

Notre Dame University
Faculty of Natural & Applied Sciences
Department of Sciences
NTR 201 - Basic Human Nutrition
Exam I

Name: _____

I.D. #: _____

Please take note of the following exam regulations:

Talking, improper seating, borrowing items (calculators, pens, correctors, etc.) are not permitted. Questions are not allowed during the exam. The exam sheets will be collected by the end of the period assigned in the official schedule. No extra time will be granted. The student has to leave the exam hall once he/she hands on the exam sheets. If caught cheating the exam sheets will be confiscated immediately and the student will have to leave the exam hall.

Every proctor in the exam hall will exercise the right to keep and apply the regulations mentioned above.

N.B.: Make sure that your cellular phones are turned off.

Multiple Choice Questions (52 questions, 2 pts each). Choose **One** Correct Answer.

- 1- Low blood sugar is termed
 - a- Hyperglycemia.
 - ☒ b- Hypoglycemia.
 - c- Hyperthermia.
 - d- Hypothermia.

- 2- Glucose is the primary energy source for:
 - ☒ a- brain cells
 - b- red blood cells
 - c- skin cells
 - d- all of the above

- 3- The diet for a diabetic person should be high in:
 - a- sugar.
 - ☒ b- dietary fiber.
 - c- alcohol.
 - d- cholesterol.

- 4- Cellulose, hemicellulose, and lignin are fibers found in:
 - a- ripe fruits.
 - ☒ b- plant walls, skins, peels, and bran layers of grains.
 - c- pectin.
 - d- food additives

- 5- It is recommended that the percent of your total calorie intake from carbohydrates should be about:
- a- 10% to 20%.
 - b- 25% to 35%.
 - ☒ c- 50% to 60%.
 - d- 70% to 80%.
- 6- Excess sugar in the diet can cause:
- a- weight gain.
 - ☒ b- dental caries.
 - c- inadequate intake of other nutrients.
 - d- all of the above.
- 7- Excess intake of fibers is not recommended since they:
- a- cause weight gain
 - b- bind vitamins and minerals
 - ☒ c- cause colon cancer
 - d- increase the risk for diabetes and cardiovascular disease
- 8- Digestion of carbohydrates:
- ☒ a- starts in the small intestine
 - ☒ b- occurs mostly in the stomach due to the action of gastric enzymes
 - ☒ c- yields monosaccharides that are absorbed into the blood
 - ☒ d- yields monosaccharides that are absorbed into the lymph
- 9- Insulin:
- ☒ a- is secreted by the pancreas in response to low blood glucose level
 - ☒ b- increases the process of glycogenesis
 - ☒ c- increases the process of glycogenolysis
 - d- increases the process of gluconeogenesis
- 10- The "empty calories of sugar" indicate that:
- ☒ a- sugars have a low content of other nutrients
 - ☒ b- pure sugars displace nutrient-dense foods from the diet
 - c- dental caries are health problems associated with excess sugar intake
 - d- sugars should be totally eliminated from the diet
- 11- Glycogen is :
- a- A chain of glucose units
 - b- A polysaccharide present in grains and fruits
 - c- the storage form of CHO in animals
 - ☒ d- both a and c
 - e- All of the above
- 12- Ketosis (low blood pH) occurs if there is
- a- excessive breakdown of fat as a source of energy
 - b- Usage of CHO as a sole source of Energy
 - ☒ c- A case of starvation or fasting
 - ☒ d- both a and c
- 13- Liver glycogen is transformed into glucose by:
- a- Gluconeogenesis
 - b- Many processes including lipolysis
 - ☒ c- Glycogenolysis
 - d- glycogenesis

14- Dietary fiber have no direct nutrient value because:

- a- they are not water-soluble
- b- they do not contain Kcalories
- ☒ c- humans lack the necessary enzymes to digest them
- d- none of the above

15- Which of the following carbohydrate-containing foods provide the quickest energy?

- ☒ a- Slice of bread
- b- potatoes
- c- milk
- d- Orange juice

16- Which type of carbohydrates will require more digestion?

- ☐ a- polysaccharides
- ☒ b- cellulose
 - c- disaccharides
 - d- monosaccharides

17- A diet containing _____ is not ideal for a person suffering from high blood cholesterol

- a- Olive oil
- ☒ b- Eggs
- c- Raw peanuts
- d- Fruits

18- Which of the following statement (s) is (are) **False**?

- ☒ a- Saturated fatty acids have single bonds between carbon atoms.
- ☒ b- A triglyceride contains 1 glycerol molecule
- c- Peanuts, cheese and potato chips are examples of foods with hidden fat.
- ☒ d- Plant foods generally have more saturated fats than animal foods.
- ☒ e- Both a and b

19- Hydrogenated fats

- a- Have had hydrogen added chemically.
- ☒ b- Become saturated fats.
- c- Contain trans-fatty acids.
- ☒ d- Both a and c
- ☒ e- All of the above

20- Glycerol is

- ☒ a- An alcohol.
- b- Obtained in the diet as a part of triglycerides.
- c- Found in phospholipids
- d- Both a and b
- ☒ e- All of the above

21- Good sources of unsaturated fats include

- a- Fish
- b- Vegetable oils (corn, soybean, sunflower)
- c- Milk and meat groups
- ☒ d- Both a and b
- e- All of the above

22- Omega-3 fatty acids

- a- Are found in fish.
- b- Are polyunsaturated fatty acids.
- c- May benefit the heart.
- d- Both a and b.
- ☒ e- All of the above.

23- Dietary lipids are mainly present in food as

- a- sterols
- b- phospholipids
- ☒ c- triglycerides
- d- monoglycerides

24- Olive oil contains abundant amounts of which type of fatty acid?

- a- saturated
- ☒ b- monounsaturated
- c- polyunsaturated
- d- partially hydrogenated

25- All of the following are true of the phospholipid lecithin **except**:

- ☒ a- It contains a hydrophilic part.
- ☒ b- It contains a hydrophobic part.
- ☒ c- It acts as an emulsifier.
- ☒ d- It is classified as a sterol.

26- If an 1800-kcalorie diet contains 100 grams of fat, the percentage of kcal from the fat is:

- a- 20 %.
- b- 35 %.
- ☒ c- 50 %.
- d- 65 %.

$$\begin{array}{l} 9 \text{ kcal/g} \qquad 9 \text{ kcal} \rightarrow 1 \text{ g} \\ \qquad \qquad \qquad \times \rightarrow 100 \text{ g} \end{array}$$

27- The major risk factors for heart disease do **NOT** include:

- ☒ a- high blood LDL.
- ☒ b- female gender.
- ☒ c- hypertension.
- ☒ d- smoking.
- e- None of the above

28- The lipid in the diet that most profoundly raises LDL is:

- ☒ a- saturated fat.
- b- monounsaturated fat.
- c- polyunsaturated fat.
- d- Phospholipids
- e- a and c.

29- Bile acids are made from:

- a- glucose
- ☒ b- cholesterol
- c- vitamin A
- d- amino acids

30- Essential Fatty Acids

- a- Are produced by the body
- ☒ b- Can be obtained from all plant foods
- ~~c- Are MUFAs obtained from the diet~~
- ~~d- Affect blood pressure, and reproductive system through their hormone-like action~~

31- If exposed to the air, the unsaturated fats encounter

- ☒ a- Rancidity
- b- hydrogenation
- ~~c- no reaction as they are very stable~~
- ~~d- all of the above~~

32- LDL

- a- is more dense than HDL
- b- is less dense than HDL
- c- contains the highest amount of proteins among the lipoproteins
- d- an elevated level of this lipoprotein is correlated with the occurrence of heart disease
- ☒ e- b and d

33- Saturated fatty acid are mainly found in

- a- butter (vegetable shortening)
- ☒ b- beef and pork
- c- corn oil, sunflower oil and soya oil
- d- a and b
- e- all of the above

34- To prevent atherosclerosis one must have a

- ~~a- High Saturated fatty acid intake to increase the HDL levels~~
- ~~b- High LDL to HDL ratio~~
- c- Low saturated fat intake and a low cholesterol intake
- d- Regular exercise program and a stable body weight
- ☒ e- c and d

35- Which of the following statements about lipid digestion and absorption in adults is false?

- a- lipid digestion requires bile
- b- lipid digestion occurs mainly in the small intestine
- ☒ c- enzymatic digestion of lipids starts in the mouth
- d- absorbed dietary lipids join the lymphatic vessels packed as chylomicrons

36- Which of the following is an essential fatty acid?

- a- stearic acid
- b- butyric acid
- ☒ c- linoleic acid
- d- palmitic acid

37- Which of the following statements about cholesterol is (are) true?

- a- it is found only in animals
- b- it is used to form vitamin D
- c- it is a component of cell membranes
- d- it is used to form steroid hormones
- ☒ e- all of the above

38- Some fat should be included in the diet for which of the following reasons?

- ☒ a- to supply essential fatty acids
- ~~b- to supply immediate energy for body cell~~
- c- to provide cholesterol for body needs
- d- to contribute to adequate glycogen stores

39- When sucrose is digested it yields:

- a- Two maltose units
- ☒ b- Glucose and fructose
- c- Glucose and galactose
- d- Fructose and galactose

40- Which of the following statement (s) is (are) **False**?

- ~~a- Vitamins can be found in both plant and animal food sources~~
- ☒ b- Processed foods always have nutrients added that have been lost during the manufacturing process
- ~~c- One of the benefits of complex carbohydrates is their high fiber content.~~
- ~~d- High calorie foods are always nutrient dense.~~

41- The minimal amount of daily calories should come from

- a- Breads, cereals, rice and pasta products
- b- Fruits and vegetables
- c- Milk, yogurt and cheese
- d- Poultry, beans or eggs
- ☒ e- Sweets, butter, red meat and white sugar.

42- Having variety in your diet means:

- ~~a- controlling portion size.~~
- b- making sure you choose foods from each of the food groups.
- ~~c- choosing foods rich in phytochemicals.~~
- d- choosing different types of foods within each food group.
- ☒ e- b and d

43- The RDAs (Recommended Dietary Allowances) recommend nutrient amounts for essential nutrients:

- a- for practically all healthy people.
- b- For decreasing risk of certain chronic diseases.
- ~~c- Based on gender and age.~~
- ☒ d- all of the above

44- Macronutrients include

- a- proteins
- b- lipids
- c- vitamin
- ☒ d- a and b
- e- all of the above

45- Which of the following statements is **False**?

- a- Carbohydrates are the most important energy foods for exercise.
- ~~b- Monosaccharides and disaccharides are simple carbohydrates.~~
- ~~c- Starches are complex carbohydrates.~~
- ☒ d- Hyperglycemia means low blood sugar.
- e- Glycogen is the body's store of glucose.

46- Which of the following statement (s) is (are) **False**?

- a- Excess carbohydrates can be converted to fat.
- ☒ b- Sugar alcohols yield fewer calories than simple sugars.
- c- Artificial sweeteners are considered food additives.
- d- None of the above.

47- Complex carbohydrates include

- a- Polysaccharides
- b- Glucose polymers
- c- Starches
- d- Glycogen
- ☒ e- All of the above

48- All of the following foods contain carbohydrates **except**

- a- Milk
- b- Macaroni
- c- Lentils
- ☒ d- Margarine
- e- All of the above

49- Polysaccharides that make up a plant cell wall (membrane) are known as

- a- Dextrose
- ☒ b- Fiber
- c- Maltose
- d- All of the above

50- Carbohydrates are absorbed in the

- a- Stomach.
- b- Mouth.
- ☒ c- Small intestine.
- d- Large intestine.

51- Examples of digestive enzymes include

- a- Amylase
- b- Lactose
- c- Maltase
- ☒ d- Both a and c
- e- All of the above

52- The best food sources of fiber are

- a- Fruits and vegetables.
- b- Bran cereals.
- c- Meat products.
- ☒ d- Both a and b
- e- All of the above