TELANGANA UNIVERSITY
Faculty of Science
Department of Nutrition
PG Semester – IV
Paper- I: Advanced Nutrition
Internal - IQuestion Bank

SECTION – A: Multiple Choice Questions

1. Designer foods are primarily developed to
   a) Improve nutritional quality b) Increase cost c) Reduce availability d) Enhance spoilage → **Ans: a**
2. Single cell protein (SCP) is commonly produced from
   a) Plants b) Microorganisms c) Animals d) Minerals → **Ans: b**
3. Genetic modification in foods involves
   a) Heating b) Drying c) Altering genetic material d) Freezing → **Ans: c**
4. Food irradiation is mainly used for
   a) Cooking b) Flavouring c) Drying d) Preservation → **Ans: d**
5. Organic foods are produced without the use of
   a) Synthetic chemicals b) Water c) Sunlight d) Soil → **Ans: a**
6. Fortification refers to
   a) Removing nutrients b) Adding nutrients to food c) Spoilage of food d) Drying of food → **Ans: b**
7. Extrusion cooking involves
   a) Low pressure b) Freezing c) High temperature and pressure d) Fermentation → **Ans: c**
8. Space foods are specially designed for
   a) Children b) Elderly c) Athletes d) Astronauts → **Ans: d**
9. Leptin hormone primarily regulates
   a) Appetite suppression b) Digestion c) Absorption d) Excretion → **Ans: a**
10. Ghrelin hormone is responsible for
    a) Satiety b) Stimulating hunger c) Digestion d) Absorption → **Ans: b**
11. Amino acid score is used to assess
    a) Fat quality b) Mineral content c) Vitamin content d) Protein quality → **Ans: d**
12. Net Protein Utilization (NPU) measures
    a) Intake only b) Absorption only c) Digestion only d) Utilization of protein in the body → **Ans: d**

13. Biological Value (BV) indicates
a) Retention of absorbed protein b) Total intake c) Digestion rate d) Excretion rate → **Ans: a**

14. Digestibility coefficient refers to
a) Absorption of vitamins b) Digestion of nutrients c) Storage of fat d) Proportion of food digested (and effectively absorbed) → **Ans: d**

15. Balance studies are used to measure
a) Intake and output of nutrients b) Cooking methods c) Taste quality d) Texture → **Ans: a**

16. Radio-isotope technique is used to study
a) Texture b) Nutrient absorption c) Colour d) Taste → **Ans: b**

17. Plasma appearance method indicates
a) Storage b) Excretion c) Nutrient presence in blood d) Digestion → **Ans: c**

18. Microbial assay is mainly used for
a) Fat analysis b) Protein synthesis c) Mineral analysis d) Vitamin estimation → **Ans: d**

19. Calcium absorption is inhibited by
a) Oxalates b) Vitamins c) Proteins d) Water → **Ans: a**

20. Iron absorption is enhanced by
a) Phytates b) Calcium c) Vitamin C d) Fibre → **Ans: c**

SECTION – B: Fill in the Blanks

1. Proteins extracted from green leaves are called **leaf protein**.
2. Spirulina is an example of **algal** protein source.
3. One advantage of single cell protein is its high **growth rate**.
4. Genetic modification can improve **yield** and resistance in crops.
5. Food irradiation helps in reducing **microbial load**.
6. One major concern of GM foods is **safety**.
7. Extrusion cooking improves **digestibility** of proteins.
8. Organic farming improves **soil fertility**.
9. Leptin is secreted by **adipose tissue**.
10. Ghrelin is mainly secreted by the **stomach**.
11. Biological value of egg protein is considered **high**.
12. Net Protein Utilization is expressed as a **percentage**.
13. Digestibility of proteins depends on their **structure**.
14. Balance studies help in assessing nutrient **retention**.
15. Radio-isotope techniques help trace nutrient **metabolism**.
16. Plasma appearance method reflects rate of nutrient **absorption**.
17. Microbial assay is widely used for **vitamin B complex** estimation.
18. Oxalates are commonly found in **spinach**.

19. Phytates reduce absorption of **iron**.
20. Vitamin C converts ferric iron into **ferrous** form.

SECTION – C: Descriptive Questions

1. Explain the development, advantages, and limitations of designer foods and organic foods.
2. Describe different types of novel protein sources such as single cell protein and leaf protein.
3. Explain modern food processing techniques such as extrusion cooking and food irradiation.
4. Explain the concept of bioavailability.
5. Describe various experimental methods used to study nutrient bioavailability (balance studies, radio-isotope methods, plasma appearance method, microbial assays).