

Microbiology

TD N°. 02: Bacterial cell

Exercise 1: Multiple Choice Questions (MCQ – 10 questions)

Choose the correct answer for each question.

1. What is the main characteristic of bacteria?

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|---|---------------------|
| a) Presence of a nucleus | c) Linear DNA |
| b) Absence of membrane-bound organelles | d) Nuclear membrane |

2. What is the average size of bacteria?

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|---------------------------|----------------------------|
| a) 0.1 - 10 μm | c) 50 - 100 μm |
| b) 10 - 50 μm | d) 100 - 500 μm |

3. Which type of bacteria has a spherical shape?

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|------------|----------------|
| a) Bacilli | c) Cocci |
| b) Vibrios | d) Spirochetes |

4. Which structure is essential in all bacteria?

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|-------------|------------|
| a) Capsule | c) Plasmid |
| b) Ribosome | d) Pili |

5. Which staining technique differentiates Gram + and Gram - bacteria?

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|------------------|-------------------|
| a) Ziehl-Neelsen | c) Gram |
| b) India Ink | d) Methylene blue |

6. What is the main function of flagella?

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|------------------------------------|-----------------|
| a) Protection against phagocytosis | c) Reproduction |
| b) Mobility | d) DNA storage |

7. Which bacterium has a spiral shape?

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|---------------------------|----------------------------|
| a) <i>Staphylococcus</i> | c) <i>Escherichia coli</i> |
| b) <i>Vibrio cholerae</i> | d) <i>Clostridium</i> |

8. What is the main component of the Gram + bacterial cell wall?

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|------------------------|----------------|
| a) Lipopolysaccharides | c) Cholesterol |
| b) Peptidoglycan | d) Proteins |

9. Which element allows bacteria to resist extreme conditions?

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|--------------|-----------|
| a) Ribosomes | c) Spores |
| b) Plasmids | d) Pili |

10. Which bacterium has a capsule?

- | | |
|--------------------------------------|---------------------------------|
| a) <i>Mycobacterium tuberculosis</i> | c) <i>Staphylococcus aureus</i> |
| b) <i>Escherichia coli</i> | d) <i>Bacillus</i> |