

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

**Term-End Examination**

**December, 2007**

**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) Explain the following in 2 – 3 sentences only : 10

- (i) Tetany
- (ii) Alveoli
- (iii) Antigen
- (iv) Diuretics
- (v) Peristalsis

- (b) Match the items in Column A with the items in Column B :

10

Column A

Column B

- |                  |  |
|------------------|--|
| (i) Sulci        | (1) Procedure to record brain's activity             |
| (ii) Anaemia     | (2) Covering of the lungs                            |
| (iii) Dialysis   | (3) Non-cancerous growth in uterus                   |
| (iv) Syphilis    | (4) Fissures separating the folds of cerebral cortex |
| (v) Cretinism    | (5) Deficiency of RBCs                               |
| (vi) Pepsin      | (6) Type of diffusion                                |
| (vii) Peritoneum | (7) Sexually transmitted disease                     |
| (viii) E.C.G.    | (8) Iodine deficiency                                |
| (ix) Myeloma     | (9) Enzyme   |
| (x) Fibroids     | (10) Lining of the walls of the abdominal cavity     |
|                  | (11) Procedure to record heart's activity            |
|                  | (12) Tumour of bone marrow                           |

2. (a) "Ageing physiologically refers to the impaired ability to maintain homeostasis in face of external or internal challenges." Elaborate upon the statement highlighting the age related changes in different body systems.

10

- (b) What is anaemia ? Discuss the types and physiological causes of anaemia. 10
3. (a) Describe the various functions of the kidney. 12
- (b) Enumerate the various tests and procedures to evaluate renal function. 8
4. (a) Describe the structure of 'large intestine'. 6
- (b) What are the various functions of the large intestine ? 6
- (c) Describe various types of movements of gastro-intestinal tract. 8
5. (a) What is contraception ? Describe in brief the various methods of contraception. 12
- (b) Briefly describe the process of fetal growth and development. 8
6. (a) What is "Blood Pressure" ? 2
- (b) Discuss the factors affecting the blood pressure. 8
- (c) Describe in brief the various causes of secondary hypertension. 10
7. (a) Discuss in brief the morphology of a nerve cell. 4
- (b) Enlist the components of the brain. 4

(c) State the functions of the following : 12

- (i) Cerebrum
- (ii) Thalamus
- (iii) Hypothalamus
- (iv) Mid-brain

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

- (i) Cell mediated immune system
- (ii) Chemical control of respiration
- (iii) Structure of heart and its components
- (iv) Diffusion as a process of passive transport
- (v) Disorders of image formation
- (vi) Hormones secreted by posterior pituitary gland