



Question One: (12 mark)

Chose the appropriate answer from the listed choice of each statement:

- 1- The origin of nuclear envelope is:
 - a- Nucleus
 - b- Chloroplasts
 - c- Smooth endoplasmic reticulum
 - d- Granular endoplasmic reticulum

- 2- During the cell division the phase follows the G2 is known as:
 - a- G1
 - b- M
 - c- S
 - d- G3

- 3- The chromosomes of a eukaryotic cell are located in the:
 - a- Nucleus
 - b- Mitochondria
 - c- Ribosome
 - d- Endoplasm

- 4- The blood group which has no antigen is:
 - a- O⁺
 - b- B
 - c- O⁻
 - d- AB

- 5- The smallest formed elements of blood are the:
 - a- W.B.CS
 - b- R.B.CS
 - c- Platelets
 - d- Fibrin

- 6- Krebs cycle chain occurs in the:
 - a- Cytosol
 - b- Mitochondrial matrix
 - c- Cytoplasm
 - d- The inner membrane of the mitochondria



- 7- Life span of the red blood cells is:
- a- 150 day
 - b- 120 day
 - c- (9-10) day
 - d- (2-3) day
- 8- A person whose blood group is "AB" can receive blood from:
- a- Group "AB" only
 - b- Group "o" only
 - c- Group "A" and Group "B"
 - d- All of the above
- 9- The movement of molecules across cell membranes requiring the use of ATP
- a- Osmosis
 - b- Diffusion
 - c- Active transport
 - d- Passive transport
- 10- Phagocytotic vesicles are used for:
- a- Cellular drinking.
 - b- Cellular respiration
 - c- Cellular locomotion
 - d- Cellular eating
- 11- "Splitting of sugar" means:
- a- Fermentation
 - b- Glycolysis
 - c- Oxidization
 - d- Breathing
- 12- The percentage of water in the blood plasma about:
- a- 55%
 - b- 45%
 - c- 10%
 - d- 90%



Question Two: (8 marks)

Write the scientific term for each of the following sentences:

- 1- _____ an alternate form of a gene.
- 2- _____ make modifications on proteins that enter to the cell
- 3- _____ having two different alleles for a given trait.
- 4- _____ a small and dense region in the interior of the cell nucleus.
- 5- _____ in a heterozygous, the allele is completely masked in the phenotype.
- 6- _____ the process of oxidizing food to release energy.
- 7- _____ is the monomer of the nucleic acid.
- 8- _____ A process of asexual reproduction in which the cell divides in two producing a replica, with an equal number of chromosomes in haploid cell.

Question Three: (6 marks)

Answer the following Questions:

A) What is the other name of Leucocytes? What is the function of these cells?

B) Can a " B" positive woman and "B" negative man have a healthy baby?
Explain your result?

C) From the complete oxidation of one glucose molecule, Prokaryotic cells can yield a maximum of 38 ATP molecules while eukaryotic cells can yield a maximum of 36.....why??



Question Four: (8 marks)

Match the description below with the organelle or cell component on the right:

1.	Contains green chlorophyll where photosynthesis takes place		Leukocytes
2.	Regulate the passage materials and substances		Golgi apparatus
3.	Branch of biology deals with the study of response against foreign materials.		Meiosis
4.	Involved with the body's defence mechanism.		Lysosomes
5.	Make modifications on proteins in the cell.		Nuclear pores
6.	A protein that bind oxygen.		Immunology
7.	Play important role in elongation of cell life		Mitosis
8.	A type of cellular reproduction reduces the number of chromosomes to half.		Haemoglobin
			Chloroplast

Question Five: (10 marks)

A) Define:

The Chromosome: _____

Complete dominance: _____

Immune system: _____



B) Describe the function of:

Centriole: _____

Lacrimal glands of eyes: _____

Question Six: (6 marks)

A man with blood group (AA) has married a woman with blood group (O)
...according to a genetic basis, what are the chances of blood groups of their children.



Question Seven: (10 marks)

A) There are two types of immunity:

1- _____

2- _____

B) In the absence of oxygen, respiration consists of two metabolic pathways:

1- _____

2- _____

C) Mucous membrane acts as filtration system through prevention of microorganisms to enter inside the body by many ways:

1- _____

2- _____

3- _____

4- _____

D) The differences in human blood are due to the presence or absence of certain protein molecules called:

_____ and _____

*End of Questions
Good Luck*