

IDA REGISTERED DIETITIAN EXAMINATION

NOVEMBER 2008

Paper I (Physiology, Microbiology, Biochemistry)

Time : 2 Hrs

Answer All Questions

Marks : 100

Section A

Give the correct answer (10x2=20 marks)

1. Growth hormone stimulates the growth of bones and cartilages through
 - a. Calcitonin
 - b. Calmodulin
 - c. Somatomedin
 - d. None of the above

2. Proportion of carbohydrate, fat and protein in the balanced diet is
 - a. 1:1:4
 - b. 1:4:1
 - c. 1:1:1
 - d. none of the above

3. Soyabean is recommended for menopausal women due to its content of
 - a. Amino acids
 - b. fatty acids
 - c. Phyto-estrogen
 - d. minerals

4. The organism used in Baker's yeast is
 - a. Saccharomyces
 - b. Aspergillus
 - c. Bacillus subtilis
 - d. Monilia

5. GM foods are
 - a. Germinated and Malted
 - b. Granular and Moist
 - c. Genetically Modified
 - d. Glucose and Milk

6. The reaction between sugar and amino acid is known as
 - a. Denaturation
 - b. Hydrolysis
 - c. Maillard
 - d. Browning

7. All the following are the functions of Vitamin C except
 - a. Cellular Oxidation – reduction
 - b. Absorption of iron
 - c. Ca & P metabolism
 - d. Synthesis of collagen

8. Muscle protein absent in smooth muscle is

- a. Actin
- b. Myosin
- c. Calmodulin
- d. Troponin

9. The enzyme deficient in Von Gierke's disease is

- a. Glycogen Synthase
- b. Glucose -6 -phosphatase
- c. Glucokinase
- d. Phosphorylase

10. Normal diastolic blood pressure in an adult man is

- a. 60mmHg
- b. 80 mmHg
- c. 120 mmHg
- d. 140 mmHg

Section B

1. State whether the following statements are true or false (1x5=5 marks)

- a. Uric Acid is the end product of protein metabolism
- b. High concentration of C-reactive protein is found in case of Coronary Artery Disease.
- c. Superoxide dismutase scavenges toxic free radicals.
- d. Glucose -6-P de-hydrogenase deficiency causes hemolytic anemia
- e. NO gas acts as a vasodilator

2. Fill in the blanks (1x5=5 marks)

- a. The ----- Lipoprotein has the lowest density
- b. ----- type of enzyme inhibition is irreversible
- c. ----- is active form of methionine
- d. ----- are cholerectic agents
- e. Preservation of food by canning involves -----

3. Name one organism involved in each of the following (1x5=5 marks)

- a. cholera
- b. Leprosy
- c. Ripening of cheese
- d. Yoghurt
- e. beer manufacture

4. Differentiate between (3x3=9 marks)

- a. Yeasts and molds
- b. Active and passive transport
- c. LDL & HDL

5. Match the following (1x6 =6 marks)

- | | |
|--------------------------------|------------------------|
| a. Glucose -6-phosphatase | 1. Carboxylation |
| b. HMG -CA reductase | 2. Alexander Fleming |
| c. N-Carbamoyl -(P) Synthetase | 3. Flavinoids |
| d. Penicillin | 4. Carbamoyl Phosphate |
| e. Red wine | 5. Mevalonate |
| f. Biotin | 6. Glucose |

6. Explain the terms (2x5=10 marks)

- a. Hypobaric storage

- b. Facultative anaerobe
- c. COPD
- d. Anaplerotic reactions
- e. Omega-3-fatty acids

7. Complete the following reactions (10 marks)

- a. Citrulline _ Arginosuccinic acid
- b. Malate _ Oxalo acetate
- c. Tyrosine _ Epinephrine

Section C (2x15=30 marks)

Answer any TWO questions

1. Explain why Glucose -6-(P) is regarded as the Key intermediate metabolic product of carbohydrate metabolism.
2. Write notes on :
 - a. Hormones of the kidney
 - b. Transport, storage and functions of iron in the body
3. Discuss oxidation and biosynthesis of even C fatty acids in the body.

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Paper II (Nutrition, Dietetics, Food Service Management)

Time : 2 Hrs

Answer All Questions

Marks : 100

Section A (10x2=20 marks)

1. Categorize the following BMI levels:

- a. 31
- b. 15
- c. 25
- d. 19

2. If the urinary Iodine concentration is < 40 mcg/dl, it indicates-----

3. Differentiate between chronic and acute condition

Classify the following accordingly

- a. Tuberculosis
- b. Diarrhea
- c. Peptic Ulcer
- d. Infectious Hepatitis

4. State whether true or false:

'All foods with low glycemic index can be given to diabetic patients'.

5. Immuno-competence during old age depends on several nutrients. Pick out four key nutrients from the following list:

Calcium, Magnesium, Iron, Ascorbic Acid, Copper, Riboflavin, Niacin, Zinc.

6. Why are trans- fatty acids bad for health?

7 In a 2000 Kcal diet if 70% of energy is derived from CHO, 10% from protein and 20 % from fat, then how many grams of each is required to be provided in the diet?

8 What is the meaning of 'Organic Foods'?

9 Endemic Fluorosis is a public health problem when drinking water contains naturally occurring fluoride of more than:

- a. 0.5ppm
- b. 1ppm
- c. 1.5ppm
- d. 2ppm

10 Pick out the odd combination

- a. Vitamin E and Selenium
- b. Zinc and Insulin
- c. Tyrosine and Thyroxine
- d. Tryptophan and Glucagon

Section B (25x2=50 marks)

1. What do you understand by height for age and weight for height in assessing

malnutrition?

2. What is ICDS? Give four major services offered by ICDS to the community
3. Give any two Government run programs each for (a) supplementary feeding program (b) Nutrient efficiency program.
4. What is the Calcium and Protein content of human milk? Create a slogan for promotion of breast feeding.
5. Give four important pieces of information to be collected as a dietitian for an OPD patient.
6. What is an Organization chart? Give one example.
7. Classify equipments used in a hospital dietary service according to their use in production cycle giving examples.
8. Give two benefits of consuming Omega-3-fattyacid in the diet.
9. Mention two adverse effects of dehydration.
10. What is Vegan Diet?
11. Explain Oxidative Stress.
12. Give two benefits of minimizing drug interaction.
13. Differentiate between liquids and soft diet. Give examples.
14. What is the recommended route of feeding in the following disorder, explain by giving reasons. a. Cystic Fibrosis b. Bone Marrow Transplantation
15. Define Net Protein Utilization (NPU). What is it used for?
16. Explain a 40-30-30 diet
17. What nutritional care guidelines would you recommend for patients with Dumping Syndrome?
18. Which of the following foods cannot be incorporated in a gluten free diet and why?
a. Tandoori roti b. Pineapple cake c. Vegetable pulav d. Noodles
19. Give the full form of BIS, PDS, ISO
20. What is the basis of fluid requirement in acute renal failure?
21. What is Bulimia Nervosa?
22. Define RDA, who formulates them in India?
23. Expand and differentiate between LBW, VLBW & ELBW.
24. What is Glycemic Index?
25. What is the difference between:
a. Refrigerated storage b. Cold storage c. Freezer storage

Section C (2x15=30 marks)

Answer any TWO of the following

1. A 40 year old male (height 170cm, weight 55 kg) is undergoing haemo-dialysis and is waiting for kidney transplant. Plan and calculate a diet you would recommend to this patient. His biochemical parameters are BP 150/95 mmHg, Creatinine 6.2 mg/dl, BUN 78 mg/dl, Potassium 5.7 mmo/L, Sodium 150 mmo/L
2. Plan and calculate a non-vegetarian diet for a 30 year old pregnant woman whose weight is 56 kg, height 160 cms. The biochemical parameters are Haemoglobin 8.5gm/dl, fasting sugar 110mg/dl, GTT 1st hour 140 mg/dl. 2nd hour 180mg/dl, 3rd hour 130 mg/dl, GRBS 147 mg/dl. Give basic principles in planning the diet.
3. Plan and calculate a vegetarian diet for a 60 year hypertensive male (height 172 cms, weight 87 kg). His BP is 160/100 mmHg, total cholesterol 275mg/dl, triglycerides 340 mg/dl, HDL 44mg/dl, VLDL 41 mg/dl and LDL 170mg/dl.