

**PGIS-N 1035 B-14**  
**M.Sc. Ist Semester (CBCS) Degree Examination**  
**Zoology**  
**(Animal Systematics)**  
**Paper - HCT-1.1**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

**Instructions to Candidates:**

- i) Answer all questions.
- ii) Illustrate your answer wherever necessary.

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

- a) Alta taxonomy
- b) Tautonym
- c) Species
- d) Sibling species
- e) Hexactinellida
- f) Diptera
- g) Gastropoda
- h) Teleostomi

**(8+8)****2. a) Give the classification of phylum porifera with example and enlist general characters.****(16×1=16)****OR****b) Present a detailed account on species concepts.****3. a) Present a detailed account on the taxonomic procedures.****(16×1=16)****OR****b) Classify phylum Mollusca with examples & Mention the general characters of the group.**

4. Write explanatory notes on any two of the following

(2×8=16)

- a) Miner phyla
- b) Trends in new taxonomy
- c) ICZN.

5. Write short notes on any **four** of the following

(4×4=16)

- a) Metridium
  - b) Hippocampus
  - c) Cistoda
  - d) Oligocheata
  - e) Linnean
  - f) Morphology
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**PGIS-N 1037 B-14**  
**M.Sc. Ist Semester (CBCS) Degree Examination**  
**Zoology**  
**(Biology of Non-Chordata)**  
**Paper - HCT-1.2**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

**Instructions to Candidates:**

- i) Answer all questions.
- ii) Illustrate your answer wherever necessary.

1. Answer the following in brief (8×2=16)
  - a) Clitelluno
  - b) Tube feet
  - c) Nephridia
  - d) Ctenophora
  - e) Coel gland
  - f) Mycocytes
  - g) Parthenogenesis
  - h) Lophophore.
2. a) Give an account on hydrostatic movements in non chordates (16×1=16)

**OR**

  - b) Explain the filter feeding mechanism in Mollusca.
3. a) Explain nervous system in Coelenterata & add a note on its functions. (16×1=16)

**OR**

  - b) Discuss in detailed on patterns of Reproduction in invertebrates.

4. Write a explanatory notes on any two of the following (2×8=16)
- a) Sense organs Q their importance.
  - b) Organs of excretion.
  - c) Symbiotic nutrition.
5. Write short notes on any **four** of the following (4×4=16)
- a) Larval forms (free living)
  - b) Malphigin tubes
  - c) Gills
  - d) Pogonophora
  - e) Amoeboid movement
  - f) Clitellum.
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**PGIS-N 1038 B-14**  
**M.Sc. Ist Semester (CBCS) Degree Examination**  
**Zoology**  
**(Molecular Cell Biology)**  
**Paper - HCT-1.3**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

**Instructions to Candidates:**

- i) Answer all questions.
- ii) Illustrate your answer wherever necessary.

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

- a) Nitrogen bases
- b) Gap Junction
- c) Microfilaments
- d) Kinetophore
- e) Glycoprotein
- f) G1 phase
- g) Satellite chromosome
- h) Pentose sugar

2. a) Write an account on classification and biological significance of protein. (16×1=16)

**OR**

b) Give an account on structure and functions of chloroplast.

3. Explain mechanism and significance of Apoptosis. (16×1=16)

4. Write explanatory notes on any two of the following

(2×8=16)

- a) Regulation of CDK cyclin
- b) Transport across cell membrane.
- c) Gene transcription.

5. Write short notes on any **four** of the following

(4×4=16)

- a) Structure of Introns.
  - b) Lipids
  - c) Double stranded RNA
  - d) Cytoskeleton structure
  - e) Genetic code
  - f) Central dogma of Molecular biology.
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**PGIS-N 1039 B-14**  
**M.Sc. Ist Semester (CBCS) Degree Examination**  
**Zoology**  
**(Computer Application & Methods in Biology)**  
**Paper - SCT-1.4**  
**(New)**

Time : 3 Hours

Maximum Marks : 80

**Instructions to Candidates:**

- i) Answer all questions.
- ii) Illustrate your answer wherever necessary.

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

- a) Coral Draw
- b) TEM
- c) Operating System
- d) Cell sorting
- e) Search Engines
- f) ANOVA
- g) Standard error
- h) Dialup connection

2. a) Discuss in detail on computer simulation in physiological process with suitable examples. (16×1=16)

**OR**

b) Write an essay on Networking.

3. a) Explain the working principles and application of spectrophotometry. (16×1=16)

**OR**

b) Give a detail account on computer assisted teaching in biology.

4. Write an explanatory notes on any two of the following (2×8=16)
- a) Cell fractionation
  - b) Tracer techniques
  - c) CPCSEA
5. Write short notes on any **four** of the following (4×4=16)
- a) Cloud computing
  - b) Biotelometry
  - c) Liquid scintillation counter
  - d) Enzyme assay
  - e) Light microscope
  - f) Culture media.
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