Chapter 4
Prokaryotic and Eukaryotic Cells: Structure and Function

1. Which of the following characteristics holds TRUE for eukaryotes?
(A) Motility by cilia
(B) Receptors in plasma membrane
(C) Peptidoglycan in the cell wall
(D) Presence of nucleus

2. Archaeal cells usually do not contain peptidoglycan, rather contain pseudopeptidoglycan which is mainly composed of
(A) *N*-acetyltalosaminuronic acid
(B) D-amino acids
(C) *N*-acetylmuramic acid
(D) L-amino acids

3. In the peptidoglycan layer of bacterial cell wall, which of the following amino acids are usually found in D-configuration?
(A) Alanine
(B) Lysine
(C) Arginine
(D) Glutamic acid

4. Which of the following statements are CORRECT about bacterial endospore?
(A) Core pH is about 5.5 to 6.0
(B) Resistant to lysozyme
(C) Dipicolinic acid is present
(D) Small and soluble protein is absent

5. Which of the following events occurs in eukaryotes?
(A) Protein phosphorylation
(B) RNA polymerase and promoter interaction
(C) Control of transcription by attenuation
(D) Formation of Okazaki fragments

6. Which of the following transport mechanisms are employed by prokaryotes?
(A) Passive diffusion
(B) Group translocation
(C) Endocytosis
(D) Active transport

7. Which of the following cellular structures are absent in eukaryotes and are present at least in some prokaryotic organisms?
(A) Ribosomes
(B) Nucleoid
(C) Internal membranes
(D) Pili

8. Which of the following can be used to mediate the fusion of plasma membranes of two different cells?

(A) Electric shock
(B) Inactivated viruses
(C) Polyethylene glycol
(D) Emulsifier

9. Which out of the following are mediated transport?
(A) Facilitated diffusion
(B) Simple diffusion
(C) Primary active transport
(D) Secondary active transport

10. F pilus has major role as
(A) carrier of F plasmid
(B) motility of the cell
(C) port of entry of genetic material during mating
(D) attachment to host cell

Answer

1. **(A), (B), (D)**
2. **(A), (D)**
3. **(A), (D)**
4. **(A), (B), (C)**
5. **(A), (B), (D)**
6. **(A), (B), (D)**
7. **(B), (D)**
8. **(A), (B), (C)**
9. **(A), (C), (D)**
10. **(A), (C)**