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①

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g. 1) Define food science, enlist properties & describe any one?

→ Food science :-

"Food science is the study of production, processing, preparation, evaluation, & utilization of food"

Properties :-

- Physical properties
- Mechanical properties
- Thermal properties
- Electrical properties
- Optical properties
- Chemical properties
- Hygroscopic properties
- Rheological properties

Physical Properties :-

- It is important in the design of any particular machine or analysis of the behaviour of the product during process.

- Shape & size
- Volume
- Porosity
- Surface area
- Density
- Specific gravity

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Name of the Student _____ Reg. No. _____

Date : / /

- Importance of physical properties -

These properties are ~~are~~ necessary for the design of :-

- cleaning unit
- grading unit
- separating unit
- Handling unit
- Shorting unit
- storing unit
- drying system

Q. e) Define food, enlist components of food, explain carbohydrate?

→ Food :-

"Food is the group of edible substances which provide energy to the living beings & repairs the old tissue & builds the new tissue".

Components of food :-

- Water
- Carbohydrates
- Proteins
- fats
- vitamins
- minerals
- flavour
- colour
- fibre

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3

Name of the Student _____

Reg. No. _____

Date : / /

Carbohydrates :-

- These are the compounds made up of three elements Carbon, hydrogen & oxygen.
- The main carbohydrate found in our food are in the form of glucose, other sugars & starch.
- Many of the complex carbohydrates are good source of fibers.
- Source of carbohydrates - these include cereals such as wheat, maize, Jowar, bajra, sugarcane, sugarbeet etc.

Function of Carbohydrates :-

- Major source of energy for the cell.
- Major structural component of plant cell.
- Immediate energy in the form of glucose.
- Reserve or stored energy in the form of Glycogen.
- It is a source of energy for the body.

Q. (6). Define food preservation, give its method describe chemical method of food preservation?

→ Defn :-

"Food preservation is a process through which physical & chemical agents are used to prevent microbial spoilage of food".

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Name of the Student _____ Reg. No. _____

Date : / /

Method of Preservation :-

- Chemical
- Radiation
- Drying
- heat
- low temperature
- microwave processing
- High pressure processing
- Bacteriocidal methods
- Bacteriostatic methods

Chemical preservation :-

- chemicals used to preserve should be properly controlled & non-irritant.
- Benzoic acid & sulphur dioxide.
- salt of benzoic acid called benzoate increases the presence of carbon dioxide & is used as preservative.
- Salt of sulphur dioxide called as potassium meta bisulphite is a crystalline salt.
- They delay the growth of micro-organisms.
or:
 - Antioxidants
 - Colour additives
 - Flavour additives
 - Sweeteners
 - Emulsifiers

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Name of the Student _____ Reg. No. _____

Date : / /

Q 4) Define food spoil, Enlist its classification, give the classification of food based on ease of spoilage?

→ Defn -

"Food spoilage can be defined as any changes in the visual, smell & texture of food that makes it unacceptable for consumption".

Type / enlist classification food spoilage:-

a]. Physical spoilage -

- Dehydration of vegetable

b]. Chemical spoilage -

- Oxidation of fat

- Browning of fruits & vegetables.

c]. Microbial spoilage -

- Enzyme production

- Growth of microorganisms

classification of food based on ease of spoilage =

1). Stable / non perishable foods :-

Food which do not spoil unless handle carelessly

ex. Sugar, flour etc.

2). Semi-perishable foods :-

If these food are properly handled & stored they will remain unspoiled for a fairly long period.

ex. Potatoes, apple, nuts etc.

6

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Name of the Student _____ Reg. No. _____

Date : / /

Q) Perishable foods :-

- This group include most of our important daily food that spoil readily unless special preservative method are used.

ex. fish, milk, vegetables, eggs etc.

Q. 5) Enlist National & international agencies in improving nutritional status in community, give its purpose explain any one agencies?

→ National agencies :-

- Ford foundation
- SOS village
- smile
- saint john ambulance association
- child in need institute
- bhakti sevak samaj
- All india blind relief society
- Family planning association of India
- central social welfare board.

International agencies :-

- WHO
- UNICEF
- CARE
- ILO
- UNDP
- UNFPA
- USAID
- WORLD BANK

Purpose of agencies :-

- To education of children.
- To promote & conduct research.
- To provide health support to people.
- To help training & education of teachers.
- To ensuring safety of public.
- To strengthening families to successfully take care for their children.

WHO :-

- WHO stand for world health organization.
- WHO is established in 7th April 1948.
- It is a specialized, non-political, health agency of united Nation with headquarters of Geneva, Switzerland.
- It is responsible for providing leadership on global health matters.
- Every year 7th April, is celebrated as "World Health Day."
- "The attainment by all people the highest level of health" is a vision of WHO.

Function of WHO :-

- set global standard for health.
- Give worldwide guidance in the field of health.
- Co-operate with governments to strengthen national health programs.

(8)

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Name of the Student _____ Reg. No. _____

Date : / /

- Develop & transfer health technology, information & standards.

Q. 6) Define Malnutrition give its type & explain any one?

→ Defn -

"Malnutrition is the condition in which a body do not get proper nutrition or get over nutrition & as the result a deficiency or excess or imbalance of energy".

- Type of malnutrition :-

A] Acc. to the nutritional status :-

1) Over nutrition :-

ex. Diabetes, Renal disease, Disorder of liver.

2) Under nutrition :-

a) Acute under nutrition :-

Marasmus, Kwashiorkor

b) Chronic under nutrition :-

Stunting, under weight

B] Acc. to the source of nutrient :-

1) Protein energy malnutrition :-

- Marasmus, Kwashiorkor

2) Micronutrient malnutrition :-

- Vitamin deficiency disorders

- Iodine deficiency disorder

- Explanation acc. to nutritional status :-

1) Over nutrition :-

- over nutrition is a form of malnutrition in which the intake of nutrient is oversupplied.
 - The amount of nutrient exceeds the amount required for normal growth, development & metabolism.
 - Over nutrition can develop into obesity, which increase the risk of serious health conditions.
ex. Diabetes, Hypertension etc
- Cause :- Lipid, Protein, Carbohydrates.

2) Under nutrition :-

- Under nutrition is the opposite of over nutrition, meaning that it is a nutrient deficiency from not eating enough food.
 - Under nutrition usually affects the balance of all the nutrients in our body.
ex. Marasmus, kwashiorkor
- cause :- Zinc, Iodine, vitamins, calciums etc.

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Name of the Student _____ Reg. No. _____

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Date: / /

- 1) Food is thus prevented from spoiling because there is no air.
- 2) Pasteurization means heating food to a certain temperature for some time followed by rapid cooling.
- 3) Measure of the sharpness of the solid material is called Roundness.
- 4) Appearance of a violet colour indicates presence of protein in the food item.
- 5) long form = ICDS = Integrated child development services.
- 6) cheese are semi perishable type of food.
- 7) nuts, sliced fish, dried fruit are stored in vacuum packing.
- 8) Write the suggested book name with writer

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Name of the Student _____ Reg. No. _____

Date: / /

- 9) Diet :- It is the amount of food taken by a person at a time.
- 10) Balanced diet :- A diet containing all the nutrients & other components in proper proportion is called balanced diet.
- 11) Malnutrition :- If a person does not get adequate food.
- 12) Give any ~~two~~ 2-national programmes.

