

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025  
(Second Semester)

Branch – FOOD TECHNOLOGY MANAGEMENT

GRAIN SCIENCE TECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

| Module No. | Question No. | Question   | K Level | CO  |
|------------|--------------|--|---------|-----|
| 1          | 1            | Cereal grains belong to<br>a) <i>Chenopodicea</i><br>b) <i>Polygonaceae</i><br>c) <i>Gramineae</i><br>d) <i>Fabaceae</i>   | K1      | CO1 |
|            | 2            | The moisture content of cereals considered safe for cereal storage is _____<br>a) 15%                      b) 14%                      c) 16%                      d) 17%  | K2      | CO1 |
| 2          | 3            | Removal of husk from rice increases its<br>a) Protein content<br>b) Soluble fibre<br>c) Insoluble fibre<br>d) Vitamins   | K1      | CO3 |
|            | 4            | The sticky consistency of rice after cooking is due to _____<br>a) Alpha amylase                      b) Lipase<br>c) Oxidase                                  d) Protease   | K2      | CO3 |
| 3          | 5            | <i>Tricum durum</i> is known as<br>a) Bread wheat<br>b) Macaroni wheat<br>c) Club wheat<br>d) Buck wheat   | K1      | CO2 |
|            | 6            | The pigment present in wheat flour is _____<br>a) Anthocyanin                      b) Lycopene<br>c) Xanthophylls                      d) Chlorophyll  | K2      | CO2 |
| 4          | 7            | Which of the following Bioactive compounds present in barley except ?<br>a) Beta glucan<br>b) Phenolics<br>c) Polysterols<br>d) Reservatrol  | K1      | CO4 |
|            | 8            | _____ is a type of non-starch polysaccharide found in the cell wall of millets like pearl or finger millets known to be bound with phenolic acids.<br>a) Lignin<br>b) Anthocyanin<br>c) Flavanoids<br>d) Arabinoxylans   | K2      | CO4 |
| 5          | 9            | Other name of poly agglutinin is _____<br>a) Trypsin inhibitor                      b) Lectin<br>c) Lecithin                                  d) Tannin  | K1      | CO5 |
|            | 10           | Transforming the raw food into variety of food products preferred by consumers is called _____.<br>a) Exploitation                      b) Value addition<br>c) Processing                                  d) Marketing | K2      | CO5 |

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**SECTION - B (35 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

| Module No. | Question No. | Question  | K Level | CO  |
|------------|--------------|---|---------|-----|
| 1          | 11.a.        | Elaborate on the postharvest losses taking place in cereals.  | K2      | CO1 |
|            | (OR)         |   |         |     |
|            | 11.b.        | Outline the milling process of corn.  |         |     |
| 2          | 12.a.        | Identify the factors affecting the cooking quality of pulses and suggest suitable cooking methods for pulses. | K3      | CO3 |
|            | (OR)         |   |         |     |
|            | 12.b.        | Outline the Indian food safety standards for rice.  |         |     |
| 3          | 13.a.        | Examine the pros and cons, usage of chemical improvers in wheat flour.  | K3      | CO2 |
|            | (OR)         |   |         |     |
|            | 13.b.        | Discuss the uses/function of steamed wheat products in food industry.   |         |     |
| 4          | 14.a.        | Identify and explain the bioactive compounds present in pearl millets.  | K3      | CO4 |
|            | (OR)         |   |         |     |
|            | 14.b.        | Explain whether the processing of millets is advantageous or disadvantageous.                                 |         |     |
| 5          | 15.a.        | Compare wet and dry milling of pulses.  | K3      | CO5 |
|            | (OR)         |   |         |     |
|            | 15.b.        | Discuss on various categories of snack foods.   |         |     |

**SECTION -C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

| Module No. | Question No. | Question   | K Level | CO  |
|------------|--------------|--|---------|-----|
| 1          | 16           | Explain about Pseudo cereals and their role in food industry.                      | K4      | CO1 |
| 2          | 17           | Point out the importance of rice processing and its by products utilization.       | K4      | CO3 |
| 3          | 18           | Enzymes play a crucial role in production of wheat products – Justify.             | K4      | CO2 |
| 4          | 19           | Discuss on the need for quality control and standards of millet based products.    | K3      | CO4 |
| 5          | 20           | Sketch out the barriers in the utilization of oil seed proteins as food or fodder. | K3      | CO5 |

Z-Z-Z

END