

Time: 30 minutes

Total: 15 points

Please choose the **MOST CORRECT** answer for each question, then fill in your answer in the attached bubble sheet.

- 1. What is the primary function of Mitochondrion in a cell?**
 - DNA replication
 - Lipid metabolism
 - Protein synthesis
 - Cellular respiration**
- 2. Which type of microorganism is most likely to be involved in the fermentation of bread?**
 - Bacteria
 - Yeast**
 - Virus
 - Algae
- 3. Which of the following is not a characteristic that all living things share?**
 - Growth.
 - Reproduction.**
 - Respiration.
 - Movement.**
- 4. What is the primary role of antibiotics?**
 - To increase the growth rate of microorganisms
 - To inhibit / arrest the growth of microorganism**
 - To enhance the pigmentation of microorganisms
 - To support the reproduction of microorganisms
- 4. Which type of bond is formed between the amino group and the carboxyl group of adjacent amino acids in a protein?**
 - Ionic bond
 - Disulfide bond**
 - Hydrogen bond
 - Peptide bond**
- 5. In which part of the cell does gene transcription occur?**
 - Nucleus**
 - Golgi Apparatus
 - Smooth Endoplasmic Reticulum
 - Ribosome
- 6. Which of the following represents a homozygous genotype?**
 - Aa
 - aa
 - AA
 - Both B and C**
- 7. In which part of the cell does protein translation occur?**
 - Nucleus
 - Golgi Apparatus
 - Smooth Endoplasmic Reticulum
 - Ribosome**
- 8. What structure regulates the passage of substances in and out of the animal cell?**
 - Nucleus
 - Plasma membrane**
 - Cell wall
 - Endoplasmic reticulum

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9. In Mendelian genetics, what is the expected phenotypic ratio of a monohybrid cross between two heterozygous individuals (Aa x Aa)?

- A. 1:1
B. 9:3:3:1
C. 3:1
D. 1:2:1

10. Which of the following is a source of genetic variation?

- A. Mitosis
B. Asexual reproduction
C. Meiosis
D. Binary fission

11. Cell wall is present in _____ and contains _____

- A. Animal cell; chitin
B. Plant cell; chitin
C. Animal cell; cellulose
D. Plant cell; cellulose

12. Common mutagenic (causes onset of mutations) agents include:

- A. Certain chemicals
B. Ionizing radiation
C. Ultraviolet radiation
D. All of the above.

13. An example of the polysaccharides (carbohydrates) that are used by the mammals to store and produce energy is:

- A. Cellulose
B. Chitin
C. Glycogen
D. Amylose

14. The two strands of the DNA molecules are held together by:

- A. Phosphodiester bonds
B. Hydrogen bonds
C. Covalent bonds
D. Peptide bonds

15. What is the primary role of enzymes in biochemical reactions?

- A. To increase the temperature of reactions
B. To serve as a source of energy
C. To lower the activation energy of reactions
D. To act as structural components of cells

-----GOOD LUCK-----