



Q1. outline 5 groups of food :

1. Vegetable group
2. Milk and milk product group
3. Meat and meat product group
4. Fruits group
5. Cereals group
6. Building food group
7. Protecting food group
8. Energetic food group
9. Regulating food group
10. Repairing food group.

Q2. Two combination of feeding plants that supply all the essential amino acids in the right amount

1. Soya
2. Beans
3. Pea nuts
4. Peas
5. Ground nuts
6. Coco nuts
7. Grains /
8. Seeds
9. Nuts
10. Legumes.

Q3. Name five roles that dietary fiber play in the body

1. To facilitate digestion
2. To prevent constipation
3. To facilitate waste excretion
4. To reduce cholesterol in the blood
5. To supply energy
6. To prevent high blood pressure
7. It may decrease the risk for the

## Colon cancer

8. ~~It~~ To control blood glucose
9. To prevent obesity

Q4. Describe briefly how we can reduce risk of cancer among people through feeding

1. Encourage eating food containing zinc
2. Encourage eating fruits (fruits food)
3. Avoid fatty food
4. Avoid too much alcoholic drink
5. Balancing diet
6. Avoid cholesterol food
7. Avoid burned food
8. Avoid steel wire in cleaning of food preparation equipment
9. Consuming fresh food
10. Consuming food rich in fiber
11. Avoid over eating / over nutrition
12. Increase vegetables consumption

Q5. Identify at least five strategies for health promotion and diseases prevention

1. Eat a balanced diet
2. To do regular physical exercise / sports
3. Family planning
4. To avoid too much fat in the diet
5. Avoid food rich in cholesterol
6. Having health insurance / medical insurance
7. Respecting hygienic rules
8. Respect  $\nabla$  of breast feeding, only for babies until six month
9. Use condom
10. Use abstinence approach
11. Sleep always in the mosquito net
12. Limiting stress
13. Limiting alcoholic intake

14. Not smoking
15. Getting adequate fluid
16. Took enough sleeping time
17. Good food preservation

Q6. Name at least five (5) functions of zinc in the body

1. Teeth development
2. Bones development
3. Diseases prevention
4. To increase immunity
5. To promote growth
6. To build cells
7. To repair cells
8. Promotion and development of sexual organ
9. Brain development
10. Protein metabolism, wound healing
11. Storage release and function of insulin
12. DNA synthesis and function

Q7. How many essential amino acid are there?  
⇒ There are nine (9) essential amino acid.

1. Histidine
2. Isoleucine
3. Leucine
4. Lysine
5. Methionine
6. Phenylalanine
7. Threonine
8. Tryptophan
9. Valine

⇒ Histidine is essential in infancy.

Q8. Indicate at least three different ways by which water is lost

1. During sweating
2. Urinating
3. Tears
4. During physical exercise
5. Defecation
6. Vomiting
7. During breathing out
8. Diarrhea
9. Fever
10. Menstruation
11. Breast feeding

Q9. Name four roles of minerals

1. Prevention of diseases
2. To protect the body
3. To satisfy bones
4. To increase immunity
5. Water retention
6. Cells formation
7. Blood formation
8. Tissues formation
9. Regulation of body fluids
10. Regulation of acids base balance
11. Regulation of metabolism processes
12. Facilitate the use vitamins

Q10. Describe three stages of iron depletion

- Deformation of blood cells
- Destruction of blood cells
- Reduction of blood cells
- Decrease in iron status
- Reduce blood cells
- Hemoglobin levels are reduced (anemia)

Q.11. Describe how waste are removed from the body

\* During digestion, after absorption of nutrients wastes are sent to the large intestine to be dehydrated before being removed out of the body through anus (defecation)

\* Other ways:

Wastes can be removed through:

- Sweating
- Urine
- Tears
- Physical exercise
- Vomiting
- Breathing
- Menstruation

Q.12. Name at least two factors and two organs that regulate and contribute to digestion of some food

\* factors:

- \* Attractiveness of food
- \* Presence of fiber, in the food
- \* Health status / health condition
- \* Digestive secretion
- \* Digestive tone (simple movement after eating)
- \* Type of daily activities
- \* Psychological status
- \* Taking food at a regular time
- \* Hormones
- \* Stomach acid
- \* Enzymes and bile
- \* Crushing the food

## \* Organs

- \* Salivary gland
- \* Tongue
- \* Teeth
- \* Oesophagus
- \* Stomach
- \* Liver
- \* Pancreas
- \* Small intestine
- \* Large intestine
- \* Sphincters
- \* Nerves
- \* Muscles

Q13. Name all body cells which contribute in the immune system

1. White blood cells
2. Antibodies
3. Plasma membranes
4. Red blood cells
5. Lymphocytes
6. Monocytes
7. Phagocytes
8. Mast cells
9. Basophils

Q14. Outline the role of insulin and glucagon in the body.

### \* Insulin:

1. To regulate sugar in the body
2. Distribute sugar in the body
3. Insulin increases the synthesis of glucogen in the liver

## \* Glucagon:

1. Transform glucogen into glucose
2. Increasing blood glucose

Q15. There are many broad social, economical, biological and psychological factors affecting infant growth. Indicate at least two factors for each.

### a. Social factors:

- Conflict in the Society
- Irresponsibility in the society
- Group influence (environment)
- No respect of family planning

### b. Economical factors:

- Poverty
- Purchasing power
- Nutrition
- Inflation
- Limited availability of food.

### c. Biological factors:

- Heredity
- Abnormalities of family / family abnormalities
- Health situation of parents
- Parasites
- Chronic illness
- Insufficiency or enough breast feeding

### d. Psychological factors:

- Culture
- Personal beliefs
- Poor sanitation
- Food of poor quality



Q16. Explain two Vitamin C functions as an antioxidant

1. It is a catalyst found in both animals and plants
2. It is used to make ascorbic acid used for the conversion of procollagen to collagen
3. It oxidizes proline residues to hydroxyproline
4. Ascorbic acid is a redox catalyst which can reduce and neutralize reactive oxygen such as hydrogen peroxide

or

Vit C is used to synthesise collagen to build tissue  
to prevent scurvy  
to facilitate absorption of iron  
to increase immunity (to prevent diseases).

Q17. a. Name at least four types of oxidants which may be present in food

- Ascorbic acid
- Vitamins
- Vitamin A, E
- Glutathione
- Lipic acid
- Uric acid
- Carotene
- Pesticides
- Industrial chemical wastes
- Drug
- Additives

• Chemicals used in raising farm animal

b. Describe the risk of these oxidants in high dose:

\* Cancer: is a disease characterized by disorganized multiplication of cells

\* Allergies: immunological response of the body to any substance it can not tolerate

\* Birth defects: it is reproduction troubles characterized by immature birth

\* Industrial pollution

\* Antibiotics in meat may be linked to human health problems.

Q18. a. Describe obesity:

It is an excessive increasing in body weight normally caused by excess of fat and carbohydrate.

b. Indicate five risks (factors associated to it).

- High blood pressure / heart disease
- Arthritis (joint)
- Respiratory troubles
- Liver problems
- Sterility
- Diabetes
- Gallbladder disease

Q19. Describe the role of the liver

- \* Detoxification: elimination of toxic substances from the body
- \* Proteins synthesis: participate in anabolism of plasma proteins
- \* Insulin production: synthesis of insulin enzyme for distribution of sugar in the body
- \* Production of biochemicals necessary for digestion (bile and other succs)
- \* Regulation of glycogen storage. It controls the sugar which is in reserve
- \* Hormone production
- \* Decomposition of red blood cells
- \* To convert carbohydrates into blood sugar
- \* To supply energy.

20. A good nutrition: is about a balanced diet, containing all nutrients required by a person in a required quantity and quality composed of food from animal origin and from plants origin.

- This diet should be composed of
- food rich in carbohydrate
  - food rich in fats & lipids
  - food rich in proteins
  - food rich in vitamins
  - food rich in minerals
  - food rich in water.

21. Indicate which foods to provide for the needed nutrients of children.

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\* From birth up to six months - provide breast feeding only because it contains all required nutrients in quantity and quality for the body.

\* From six months up to 12 years the child needs a complementary feeding that should be rich in:

- Carbohydrate
- Proteins
- Vitamins
- Fats / Lipids
- Minerals
- Water

Such as:

Cereals, meat / fish, milk & milk product, fruits, vegetables.

This food provide to the child necessary energy and calories and other materials to build, protect and repair the body tissue.

\* From 12 yrs up to 15 yrs this period is characterized by many biological changes. It is a period of rapid growth so why proteins are required in a big amount to build cells?

Food rich in calories are needed to provide enough energy.

Moderate fat quantity is required. Food rich in iron is needed especially for teenager girls to provide enough quantity of blood that sometimes excreted during their menstruation to avoid anaemia.

mic situation.

A diet of food rich in calcium to solidify bones is required for children.

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Q22. Draw and explain a food pyramid of your choice

