**ST MARY’S UNIVERSITY**

**TWICKENHAM, LONDON**

BA/ BSc Degree Examination students registered for

Level **FOUR**

Title: **Introduction to Nutrition and Health**

Code: **HEP4010**

Semester: **ONE**

Date: **January 8th 2019**

Time: **9:30 – 10:30AM**

TIME ALLOWED: **ONE** HOUR

Please answer **ALL** questions on the separate form.

If an error occurs, please put an **‘X’** thorough the incorrect answer.

If you would like to return to the original answer circle the **‘X’**

Answer **ALL** questions.

Write your Regnum on **ALL** pages

1. How many kilojoules are equivalent to 300 kcals?
2. 1092 kJ
3. 1184 kJ
4. 1255 kJ
5. 1500 kJ
6. What does it mean if a food is energy dense?

a) Few calories in large volume of food

b) Many calories in large volume of food

c) Many calories in small volume of food

d) Few calories in small volume of food

1. The metabolisable energy of foods is measured using a:

a) Osmometer

b) Bomb calorimeter

c) Bod Pod

d) Human calorimeter

4. What is a factor that determines basal metabolic rate (BMR)?

1. The weight of a person
2. The age of a person
3. The lean body mass of a person

a) I & II

b) I & III

c) II & III

d) All of the above

1. Which of the following contributes towards energy expenditure?
2. Basal Metabolic Rate
3. Physical Activity Level
4. Thermic Effect of Foods
5. I
6. II
7. III
8. All of the above
9. Which of the following may induce thermogenesis?
10. Caffeine
11. Nicotine
12. Alcohol

a) I & III

b) II & III

c) I & II

d) All of the above

1. What element of energy requirements is most variable?
2. Basal metabolic rate
3. Physical activity
4. Thermic effect of feeding
5. None of the above
6. The building blocks of carbohydrate are:
7. Amino acids
8. Fatty acids
9. Monosaccharides
10. Fibre fractions
11. Maltose is made up of:
12. Glucose + Glucose
13. Glucose + Galactose
14. Fructose + Glucose
15. Fructose + Galactose
16. Around how much dietary energy should come from total carbohydrate?
17. 11%
18. 15%
19. 35%
20. 50%
21. A high intake of NSP is associated with a lower risk of which type of cancer?
22. Breast cancer
23. Lung cancer
24. Bone cancer
25. Colorectal cancer
26. Excessive oligosaccharides consumption may cause:
    1. Weight gain
    2. Bloating and gas
    3. Constipation
    4. Diabetes
27. What is glycogen?
28. Pigment of the eye
29. The hormone that controls blood sugars
30. Stored glucose in the liver and the muscle
31. The process of releasing energy without oxygen
32. Excessive sugar intake leads to:
33. Decrease in blood lipid levels
34. Bone demineralisation
35. Improved renal function
36. Dental caries
37. Which of the following are both types of carbohydrate?
38. Fat and oligosaccharides
39. Fat and amino acids
40. Starch and oligosaccharides
41. Starch and amino acids
42. Which of the following is an essential amino acid?
43. Isoleucine
44. Glycine
45. Proline
46. Serine
47. Which food group is the largest contributor of protein for UK adults?
48. Vegetables and potatoes
49. Meat and meat products
50. Cereal and cereal products
51. Milk and milk products
52. Which of these is NOT a function of protein in the body of a healthy person?
53. Provides a major source of energy
54. Provides a structural role
55. Act as catalysts for reactions
56. Transports substances around the body

1. Which of the following provides protein of a high biological value?
2. Orange juice
3. Tuna steak
4. Peanuts
5. Banana
6. Protein complementation is:
7. Combing sources of incomplete proteins to ensure optimal amino acid profile
8. A way of defining biological value
9. Eating certain carbohydrates alongside protein to increase recovery
10. None of the above
11. What is one of the limiting amino acid in Legumes?

a) Lysine

b) Isoleucine

c) Tryptophan

d) Leucine

1. Oily fish store fat reserves in the:
2. Liver
3. Flesh
4. Muscle
5. All of the above
6. Which of the statements below is not correct?
7. Saturated fatty acids have no double bonds
8. Saturated fatty acids carry the maximum number of hydrogen atoms
9. Stearic acid is the most common unsaturated fatty acid
10. Polyunsaturated fatty acids have at least two double bonds
11. According to the Department of Health (1991):
12. Total fat intake should provide an average and not exceed 15% of total energy intake.
13. Total fat intake should provide an average and not exceed 45% of total energy intake.
14. None of the above
15. Total fat intake should provide an average and not exceed 33% of total energy intake.
16. What does the term”n-3 fatty acids” signify?
17. The first double bond occurs six carbons from the acid group end
18. There are six double bonds in the fatty acid
19. The first double bond occurs six carbons from the methyl group end
20. None of the above
21. What phrase is related to transporting fat in circulation?

a) Glycogen

b) Glycerol

c) Chylomicrons

d) Spleen

1. Which of the following statements is not correct?
2. High levels of HDL are protective against cardiovascular disease
3. High intakes of polyunsaturated fatty acids can lower HDL
4. High intakes of monounsaturated fatty acids can increase LDL
5. High levels of LDL promote cardiovascular disease
6. What is the maximum number of alcohol units recommended per week for men?
7. 12
8. 20
9. 13
10. 14
11. Which of the following groups are advised not to consume alcohol?
12. Working mothers
13. Elderly women
14. Pregnant and lactating women
15. All of the above
16. How many units of alcohol is in this drink? One pint (500ml) of lager (ABV 5%):
17. 5 Units
18. 1 Unit
19. 5.5 Units
20. 2.5 Units
21. In nutrition guidelines, what does DRV stand for?
22. Dietary recall validation
23. Diet response value
24. Dietary record verification
25. Dietary reference value
26. What is the reference national diet and nutrition survey in the UK?
27. NDNS
28. NHS
29. SPSS
30. HEHS
31. Peanut butter contain 30g protein/100g, toast contains 10g protein per 100g,if 25g of peanut butter is spread on a toast weighing 50g, how much protein does this contain peanut butter toast contain?
    1. 7.5 g protein
    2. 12.5g protein
    3. 15.5g protein
    4. 18.5 g protein
32. A tuna melt contains 4g protein, 20g fat and 60g carbohydrate. How much energy does this jam doughnut provide?
33. 448 Kcals
34. 341 Kcals
35. 241Kcals
36. 356 Kcals
37. A small teacake contains 30 g carbohydrate and 3 g protein and 5g fat. How much energy does the teacake provide?
38. 177Kcals
39. 277Kcals
40. 377Kccls
41. 477Kcals
42. Which of the following is a characteristic of fat-soluble vitamins?
    1. Excesses are stored in the liver and adipose tissue
    2. Travel freely in the blood
    3. There is no risk of toxic issues
    4. Daily intakes needed to maintain blood levels
43. Why must athletes be well hydrated?
44. Helps with reduce fatigue
45. Helps to maintain blood plasma volume
46. Helps with cognitive function in the body
47. All of the above
48. Anaemia is associated with a low intake of which mineral?
    1. Calcium
    2. Phosphorous
    3. Iron
    4. Zinc
49. The main functions of vitamin D are:
    1. Calcium and iodine homeostasis
    2. Calcium and iron homeostasis
    3. Bone metabolism and iron homeostasis
    4. Calcium homeostasis and bone metabolism
50. Extreme low levels of Vitamin C lead to:
    1. Teratogenic effects to new-borns in pregnant women
    2. Liver toxicity
    3. Scurvy
    4. GI issues
51. A major source of haem iron in the UK diet is:
    1. Nuts and seeds
    2. Red meat
    3. Fruits
    4. Dark leafy green vegetables
52. Which one of the following is not a function of Vitamin E?
    1. Antioxidant
    2. Prevents peroxidation of PUFA
    3. Cell signalling
    4. Coagulant
53. Primary deficiency of Vitamin K occurs in:
54. Vegetarians
55. Children
56. Housebound people
57. New born babies
58. In children, iodine deficiency leads to:
59. Down’s syndrome
60. Rickets
61. Cretinism
62. Anaemia
63. Toxicity of fluoride:
64. Is not possible because fluoride cannot be stored
65. Is possible and is called fluoridation
66. Is possible and is called fluorosis
67. Is possible and is called fluoride intoxication
68. The availability of iodine is linked to the functioning of which hormone?
69. Adrenalin
70. Thyroxin
71. Insulin
72. Aldosterone
73. What is the most reliable food source of zinc?
74. Orange juice
75. Meats and seafood
76. Dark green vegetables
77. Bread
78. Content of vitamin A in foods is often expressed as:
79. Retinol equilibrium
80. Retinol excess
81. Retinol elements
82. Retinol equivalents
83. Which of the following B vitamins helps prevent Neural Tube Defects in children when consumed in adequate amounts during pregnancy?
84. Folate
85. Thiamin
86. Niacin
87. Vitamin B12
88. Which of the following is NOT a clinical feature of pellagra?
89. Dermatitis
90. Diarrhoea
91. Dementia
92. Bitot spots

**END OF EXAMINATION**

**Multiple Choice Questions Answer Sheet HEP4010:**

**Regnum:………………………**

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| **Question:** | **Answer:** |
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**END OF EXAMINATION**