**ST MARY’S UNIVERSITY**

**TWICKENHAM, LONDON**

BA/ BSc Degree Examination students registered for

Level **FOUR**

Title: **Introduction to Nutrition and Health**

Code: **HEP4010**

Semester: **Resit**

Date: **4th July 2019**

Time: **09:30-10:30 AM**

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. Which of the following statements is TRUE?
2. Fat, carbohydrate and water all provide energy in the diet.
3. Fat, carbohydrate and protein all provide energy in the diet.
4. Vitamins, minerals and fat all provide energy in the diet.
5. Vitamins, minerals and protein all provide energy in the diet.
6. How many kilojoules are equivalent to 300 kcals?
7. 1092 kJ
8. 1184 kJ
9. 1255 kJ
10. 1500 kJ
11. The heat of a sample of breakfast cereals (1g) measured using a bomb calorimeter was 5000 calories. How many Kcal in a 100g portion?
12. 5000 Kcal/100g
13. 500 Kcal/100g
14. 50Kcal/100g
15. 5Kcal/100g
16. What is a factor that determines basal metabolic rate (BMR)?
17. The weight of a person
18. The age of a person
19. The lean body mass of a person

a) I & II

b) I & III

c) II & III

d) All of the above

1. The basal metabolic rate (BMR) approximately accounts for what percentage of daily energy requirements in non-athletes healthy adults?

a) 50%

b) 15%

c) 40%

d) 60%

1. Total Energy Expenditure (TEE) equals to:
2. TEE = BMR x PAL
3. TEE = BMI x PAL
4. TEE = BMR / PAL
5. TEE = BMI / PAL
6. What is the (Physical Activity Value) PAL value for the average population?
7. 1.74
8. 1.63
9. 1.55
10. 1.90
11. Which process is responsible for the creation of disaccharides from monosaccharides?
12. Hydrolysis
13. Oxidation
14. Condensation
15. Deamination
16. Sucrose is made up of:
17. Glucose + Glucose
18. Glucose + Galactose
19. Fructose + Glucose
20. Fructose + Galactose
21. What is the NSP reference intake in UK adults?
22. 18g
23. 13g
24. 20g
25. 30g
26. In human nutrition the principle Non Starch Polysaccharides (NSP) are comprised of:
27. Muscle cell walls
28. Plant cell walls
29. Sucrose
30. Sugar alcohols
31. Which of the following food groups makes the largest contribution to NSP intake in UK adults?
32. Sweets and confectionaries
33. Meat and Fish
34. Eggs and Tofu
35. Cereals and cereal products
36. Which of the following are both types of carbohydrate?
37. Fat and oligosaccharides
38. Fat and amino acids
39. Starch and oligosaccharides
40. Starch and amino acids
41. Which of these is a conditionally essential Amino acid?
42. Histidine
43. Isoleucine
44. Valine
45. Methionine
46. Which of the following amino acid is notessential for adults?
47. Arginine
48. Phenylalanine
49. Tryptophan
50. Leucine
51. Which food group is the largest contributor of protein for UK adults?
52. Vegetables and potatoes
53. Meat and meat products
54. Cereal and cereal products
55. Milk and milk products
56. The 2 main protein deficiencies conditions are:
57. Beriberi and pellagra
58. Scurvy and rickets
59. Marasmus and kwashiorkor
60. Goitre and anaemia
61. Which of these is NOT a function of protein in the body of a healthy person?
62. Provides a major source of energy
63. Provides a structural role
64. Act as catalysts for reactions
65. Transports substances around the body

1. Which of the following provides protein of a high biological value?
2. Apple juice
3. Beef steak
4. Chia seeds
5. Apples
6. Which of the following enzymes is notinvolved in the digestion of protein?
7. Pepsin
8. Trypsin
9. Maltase
10. Protease
11. What is one of the limiting amino acid in cereal grains?
12. Methionine
13. Lysine
14. Tryptophan
15. Phenylalanine
16. Oily fish store fat reserves in the:
17. Liver
18. Flesh
19. Muscle
20. All of the above
21. Which are the main omega-3 fatty acids found in oily fish?
22. EPA and linolenic acid
23. Linolenic and alpha-linoleic
24. EPA and DHA
25. DHA and linolenic
26. Every triacylglycerol molecule contains:
27. One molecule of glycerol and three fatty acids
28. One fatty acid and three molecules of glycerol
29. One molecule of glycerol and one fatty acid
30. Three fatty acids only
31. According to the Department of Health (1991):
32. Total fat intake should provide an average and not exceed 15% of total energy intake.
33. Total fat intake should provide an average and not exceed 45% of total energy intake.
34. None of the above
35. Total fat intake should provide an average and not exceed 33% of total energy intake.
36. The nomenclature of fats outlines the location of double bond from which end of the chain?
37. Carboxyl
38. Methyl
39. Nitrogenous
40. Oxidative
41. What phrase is related to transporting fat in circulation?

a) Glycogen

b) Glycerol

c) Chylomicrons

d) Spleen

1. What does LDL stand for?
2. Low Density Lipoprotein
3. Low Degree Lipoprotein
4. Low Density Linoleic acid
5. Low Degree Linoleic acid
6. What is the maximum number of alcohol units recommended per week for men?
7. 12
8. 20
9. 13
10. 14
11. Drinking heavily during pregnancy can lead to the child developing:
12. Foetal alcohol syndrome
13. Scurvy
14. Rickets
15. Diabetes
16. How much energy would 50g of alcohol provide?
17. 70 kcal
18. 200 kcal
19. 450 kcal
20. 350 kcal
21. Which DRV is used for protein?
22. LRNI
23. EAR
24. % Energy Intake
25. RNI
26. Cream cheese contain 30g protein/100g, toast contains 10g protein per 100g. If you spread 25g of cream cheese on a toast weighing 50g, how much protein does this contain together?
    1. 7.5 g protein
    2. 12.5g protein
    3. 15.5g protein
    4. 18.5 g protein
27. A jam doughnut contains 2g protein, 17g fat and 70g carbohydrate. How much energy does this jam doughnut provide?
28. 441 Kcals
29. 341 Kcals
30. 241Kcals
31. 541Kcals
32. A vegan diet can cause deficiency in:
33. Folic acid
34. Magnesium
35. Vitamin B12
36. Vitamin C
37. 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
38. Anaemia is associated with a low intake of which mineral?
    1. Calcium
    2. Phosphorous
    3. Iron
    4. Zinc
39. Most of the functional iron in the body is found in:
40. DNA
41. Haemoglobin
42. Myoglobin
43. Enzymes
44. 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
45. 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
46. 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
47. Which one of the following is not a function of Vitamin E?
    1. Antioxidant
    2. Prevents peroxidation of PUFA
    3. Cell signalling
    4. Coagulant
48. Primary deficiency of Vitamin K occurs in?
49. Vegetarians
50. Children
51. Housebound people
52. New born babies
53. In children, iodine deficiency leads to:
54. Down’s syndrome
55. Rickets
56. Cretinism
57. Anaemia
58. Toxicity of fluoride:
59. Is not possible because fluoride cannot be stored
60. Is possible and is called fluoridation
61. Is possible and is called fluorosis
62. Is possible and is called fluoride intoxication
63. The availability of iodine is linked to the functioning of which hormone?
64. Adrenalin
65. Thyroxin
66. Insulin
67. Aldosterone
68. What is the most reliable food source of zinc?
69. Orange juice
70. Meats and seafood
71. Dark green vegetables
72. Bread
73. Content of vitamin A in foods is often expressed as:
74. Retinol equilibrium
75. Retinol excess
76. Retinol elements
77. Retinol equivalents
78. Which of the following B vitamins helps prevent Neural Tube Defects in children when consumed in adequate amounts during pregnancy?
79. Folate
80. Thiamin
81. Niacin
82. Vitamin B12
83. Which of the following is NOT a clinical feature of pellagra?
84. Dermatitis
85. Diarrhoea
86. Dementia
87. 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**