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No. of Printed Pages: 3

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SARDAR PATEL UNIVERSITY
M.Sc. (Home Science) III Semester (FN/FBT) (Old Course-CBCS)
External Theory Examination
Date: 5/12/2012, Wednesday
2.30 p.m to 5.30 p.m
PH03CFDN02/PHO3CFBT02: Food Chemistry

Total Marks: 70
(8)

Q.1 Choose the correct answer/answers from the given options

- (i) Retrograded starch is the example of
- (A) RS₁
 - (B) RS₂
 - (C) RS₃
 - (D) RS₄
- (ii) Food having 100% carbohydrate is....
- (A) Honey
 - (B) Sugar
 - (C) Jaggary
 - (D) Wheat
- (iii) The highest amount of saturated fatty acid is present in...
- (A) Soy oil
 - (B) Vegetable ghee
 - (C) Vegetable oil
 - (D) Butter
- (iv) Proliferation of lymphocytes is brought about by peptides having
- (A) Antimicrobial activity
 - (B) Immunomodulatory properties
 - (C) Antithrombotic properties
 - (D) Antipyretic properties
- (v) The cheapest source of protein is...
- (A) Milk
 - (B) Fish
 - (C) Soybean
 - (D) Maize
- (vi) The metal which is used in hydrogenation process is ...
- (A) Copper
 - (B) Nickle

(P.T.O)

- (C) Iron
- (D) Zinc

- (vii) Fatty acid classified as omega-9-fatty acid
- (A) Oleic acid
 - (B) Stearic acid
 - (C) Linolenic acid
 - (D) None of the above
- (viii) The dietary constituent that possess hypocholesteremic effect ...
- (A) Soluble fiber
 - (B) Insoluble fiber
 - (C) Starch
 - (D) Fat

Q.2 Comment on the following (any seven)

(14)

- a) Sensory evaluation is an important step in food product development.
- b) Egg protein has a best quality of protein.
- c) Human diet should contain minimum amount of vegetable ghee.
- d) Prebiotics are considered as a functional ingredient.
- e) Sucrose is a non-reducing sugar.
- f) Hydration capacity of amino acids is different for different amino acids.
- g) Color is an important sensory attribute of food product.
- h) Define "emulsifier and denaturation temperature".
- i) Lipids having high saturated fatty acid are better choice for preparation of fried foods.

Q.3 Answer the following (any three)

(12)

- a) Write in detail about starch gelatinization.
- b) Write in detail about non-enzymatic browning.
- c) Discuss in detail about sweeteners.
- d) Write the importance of fiber in the prevention of CVD.
- e) Discuss the enzymatic hydrolysis of starch

Q.4 (A) Enlist the functional properties of proteins and write in detail about any two of them.

(6)

OR

Write in detail about egg protein.

(-3-)

(B) Write the physical and chemical properties of amino acids.

(6)

OR

Write about any two bioactive peptides.

Q.5 Answer the following (any two)

(12)

- a) What is lipid oxidation? Write in detail about any two tests to evaluate lipid oxidation.
- b) Write different classifications of fatty acids.
- c) Write in detail about the physical and chemical properties of lipids.
- d) Discuss about the types and health benefits of Omega-3 fatty acids.

Q.6 Write a short note on (any four)

(12)

- a) Food standards
- b) Germination
- c) Starch structure
- d) Food colours
- e) Antioxidants
- f) Role of fiber in diabetes
- g) Resistant Starch
