

## Cell Function Quiz PDF

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**What is apoptosis, and why is it important for multicellular organisms?**

**Explain the role of the nucleus in a eukaryotic cell.**

**Which phase of the cell cycle involves DNA replication?**

- G1 phase
- G2 phase
- M phase
- S phase

**Which structures are involved in protein synthesis? (Select all that apply)**

- Ribosomes
- Rough Endoplasmic Reticulum
- Lysosomes

Golgi Apparatus

**Which of the following are components of the cell membrane? (Select all that apply)**

- Phospholipids
- Nucleic acids
- Carbohydrates
- Proteins

**Which of the following are types of passive transport? (Select all that apply)**

- Diffusion
- Active transport
- Facilitated diffusion
- Osmosis

**What are the phases of mitosis? (Select all that apply)**

- Prophase
- Anaphase
- Telophase
- Metaphase

**How do enzymes function as catalysts in cellular metabolism?**

**Discuss the differences between mitosis and meiosis in terms of their outcomes and purposes.**

**Explain how signal transduction pathways enable cells to respond to external signals.**

**What is the role of lysosomes in the cell?**

- Energy production
- Protein synthesis
- DNA replication
- Digestion of waste materials

**What is the primary function of the mitochondria in the cell?**

- Protein synthesis
- Energy production
- DNA replication
- Lipid synthesis

**Which process occurs in the chloroplasts of plant cells?**

- Cellular respiration
- Protein synthesis
- Glycolysis
- Photosynthesis

**Which organelle is known as the control center of the cell?**

- Nucleus
- Ribosome
- Mitochondria
- Golgi Apparatus

**Which of the following are functions of the smooth endoplasmic reticulum? (Select all that apply)**

- Protein synthesis
- Detoxification
- DNA replication
- Lipid synthesis

**What is the main structural component of the cell membrane?**

- Proteins
- Phospholipids
- Nucleic acids
- Carbohydrates

**Which organelle is responsible for modifying and packaging proteins?**

- Lysosome
- Ribosome
- Mitochondria
- Golgi Apparatus

**What type of transport requires energy to move substances across the cell membrane?**

- Passive transport
- Osmosis
- Diffusion
- Active transport

**Describe the process of photosynthesis and its importance to plant cells.**

**Which processes are part of cellular respiration? (Select all that apply)**

- Glycolysis
- Photosynthesis
- Electron transport chain
- Krebs cycle