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**MFN-001**

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

**M. SC. (DFSM)**

**Term-End Examination**

**June, 2024**

**MFN-001 : APPLIED PHYSIOLOGY**

*Time : 3 Hours*

*Maximum Marks : 100*

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

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1. (a) Differentiate between a Eukaryotic cell and a Prokaryotic cell highlighting the difference between the two. Illustrate the structure of these cells. 5
- (b) What do you understand by haemostasis ? Enlist the disorders of haemostasis. 4
- (c) Differentiate between antigen and antibodies, giving examples. 3

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- (d) Enlist any *four* factors affecting blood pressure. 2
- (e) With respect to digestion of carbohydrates, present in a tabular form the organ, digestive juice and enzymes produced in the organ for digestion of carbohydrates and its action. 4
- (f) Name the hormones produced by anterior and posterior pituitary gland. 2
2. (a) Define anemia. Explain the various types of anemia. 10
- (b) What do you understand by cell cycle ? Elaborate on the phases of cell cycle with suitable diagrams. 10
3. (a) What is Pancreas ? With the help of a diagram, describe the structure and functions of the different hormones produced by pancreas. 2+2+6
- (b) Enumerate the unique properties of cardiac muscle. 10

4. (a) Illustrate the structure of the lungs with a labelled diagram. 4
- (b) Explain the mechanism and regulation of respiration in our body. 8+8
5. (a) What is the basic unit of the kidneys ? Illustrate its structure with a well labelled diagram. 1+5
- (b) Discuss the function of kidneys in relation to maintaining water balance. 10
- (c) Enlist any *four* renal function tests you would advocate to evaluate renal function. 4
6. (a) What is the nerve cell called ? Illustrate its structure with a well labelled diagram. 1+4
- (b) “Moving a muscle involves communication between muscle and the brain.” Justify this statement, illustrating the sensory and motor nerve pathway with a diagram. 10
- (c) Enlist any *five* cranial nerves and their functions in our body. 5

7. (a) Illustrate the structure of the eye. Describe the mechanism of vision. 4+6
- (b) What is lactation ? Explain the physiology of lactation. 2+6
- (c) Name any *two* hormones secreted in pregnancy and their principal effect. 2
8. Write short notes on any *four* of the following : 5+5+5+5
- (a) Specific acquired immunity
  - (b) Adrenal gland and its functions
  - (c) Phases of menstrual cycle
  - (d) Structure and function of cerebellum
  - (e) Passive Transport mechanism