

Name: _____						
Subject: Biology		Class: 11 <sup>th</sup>	Time: 80 minutes	Total Marks:	40	
Chapter No.5		MJDexpert.com			Obtained marks	

**Note:** Please attempt any 11 short questions from Question 2. Also, attempt both parts (a and b) of Question 3. Cutting and removal of any content is strictly prohibited.

### Objective-Section

**Q. 1 Encircle the correct answer. (10x1=10)**

- The system of naming organisms scientifically was devised by:  
(A) Aristotle (B) Darwin (C) Linnaeus (D) Lamarck
- The binomial nomenclature system includes:  
(A) Kingdom and Phylum (B) Genus and Species (C) Family and Order (D) Class and Order
- A species is defined as a group of natural populations that:  
(A) Can interbreed and produce fertile offspring (B) Have the same morphology (C) Live in the same habitat (D) Have similar diets
- The term "virus" was originally used to describe:  
(A) A bacterium (B) A poison (C) A plant disease (D) A genetic disorder
- The scientific name of corn is:  
(A) Triticum aestivum (B) Zea mays (C) Oryza sativa (D) Solanum tuberosum
- Which of the following is not a characteristic of viruses?  
(A) Possess metabolic machinery (B) Can only replicate in living cells (C) Are smaller than most bacteria (D) Have either DNA or RNA
- In the five kingdom classification system, fungi are classified as:  
(A) Autotrophs (B) Heterotrophs (C) Mixotrophs (D) Phototrophs
- Bacteriophages are viruses that infect:  
(A) Animals (B) Plants (C) Bacteria (D) Fungi
- The protein coat surrounding a virus is known as:  
(A) Envelope (B) Nucleocapsid (C) Capsid (D) Prion
- Which of the following is responsible for mad cow disease?  
(A) Viruses (B) Prions (C) Bacteria (D) Fungi

### Subjective-Section

**Q.2 Write short answers of any ten of the following questions: (11x2=22)**

- Define species according to the text.
- What are the main differences between autotrophs and heterotrophs?
- Describe the binomial nomenclature system.
- What role does the capsid play in a virus?
- Explain the importance of classification in biology.
- What is the significance of Carlous Linnaeus's contribution to biology?
- Differentiate between prokaryotic and eukaryotic cells.
- Why are fungi classified separately from plants?
- What are bacteriophages, and how do they function?
- Briefly explain the five-kingdom classification system.
- How did Ernst Haeckel contribute to the classification of organisms?
- Describe the structure of a virus.

**Q.No.3 Long Question:**

**(4+4)**

- Describe the life cycle of a bacteriophage. Include the steps involved in its replication within a host cell.
- Discuss the differences between the lytic and lysogenic cycles of bacteriophages.