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**POST GRADUATE DIPLOMA IN FOOD
SCIENCE AND TECHNOLOGY (PGDFT)****Term-End Examination****December, 2016****MFT-001 : FOOD CHEMISTRY AND NUTRITION***Time : 3 hours**Maximum Marks : 70*

Note : Attempt all questions. Attempt two sub-parts from questions 1-6 and Four short notes from question 7. All questions carry equal marks.

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1. (a) Explain the process of digestion and absorption of Carbohydrates in human body. 5
 - (b) Describe the Kjeldahl Method of protein estimation. 5
 - (c) What is rancidity ? How does it affect the quality of fats ? 5

 2. (a) Write a note on the anti - nutritional factors present in cereals and legumes. 5
 - (b) Explain the process of conversion of muscle to meat. 5
 - (c) List the classes of pigments present in fruits and vegetables. Describe any 1 class of detail. 1+4

 3. (a) Write a note on mutarotation and inversion of sugar. 5
 - (b) List physical properties of milk and explain any two physical properties. 5

- (c) Classify vitamins. Write the sources and functions of vitamin A. **2+3**
4. (a) Describe the signs and symptoms of Protein Energy Malnutrition. **5**
- (b) Define balanced diets. What are the basic principles to be considered while formulating balanced diets ? **2+3**
- (c) Discuss the functions, sources and deficiency of calcium. **5**
5. (a) Discuss the factors that affect the bio-availability of minerals. **5**
- (b) Write a note on the essential fatty acid composition of meat and fish. What is the importance of EFA ? **2+3**
- (c) Write a note on the quality of cereal and pulse proteins. How do they compare with animal proteins ? **3+2**
6. (a) Write a note on the effect of pesticide residues on health. What precautions can we take to reduce our exposure to pesticide residues ? **3+2**
- (b) How is dietary fibre classified ? Discuss the importance of dietary fibre in human health. **1+4**
- (c) Discuss the deficiency of iron. List the dietary sources of iron. **3+2**
7. Write short notes on any four : **2.5x4=10**
- (a) Water activity
- (b) Non - starch polysaccharides
- (c) Food preservatives
- (d) Enzymatic browning
- (e) Causes of Vitamin D deficiency
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