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MFN-001

**MASTER OF SCIENCE (DIETETICS
AND FOOD SERVICE MANAGEMENT)**

[M. SC. (DFSM)]

Term-End Examination

December, 2025

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours

Maximum Marks : 100

***Note :** Question No. 1 is compulsory. Answer
five questions in all. All questions carry
equal marks.*

1. (a) Differentiate between the following sets
of terms : 2×5=10
- (i) Animal cell and Plant cell
 - (ii) Gustation and Olfaction
 - (iii) ECG and EEG

- (iv) Capillaries and Veins
 - (v) Simple diffusion and Facilitated diffusion
- (b) Give *one* function, and/or example of each of the following : 10
- (i) Connective tissue
 - (ii) Endoplasmic reticulum
 - (iii) Phase of mitosis
 - (iv) Plasma
 - (v) Types of WBC
 - (vi) Antibodies (types)
 - (vii) Conduction tissue of the heart (types)
 - (viii) Pulmonary volumes
 - (ix) Liver
 - (x) Hypothalamus
2. (a) Briefly explain the components and functions of the internal defence mechanism functioning in our immune system. 10

- (b) What do you understand by the term 'Cardiac Cycle' ? Discuss its phases. 5
- (c) Briefly explain the factors affecting blood pressure. 5
3. (a) Give the structure of the lung. 2
- (b) Briefly explain the mechanism of respiration in our body. 8
- (c) Enlist the functions of the following in our body : 5+5
- (i) Gastric juices
- (ii) Bile
4. (a) Briefly explain the digestive function of the intestinal juices, with special reference to digestion of carbohydrates, proteins and fats. 6
- (b) Illustrate the large intestine and give the functions of the large intestine. 6
- (c) Briefly explain the process of urine formation in our body. 8

5. (a) Give the structure of the nerve cell and diagrammatically explain the process of synaptic transmission. 10
- (b) Explain the structure of spinal cord, highlighting its functions. Illustrate the cross-section of spinal cord. 10
6. What are the hormones produced from the following glands ? Discuss their functions :
5+5+5+5
- (i) Anterior pituitary
- (ii) Pancreas
- (iii) Adrenal cortex
- (iv) Pineal gland
7. (a) What is retina ? Enumerate the retina nerve cells and their functions. 2+5
- (b) Present a brief review on the types of hearing defects. 7
- (c) Briefly explain the mechanism involved in taste perception. 6

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8. Write short notes on any *four* of the following : 5+5+5+5

- (a) Contraception
- (b) Cranial nerves and their functions
- (c) Functions of cerebellum
- (d) Passive transport across cell membrane
- (e) Extracellular fluid compartments of human body

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