

No. of Printed Pages : 3

**RFNE-004**

**Ph. D. (FOOD AND NUTRITION)  
(PHDFN)**

**Term-End Examination  
December, 2025**

**RFNE-004 : ADVANCE NUTRITION**

*Time : 3 Hours*

*Maximum Marks : 100*

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

(ii) All questions carry equal marks.

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1. (a) What are the components of energy expenditure ? Briefly describe the factors which influence energy expenditure. 10
- (b) Explain the synthesis of Vitamin D<sub>3</sub> from its provitamin. Describe the interrelationship of Vitamin D with other nutrients. 10

2. (a) With the help of diagram, explain the concept of recommended dietary intake, upper intake level and the 'safe range of intake.' 10
- (b) Briefly explain the relationship between maternal nutritional status and foetal outcome. 10
3. Briefly describe nutritional requirement for : 20
- (i) Space Mission
- (ii) High Altitude
4. (a) Discuss the role of carbohydrates, proteins, water and electrolytes in the diet of a sport person. 10
- (b) Enumerate the guidelines you would follow for planning a balanced diet for the elderly. 10
5. (a) Explain the concept of body composition highlighting the different components and techniques for measuring body composition. 10

[ 3 ]

- (b) Why is iron important for our body ?  
Briefly explain methods used for  
assessment of iron status in our body. 10
6. (a) Discuss the effect of dietary fibre on the  
absorption of nutrients. 10
- (b) Briefly explain the metabolic role of  
Selenium and Zinc in our body. 10

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