

- Q.18 Give the environmental benefits of by-product utilization.
 - Q.19 Discuss about sensory evaluation techniques of by-product derived foods.
 - Q.20 How molasses differs from bagasse?
 - Q.21 What do you mean by bio-active compounds? Give some examples.
 - Q.22 What is the importance of by product utilization in food industry?

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**6th Sem.
Branch :Food Technology
Sub. : Food By-Products Utilization**

Time : 3 Hrs.

M.M. : 60

SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Define functional properties. Explain functional properties of some by-product components.

Q.24 Explain the various processing techniques used for extraction of protein from by-products.

Q.25 Which type of challenges occurs in by-product utilization in the food industry.

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

- Q.1 What is by product utilization?

 - The process of converting waste into useful products.
 - The process of recycling raw materials.
 - The process of producing goods from primary resources.
 - The process of reusing finished goods.

Q.2 Which processing technique is commonly used to convert food waste into animal feed?

 - Drying
 - Fermentation
 - Extrusion
 - Ensiling

Q.3 The by - product of fish, such as fish skin and bones, are rich in which nutrient?

 - Omega 3 fatty acid
 - Vitamin B12
 - Collagen and Gelatin
 - Vitamin D

Q.4 Which of the following by-product can be converted into valuable compounds through fermentation?

- a) Food waste
- b) Agricultural waste
- c) Industrial waste
- d) All of the above

Q.5 What is the term for the systematic approach to managing waste in food processing, which aims to minimize waste generation and maximize waste reuse and recycling?

- a) Waste hierarchy
- b) Waste management plan
- c) Integrated waste management
- d) Sustainable waste management

Q.6 What is the environmental benefits of using by product based bio fuels?

- a) Reduction in fossil fuel consumption
- b) Decrease in air pollution
- c) Increase in greenhouse gas emissions
- d) None of the above

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

Q.7 By-product utilization can help reduce energy consumption and green house gas emission by providing a _____ source of energy.

Q.8 Apple pomace contain _____ bioactive compound which is power ful antioxidant.

Q.9 The use of enzymes to break down complex organic matter in food by products into simpler compounds is an example of _____.

Q.10 Food by products can be converted into valuable compounds such as _____.

Q.11 The process of converting food by products into a nutrient rich powder or granules through heat treatment and mechanical processing is called _____.

Q.12 _____ is the by product of the cheese making process that is high in protein and can be used to make protein powders and supplements.

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. $(8 \times 4 = 32)$

Q.13 Write a brief note on healthy benefits of by product derived ingredients.

Q.14 What are the various sources of food by products?

Q.15 Discuss about the health benefits of by products derived ingredients.

Q.16 Give the examples of by-products and write down their functional properties.

Q.17 Write a brief note on nutritive value of by product components.