

**PGIS 1035 B - 15**  
**M.Sc. Ist Semester Degree Examination**  
**ZOOLOGY**  
**(Animal Systematics)**  
**Paper : HCT 1.1**

Time : 3 Hours

Maximum Marks : 80

***Instructions to Candidates:***Answer **all** questions. Each question carries **equal** marks.

1. Answer the following in brief. (8×2=16)
- a) Alpha taxonomy
  - b) Taxon
  - c) Holotype
  - d) Echeneiformes
  - e) Beta taxonomy
  - f) Priory weighting
  - g) Harmosporina
  - h) Reductionism
2. a) Discuss in detail the importance of systematics in biology (16)
- (OR)
- b) Classify phylum porifera with examples and mention the general characters of the group
3. a) Give the classification and general characters of etenophora (16)
- (OR)
- b) Mention the general characters and give the classification of phylum mollusca.

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

- a) Species concept
- b) Phenetics
- c) General characters of Arthropoda

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

- a) Lophophore
  - b) Apoda
  - c) Sporozoa
  - d) Zoological nomenclature
  - e) Curating
  - f) Identification keys.
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**PGIS 1036 B - 15**  
**M.Sc. Ist Semester Degree Examination**  
**Zoology**  
**(Biology of Non Chordates)**  
**Paper : HCT 1.2**

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) Tube feet
  - b) Statocyst
  - c) Clitellum
  - d) Hyperparasitism
  - e) Coelom
  - f) Syngamy
  - g) Conjugation
  - h) Structure of flagella.
2. a) Explain food and feeding habits of Echinoderms. (16)

(OR)

  - b) Discuss organization of respiratory organs in Molluscs.
3. a) Explain advanced nervous system in Arthropoda (16)

(OR)

  - b) Give general organization of Chaetognatha
4. Write an explanatory note on any **two** of the following. (2×8=16)
  - a) Primitive nervous system in Coelenterates
  - b) Chaetognatha
  - c) General characters of Phoronida.

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

(4×4=16)

- a) Coxal glands
  - b) Flagellar movements
  - c) Respiratory pigments
  - d) Trachea
  - e) Symbiotic Nutrition
  - f) Phoronida
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**PGIS 1037 B -15**  
**M.Sc. Ist Semester (CBCS) Degree Examination**  
**Zoology**  
**(Molecular Cell Biology)**  
**Paper : HCT 1.3**

Time : 3 Hours

Maximum Marks : 80

**Instructions to Candidates:**

Answer all questions and illustrate your answers wherever necessary.

1. Answer the following in brief. (8×2=16)
  - a) Nucleoside
  - b) Chromatid
  - c) Telomere
  - d) Transcription.
  - e) Mutations
  - f) Ion channels
  - g) Tight Junctions
  - h) Cell cycle
2. a) Write a account on classification of proteins and their biological significance. (16)  

(OR)

b) Explain molecular organisation of eukaryotic chromosome.
3. a) Give a detail account on single and double stranded RNA (16)  

(OR)

b) Describe structure of plasmamembrane and add a note on its molecular organization.
4. Write explanatory note on any **two** of the following. (2×8=16)
  - a) Structure of D.N.A
  - b) Chromosomal condensation
  - c) Transport across cell membrane

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

(4×4=16)

- a) Ion channels
  - b) Genetic engineering
  - c) Reverse transcription
  - d) Microtubules
  - e) Endoplasmic reticulum.
  - f) Nucleolar organizer
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**PGIS 1038 B - 15**  
**M.Sc. Ist Semester (CBCS) Degree Examination**  
**Zoology**  
**(Computer Applications and methods in Biology)**  
**Paper : SCT 1.4**

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) LAN
  - b) Isotopes
  - c) Geiger counter
  - d) Scanning
  - e) Culture media
  - f) Vital stains
  - g) Gradient centrifugation
  - h) Enzyme array
2. a) Explain Data processing and plotting. (16)
- (OR)**
- b) Explain histological and histochemical staining techniques.
3. a) Explain leased line, cable and wifi connections. (16)
- (OR)**
- b) Explain immuno-fluorescence essay.
4. Write explanatory note on any **two** of the following. (2×8=16)
- a) Atomic absorption
  - b) Chromatography and gel filtration.
  - c) Units of measurement of radioactivity

5. Answer any **four** of the following.

(4×4=16)

- a) Excel
  - b) Presentation and drawing
  - c) Dialup
  - d) Subcellular fractions.
  - e) Radio immuno assays.
  - f) PCR
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