IDA REGISTERED DIETITIAN EXAMINATION

NOVEMBER 2011
PAPER – I (Physiology, Microbiology, Biochemistry)

Time: 2 hours
Marks :100

SECTION A

Give the correct answer (10 x 2 = 20 marks)

1. In an axon, myelin sheath is present _____
    a. On the top
    b. At the bottom
    c. In a continuous manner
    d. At the intervals

2. Weight of a human pancreas is about _____
    a. 20g
    b. 60 g
    c. 100g
    d. 200g

3. The compound present in the synovial fluid is _____
    a. Hyaluronic acid
    b. Chondroitin 4 sulphate
    c. Chondroitin 6 sulphate
    d. Heparin

4. One of the following is a thyroid gland disorder
    a. Simmond's disease
    b. Addison's disease
    c. Grave's disease
    d. Frolich's syndrome

5. Aspirin blocks the synthesis of
    a. Prostaglandins only
    b. Prostacyclins only
    c. Thromboxanes only
    d. All of the above

6. Cellulose is made up of the molecules of
    a. α - Glucose
    b. β – Glucose
    c. Both of the above
    d. None of the above

7. The volume of ultrafiltrate formed by both the kidneys of an adult human is
    a. 250 to 500 ml/day
    b. 25 to 50 l/day
    c. 150 to 180 l /day
    d. 1200 to 1500 l/day

8. Glucose and Mannose are epimers means
    a. They are the mirror image of each other
    b. One is an Aldose and the other is a Ketose
    c. They differ in the configuration of carbon atoms
    d. None of the above

9. Toxin Linamarin is found in
    a. Fava beans
    b. Cassava
    c. Lathyrus sativus
    d. Starfish

10. Brown colouration and spoilage in milk can occur due to
    a. E. Coli
    b. Streptococci
    c. Clostridium
    d. Pseudomonas

SECTION B

1. State whether the following statements are TRUE OR FALSE (5 x 1 = 5 marks)
    a. Levels of the enzyme 'Lactate dehydrogenase' are depressed in myocardial infraction.
    b. In adults, the diastolic blood pressure is about 11 kilopascals .
    c. In Gaucher's disease, there is accumulation of cholesterol .
    d. Asparginase and Glutaminase are known as antitumor agents.
    e. Disinfectant iodophors are used in the dairy industry .

2. Fill up the blanks (5x 1 = 5 marks)
    a. Fibres of the optic nerve originate from the _____
    b. The ribonucleotide which transfers the genetic information for synthesis of proteins to ribosomes is _____
    c. The zinc containing protein of saliva involved in taste sensation is _____
    d. Tea contains a purine based substituent known as _____
    e. RDA of pyridoxine for a pregnant woman is _____

3. Match the following (5 x 1 = 5 marks)

a. Serum albumin	i. 75 to 150 mg/dl
b. Serum potassium	ii. 3.5 to 5.0 g/dl
c. Triglyceride (F)	iii. 4.2% to 5.9%
d. BUN	iv. 3.5 to 5 mEq/l
e. HBA_1C	v. 7 to 18 mg/dl

4. Explain the following (5 x2 = 10 marks)
    a. Haloenzyme
    b. Composition of urine
    c. Zymogens
    d. Waiting period
    e. Pharmacokinetics
5. Write the name of the condition / disorder caused by the following (5 x 1 = 5 marks)
    a. Genetic disorder caused due to the deficiency of enzyme Glucose 6 phosphatase - _____
    b. Obesity in elderly people accompanied by loss of LBM and strength - _____
    c. Condition caused due to excess secretion of growth hormone in childhood - _____
    d. Consumption of raw or improperly cooked pork can cause - _____
    e. Claviceps purpurae causes - _____

6. Expand the following terms and write one significance of the same (5 x 2 = 10 marks)
    a. CCKPZ
    b. β-hCG
    c. HACCP
    d. QUATS
    e. CRP

7. Write the outcome of the following in brief (5 x 2 = 10 marks)
    a. Lead poisoning
    b. Deficiency of EFA
    c. Increase in eosinophils
    d. Injury to medulla oblongata
    e. Hyperkalemia

SECTION C

Answer any **Two** questions (2 x 15 = 30 marks)

1. Discuss the different factors causing food spoilage in fruits, vegetables and fish. Indicate the preventive methods for the same.
2. Write an essay on the hormones of adenohypophysis and neurohypophysis, their action and control mechanisms.
3. In a post meal status, explain the metabolism of the body to build up the stores of carbohydrates.

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Paper II (Nutrition, Dietetics, Food Service Management) Time: 2 Hours
Marks: 100

Answer All Questions

SECTION A (10×2=20)

Identify the correct answer

1. Pregnant mothers taking folic acid supplements should rule out which of the following deficiencies to prevent IUGR.
a. Vitamin A
b. Phosphorus
c. Vitamin B12
d. Zinc

2. BMR is elevated in which of the following conditions?

a. Hyperthyroidism
b. CED
c. Hypothyroidism
d. Starvation

3. Aspartame is NOT SAFE for?

a.T1DM
b.T2DM
c. Bulimics
d. Phenylketonurics

4. P.D in ESRD patients is commonly associated with

a. Hypoglycemia
b. Hyperglycemia
c. Hypocalcaemia
d. Hypocalcaemia

5. Corn & Gliadin are low in which of the following amino acid

a. Lysine
b. Alanine
c. Glycine
d. Aspartic acid

6. Side effects of taking statins for treatment of Dyslipidemia leads to which of the following

a. Severe headaches
b. GI symptoms
c. Myalgia
d. Neuropathy

7. The percentage of fat and protein in cheese is in the following ratio

a. 1:1 c. 1:3
b. 1:2 d. 1:4

8.10-12 almonds will provide calories approximately equivalent to which of the following exchanges

a. Cereal
b. Milk
c. Fruit
d. Fat

9. What is common in the management of patients with cardiac, renal & hepatic failure?

a. Protein and fluid restriction
b. Na and K restriction
c. K and fluid restriction
d. Na and fluid restriction

10. AIDS is commonly associated with which of the following

a. O.I
b. Hypoglycemia
c. Bacterial translocation
d. Dyslipidemia

Section – B

Fill in the blanks: (5×1=5 Marks)

1. Patients with phenylketonuria tend to have deficiency of ----------
b. The process of introducing a new comer to his work environment is----------
c. In GDM insulin resistance is highest in the morning due to ----------
d. Blood transfusion is suggested to patients when Hb is below---------gm%
e. How many calories will 500ml of Ringer Lactate solution provide -------?

2. Match the following (5× 1=5 Marks)

a) Indication Bariatric surgery ( ) 150-200
b) Starvation ketosis ( ) 70
c) Pediatric fluid reqmt ( ) 150
d) Food danger zone ( ) 35
e) LDL target with CAD ( ) 40-140

3. Explain the following (5× 2=10 Marks)

a) Hospital catering
b) Post pyloric feeding
c) Give the full form SGA, SOAP, QOL, MNA,VLCD
d) Re feeding Syndrome
e) Reactive Hypoglycemia

4. Write true or "false" for the following statements (5× 1=5 Marks)

a) Vitamin K rich foods should be avoided in patients on Warfarin/dicoumarol therapy in patients who have undergone mitral valve replacement.
b) Standardised recipe is not an important tool for production control.
c) Zn is one of the parameters that need to be monitored while a patient is receiving PN.
d) Raised S.TGL is associated with pancreatitis.
e) One of the aims of NNP is fortification of essential foods.

5. Explain the following: (5×5= 25 marks)

a) MUST as important assessment tool in brief.
b) Nutrition mgt & principles in patients suffering from TIA preceding a stroke.
c) Methods and Barriers of communication.
d) Inpatient monitoring of PARENTERAL NUTRITION-(variables to be monitored)
e) Etiology and nutrition management in celiac disease

Section C:

ANSWER <u>ANY</u> 2 OF THE FOLLOWING: (2 × 15 = 30 Marks)

1. 48 year old Mr. Antony was admitted with uremic symptoms with fluid overload. His caloric intake was of approximately 235kcals/day which continued to deteriorate and was suggested to be fed by NG feeding. His urine output is 700ml/day.

   Height 168cms
   Bun 77mgs/dl
   S.Creatinine 6.9mgs/dl
   S.Albumin 2.2g/dl
   S.Sodium 148meq/l
   S.Potassium 5.8meq/l
   Gfr <15ml /min
   Blood pressure 180/110mmhg

Write the diagnosis. 1mark
Write the normal values. 3 marks
How will you prevent tissue catabolism? 1mark
How will you correct the fluid overload through MNT? 1mark
Write the nutritional mgt & objectives. 3 marks
Plan and calculate a day's diet for Mr. Antony. 6 marks

2. A patient aged 42yr housewife, known CAD with unstable angina, post hysterectomy status is awaiting CABG on the following medications
-ATEN 50, ATORVASTATIN 20MG, FENOFIBRATE-OD, NOT ON OHA (JUST LSM +MEAL PLAN)

Ht 152cm	BP 160/90mmHg
Wt 65kgs	Waist Circumference 96 cms
Hba1c 5.8 %	Total Cholesterol 200mgs/dl
FBS 122mgs/dl	LDL Cholesterol 100mgs/dl
FPBS 129mgs/dl	HDL Cholesterol 38mgs/dl
	S.TGL 276mgs/dl

Normal renal parameters

Present caloric intake is approximately 1750kcals/day.

Mention the associated syndrome and its significance. Calculate BMI 2marks
What will be the nutritional care plan with nutrition goals for this patient? 3 marks
Write the target values.
2marks
Give diet plan with calculations with necessary justification and list 2foods rich in Sfa,Mufa,Cholesterol, Tfa,Pufa 8marks

3. Thirty eight years old elderly primi weighing 68 kilograms with mild edema and polydipsia , attended the endocrinology op for further mgt. On iron, folic acid and Ca supplements, Tab Aldomet BD & Short acting analogue 5 units BD. Gestational age being 28weeks

Height -155cms Hba1c-6.7%
Mean blood glucose-132 mgs/dl , PPBS-159 mgs/dl , BP-145/88mmhg
OGTT values being—
F -105mgs/dl
1hr -198 mgs/dl
2hr-155 mgs/dl
3hr-143 mgs/dl
Write the diagnosis 1 mark
Write the glycemic control and blood pressure targets. 3 marks
Plan & calculate a day's diet with exchanges & necessary justification. 7 marks
Mention the Calorie, protein, folic acid and fluid requirements. 2 marks
Write the min Cho required to prevent starvation ketosis in GDM- 1 mark
Write the onset of action of the insulin advised 1 mark