

# Bio1\_CellBiology.pdf

## Page 1 – Cell Structure

1. What are the functions of mitochondria?
2. Draw and label a plant cell.
3. What is the role of the nucleus?
4. What is the function of ribosomes?
5. What are lysosomes?
6. Define cytoplasm.
7. What is the plasma membrane?
8. What is a prokaryotic cell?
9. What is a eukaryotic cell?
10. What is the role of chloroplasts?

## Page 2 – Cell Transport

1. What is osmosis?
2. What is diffusion?
3. Define active transport.
4. What is facilitated diffusion?
5. What is endocytosis?
6. What is exocytosis?
7. Define isotonic solution.

8. What is a hypertonic solution?
9. What is a hypotonic solution?
10. What is a concentration gradient?

### **Page 3 – Genetics I**

1. What is DNA replication?
2. What is transcription?
3. What is translation?
4. Define gene.
5. What is a chromosome?
6. What is a codon?
7. What is a mutation?
8. What is the function of tRNA?
9. What is a genotype?
10. What is a phenotype?

### **Page 4 – Genetics II**

1. What is Mendel's law of segregation?
2. What is independent assortment?
3. What is homozygous?
4. What is heterozygous?
5. What is a Punnett square?
6. Define dominant and recessive alleles.

7. What is incomplete dominance?
8. What is codominance?
9. What is polygenic inheritance?
10. What is genetic linkage?

## **Page 5 – Photosynthesis & Respiration**

1. Write the overall reaction for photosynthesis.
2. Where does the Calvin cycle take place?
3. What are the products of the light-dependent reactions?
4. What is chlorophyll?
5. What is the main function of photosynthesis?
6. What is aerobic respiration?
7. What is glycolysis?
8. Where does the Krebs cycle occur?
9. What is ATP synthase?
10. What is fermentation?

## **Page 6 – Cell Cycle & Mitosis**

1. What is mitosis?
2. What is cytokinesis?
3. What are the phases of mitosis?
4. What is interphase?
5. What is prophase?

6. What is metaphase?
7. What is anaphase?
8. What is telophase?
9. What is the G1 phase?
10. What is the function of spindle fibers?

### **Page 7 – Meiosis & Inheritance**

1. What is meiosis?
2. What is crossing over?
3. How many cells result from meiosis?
4. What is gametogenesis?
5. What is independent assortment in meiosis?
6. What is genetic recombination?
7. What is a zygote?
8. What is nondisjunction?
9. What is trisomy?
10. What is monosomy?

### **Page 8 – Biotechnology**

1. What is PCR?
2. What is gel electrophoresis?
3. What is genetic engineering?
4. What is a plasmid?

5. What is DNA fingerprinting?
6. What is cloning?
7. What is a GMO?
8. What is CRISPR?
9. What is gene therapy?
10. What is recombinant DNA?

### **Page 9 – Viruses & Immunity**

1. What is a virus?
2. What is a bacteriophage?
3. What is a vaccine?
4. What is the immune response?
5. What are antibodies?
6. What is innate immunity?
7. What is adaptive immunity?
8. What are T cells?
9. What are B cells?
10. What is herd immunity?

### **Page 10 – Review & Cell Bio Challenge**

1. State three differences between plant and animal cells.
2. What is apoptosis?
3. What is cell signaling?

4. Name an organelle unique to plant cells.
5. What is a microtubule?
6. What is the function of the Golgi apparatus?
7. Define cellular respiration.
8. What is endosymbiotic theory?
9. What is a stem cell?
10. What is the function of peroxisomes?