

Name: _____						
Subject: Biology		Class: 11 th	Time: 80 minutes	Total Marks:	40	
Chapter No.6		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)

- Who was the first scientist to report microbes such as bacteria and protozoa?
(A) Louis Pasteur (B) Antonie Van Leeuwenhoek (C) Robert Koch (D) Carolus Linnaeus
- What structure in bacteria is made up of repeating polysaccharide units?
(A) Flagella (B) Pili (C) Capsule (D) Cytoplasm
- Which shape describes rod-shaped bacteria?
(A) Cocci (B) Bacilli (C) Spirilla (D) Diplococci
- What process is involved in bacteria reproducing by splitting into two daughter cells?
(A) Conjugation (B) Binary fission (C) Transduction (D) Transformation
- What is the main function of flagella in bacteria?
(A) Reproduction (B) Respiration (C) Attachment (D) Motility
- Which bacteria have the ability to synthesize organic compounds from inorganic substances?
(A) Parasitic (B) Autotrophic (C) Saprophytic (D) Heterotrophic
- What is the primary component of bacterial cell walls?
(A) Cellulose (B) Peptidoglycan (C) Chitin (D) Lipids
- Which type of bacteria can grow in both the presence and absence of oxygen?
(A) Aerobic (B) Anaerobic (C) Facultative (D) Microaerophilic
- What is the interval of time between bacterial divisions called?
(A) Log phase (B) Lag phase (C) Generation time (D) Stationary phase
- Which of the following bacteria is known to cause tuberculosis?
(A) Escherichia coli (B) Bacillus subtilis (C) Mycobacterium tuberculosis (D) Staphylococcus aureus

Subjective-Section

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

- What are the main characteristics of the kingdom Prokaryotae?
- Describe the process of pasteurization and its significance in microbiology.
- What is the germ theory of disease and who formulated it?
- How do bacteria vary in shape? List the three primary shapes.
- What is the difference between Gram-positive and Gram-negative bacteria in terms of cell wall structure?
- Explain the function and composition of bacterial capsules.
- Define binary fission and its role in bacterial reproduction.
- How do photosynthetic bacteria differ from green plants in terms of photosynthesis?
- Describe the difference between aerobic, anaerobic, and facultative bacteria.
- What is a plasmid and what role does it play in bacterial genetics?
- Discuss the role of mesosomes in bacterial cells.
- What are bacterial spores and how do they differ from cysts?

Q.No.3 Long Question:

(4+4=8)

- Describe the structure and function of bacterial flagella.
- Explain the four phases of the bacterial growth curve and their significance in bacterial population dynamics.