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MFN-001

**MASTER OF SCIENCE (DIETETICS
AND FOOD SERVICE MANAGEMENT)
M. SC. (DFSM)**

Term-End Examination

June, 2023

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours

Maximum Marks : 100

Note : (i) Attempt **five** questions in all.

(ii) Question No. 1 is compulsory.

(iii) All questions carry equal marks.

1. (a) Define physiology. Name the physiologist who studied the cork cell. 2+1
- (b) Give the *two* tenets of the cell theory. 2
- (c) Illustrate and list the different types of blood cells. 3
- (d) What are macrophages ? Enlist any *two* functions of macrophages. 2+2

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- (e) Enlist the *four* chambers of the heart. 2
- (f) List the organs involved in the process of respiration. 3
- (g) Present the organ, digestive juice and enzymes and their action on protein digestion in our body. 3
2. (a) Differentiate between the following : 3+3
- (i) Eukaryotic cell and Prokaryotic cell
- (ii) Mitosis and Meiosis
- (b) Illustrate the structure of a eukaryotic cell, labelling the different organelles. 5
- (c) Give the function of any *three* organelles of the eukaryotic cell. 3+3+3
3. (a) Explain the different types of anaemias and their physiological causes. 10
- (b) Give the specific role of the following in our body : 5+5
- (i) Antibody Mediated Immune System (AMIS)
- (ii) Cell Mediated Immune System (CMIS)

4. (a) What is the heart cycle ? Explain the events that occur in the heart cycle. 1+4
- (b) Enumerate the points you will keep in mind to keep your heart healthy. 5
- (c) Explain the mechanism of respiration in our body. 10
5. (a) Describe the structure of tongue with the help of a diagram. 12
- (b) Discuss the functions of tongue and saliva. 8
6. (a) Briefly explain the formation of urine through selective reabsorption. 8
- (b) Enumerate the common test and procedures you will consider to evaluate renal functions in humans. 8
- (c) What is Glomerular Filtration Rate (GFR) ? 4
7. (a) Draw a diagram of the neuron and enumerate its functions. 8
- (b) Explain homeostasis. 2

- (c) Briefly describe the mechanisms involved in the transport of substances across cell membrane. 10

8. Write short notes on any *four* of the following :

5 each

- (a) Hormones secreted by the body
- (b) The cranial nerves—types and functions
- (c) Structure and functions of the ear
- (d) Foetal growth and development upto 32 weeks of gestation
- (e) Components of central nervous system