic code and add a note on biological significance **(16)**

or

b) Explain Bio chemical basis of mutations and add a note on repair mechanism **(16)**

4. Write explanatory note on any **two** of the following **(2×8=16)**

a) Transposable elements

b) DNA polymerases

c) r-DNA technology

5. Write short notes on any **four** of the following **(4×4=16)**

a) Over lapping genes

b) Auto regulation

c) Ligases

d) DNA sequencing

e) Operon

f) Ribosomes