



PAU-0010-0004506 Seat No. _____

Third Year B. H. T. M. (Sem. V) (CBCS) Examination

October/November - 2018

**5.6 E.1 Food Science & Nutrition
(New Course)**

Faculty Code : 0010

Subject Code : 0004506

Time : 3 Hours]

[Total Marks : 70

Instructions :

- (1) Q. 9 and Q. 10 are compulsory.
- (2) Attempt any three questions from Q. 1 to Q.8
- (3) All questions carry 14 marks each.

- 1 What are the factors which affect digestion ? Write a detailed note on digestion, absorption and metabolism of food.
- 2 What are food additives ? Classify the food additives in detail. Also explain the role of food additives in food processing industry.
- 3 What is food ? Write a detailed note on functions of food. Write a detailed note on the factors affecting the food intake.
- 4 What is carbohydrate ? Explain the classification of carbohydrate in detail.
- 5 What is gelation ? Explain the factors affecting gelation in detail.

OR

- 5 What is starch ? Write a brief note on the effect of cooking on starch. What are the factors which affect the property of starch as a thickening agent ?
- 6 Write a detailed note on food groups.

OR

- 6 What is food pyramid ? Explain both the old and new food pyramids.
- 7 What is protein ? Write a detailed note on the classification of proteins.

- 8 Write a detailed note on protein in relation to egg cookery or meat cookery.
- 9 Write short notes on : (any two) 2×7=14
- (a) Emulsifying agents and Humectants
 - (b) Stabilisers and Thickening agents
 - (c) Retrogradation and Dextrinisation
 - (d) Chyme and functions of gastric juice
 - (e) Nutrients
- 10 Do as directed : 10+4=14
- (a) Fill in the blanks 10
 - (i) Vitamin _____ is necessary for clotting of blood.
 - (ii) Small intestine is divided into three parts _____, _____ and _____.
 - (iii) Large intestine is divided into three parts : _____, _____ and _____.
 - (iv) Colon is divided into three parts _____, _____ and _____.
 - (v) The enzyme Pepsin acts on _____; whereas the enzyme lipase acts on _____ and the enzyme amylase acts on _____.
 - (vi) Protein is broken into _____, starch into _____ and fats into _____.
 - (vii) Bile juice and pancreatic juice are _____ in nature and gastric juice is _____ in nature based on pH.
 - (viii) Salivary glands secrete _____; whereas Bile Juice is secreted by _____.
 - (ix) Pancreatic juice is composed of _____, _____, _____ and _____.
 - (x) _____ starches have 100% amylopectin and are use to make thin edible films to wrap candles.
 - (b) Match the following : 4

Physiological		Nutrients	
Group A		Group B	
A	Energy	I	Fibre
B	Growth	II	Vitamin
C	Protective	III	Fats
D	Regulatory	IV	Protein