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MFN-001

**MASTER OF SCIENCE (FOOD AND
NUTRITION) [M. SC. (DFSM)]**

Term-End Examination

June, 2025

MFN-001 : APPLIED PHYSIOLOGY

Time : 3 Hours

Maximum Marks : 100

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

1. (a) Differentiate between the following sets
of terms : 2×5=10
- (i) Ribosome and Mitochondria
- (ii) Phagocytosis and Pinocytosis

(iii) Macrocytic and Microcytic anaemia

(iv) Bronchi and Bronchioles

(v) Atherosclerosis and Myocardial
ischemia

(b) Give the composition of bile. 2

(c) Enlist any *four* disorders of the
digestive system. 2

(d) Explain the role of kidney as an
endocrine gland. 3

(e) What is the Menstrual cycle ? Enlist its
phases. 3

2. (a) What do you understand by 'Antibody
Mediated Immune System (AMIS) ?
Briefly discuss the role and mechanism

of action of AMIS, with the help of a diagram. 10

- (b) What do you understand by the ABO and the Rh blood grouping system ? Discuss its relevance in the context of health and well-being. 10

3. (a) With the help of a diagram, explain how does the blood circulate in the heart. 10

- (b) Define hypertension. Give the classification of hypertension. 5

- (c) Enumerate the blood vessels of the cardiovascular system. 5

4. (a) Briefly explain the movements of the gastrointestinal tract. 8

- (b) “Saliva serves many roles in our body.”

Justify the statement, highlighting the functions of saliva. 8

- (c) Describe the digestion of proteins in our body. 4

5. (a) What is a nephron ? Illustrate and explain the components of nephron. 10

- (b) What renal function tests would you consider to evaluate the renal function in a patient ? 5

- (c) What is dialysis ? How is dialysis done ? Elaborate. 5

6. (a) Discuss the important modes of transport across the cell membrane, giving appropriate examples. 10

- (b) Illustrate the main areas of the cerebrum, giving their functions in the body. 10
7. (a) What are cranial nerves ? Tabulate the types and functions of the cranial nerves in our body. 10
- (b) Illustrate the structure of the eye, presenting the vision process in the normal and disordered eye. 10
8. Write short notes on any *four* of the following : 5+5+5+5
- (i) Structure, functions and hormones produces by the pancreas

(ii) Major hormones produced by the
pituitary gland

(iii) Physiology of lactation

(iv) Organs involved in taste perception

(v) Structure and functions of the internal
ear

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