

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2020**

(CBCSS)

Home Science (Nutrition and Dietetics)

HND 1C 05—RESEARCH METHODS AND STATISTICS

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

**General Instructions**

1. *In cases where choices are provided, students can attend all questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

**Part A**

*Answer any four questions, each in one paragraph.  
Each question carries a weightage of 2.*

1. What are the properties of arithmetic mean ?
2. Define hypothesis ? Give any two types of hypothesis.
3. What are the general rules of tabulation ?
4. State the different types of scales with example.
5. What do you mean by individual, discrete and continuous series ?
6. What is Product Moment Correlation ?
7. Enlist the essential qualities of a good sample ?

(4 × 2 = 8 weightage)

**Part B**

*Answer any four questions, each within one page.  
Each question carries a weightage of 3.*

8. Briefly explain Central Limit Theorem.
9. Write a note on chi-square test.

Turn over

10. Brief on following :

- (i) Historical research.                      (ii) Action research.  
(iii) Qualitative research.                      (iv) Industrial research.

11. Explain any *four* methods of collecting primary and secondary data.  
12. Discuss about the properties of a Normal probability curve.  
13. Write a short note on the significance of Theoretical Framework in research.  
14. Explain census and sampling methods State its differences.

(4 × 3 = 12 weightage)

### Part C

*Answer any two questions.*

*Each question carries a weightage of 5.*

15. Explain Research Process.  
16. Discuss the relevance of developing a research tool.  
17. Identify a Research problem and prepare a primary synopsis.  
18. Define dispersion. Describe the different types of dispersion in detail.

(2 × 5 = 10 weightage)

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2020**

(CBCSS)

Home Science (Nutrition and Dietetics)

HND 1C 04—MACRO NUTRIENTS

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

**General Instructions**

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**Part A**

Answer any **four** questions, each in **one paragraph**.

*Each question carries a weightage of 2.*

1. What is meant by protein turnover ?
2. How does fluid imbalance cause oedema ?
3. List the properties of dietary fiber
4. What are the commercial uses of protein ?
5. What is meant by BMR ? How can this be measured ?
6. Differentiate between saturated and unsaturated fatty acids and their sources.
7. What is meant by Glycemic index and glycemic load ?

(4 × 2 = 8 weightage)

**Turn over**

**Part B**

Answer any **four** questions, each within **one page**.

Each question carries a weightage of 3.

8. Brief on process of deamination.
9. Do macronutrients interact each other ? Justify.
10. How critical is the condition of dehydration ?
11. What is meant by glycogen storage disease ? How can this be managed ?
12. Classify plasma lipoproteins Brief on their function ?
13. Illustrate the pathway of glycogenolysis and its regulation.
14. What is meant by energy value of foods ? What is the function of Bomb calorimeter ?

(4 × 3 = 12 weightage)

**Part C**

Answer any **two** questions.

Each question carries a weightage of 5.

15. Detail on digestion and absorption of lipid in human body.
16. Illustrate and explain HMP Shunt and the energetics.
17. Elaborate on the etiology, symptoms and complications of the following inborn errors.
  - a) Alkaptonuria.
  - b) Maple syrup urine disease.
  - c) Albinism.
18. Discuss about the components and factors affecting total energy expenditure.

(2 × 5 = 10 weightage)

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EXAMINATION, NOVEMBER 2020**

(CBCSS)

Home Science (Nutrition and Dietetics)

HND 1C 03—ADVANCED FOOD SCIENCE

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

**General Instructions**

1. *In cases where choices are provided, students can attend all questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
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**Part A**

*Answer any four questions, each in one paragraph.*

*Each question carries a weightage of 2.*

1. Differentiate between Standardization and homogenization of milk.
2. What is SCP? Enlist the advantages.
3. What are Non starch polysaccharides?
4. Write a note on carotenoids and Anthocyanins.
5. Enlist the factors affecting gluten formation.
6. What are the methods to enhance the tenderness of meat?
7. What do you understand by nanotechnology in food?

(4 × 2 = 8 weightage)

**Part B**

*Answer any four questions, each within one page.*

*Each question carries a weightage of 3.*

8. Discuss the role of food fortification in combating nutritional deficiencies.
9. Explain the types of pasteurisation.

**Turn over**

10. Bring out the role of probiotics in health.
11. Discuss the anti-nutritional factors present in pulses.
12. Explain the sensory method of food evaluation.
13. Explain the process of browning and methods of prevention.
14. Discuss gelatinization and the factors affecting it.

(4 × 3 = 12 weightage)

### Part C

*Answer any two questions.*

*Each question carries a weightage of 5.*

15. Explain Cereals under the following headings : a) Structure b) Composition c) effect of heat on cooked cereal starches.
16. Discuss the applications of enzymes in food industry.
17. What is a sensory evaluation ? Explain the different tests to detect the sensory quality of food.
18. Explain about different non starch polysaccharides and their applications in food industry.

(2 × 5 = 10 weightage)

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2020**

(CBCSS)

Home Science (Nutrition and Dietetics)

HND 1C 02—NUTRITION THROUGH LIFE CYCLE

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

**General Instructions**

1. *In cases where choices are provided, students can attend all questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
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**Part A**

*Answer any **four** questions, each in one paragraph.*

*Each question carries a weightage of 2.*

1. Write a note on carbohydrate loading.
2. What is triple burden of malnutrition ?
3. Write a note types of nutritious weaning foods.
4. Enlist the hormones influencing lactation.
5. Define a balanced diet
6. What is sports anemia ?
7. Explain the concept of growth charts.

(4 × 2 = 8 weightage)

**Part B**

Answer any **four** questions, each within **one page**.

*Each question carries a weightage of 3.*

8. Elaborate on consequences of Anemia.
9. Explain the hormonal changes during menopause.
10. Describe the interventions to prevent malnutrition among preschoolers.
11. Explain the energy systems of die human body and its relationship to type of Sports events.
12. Describe the possible complications of LBW babies.
13. What are the dietary changes needed to prevent malnutrition among adolescents ?
14. Comment on role of nutrition in academic performance of school children.

(4 × 3 = 12 weightage)

**Part C**

Answer any **two** questions.

*Each question carries a weightage of 5.*

15. Describe the physiological changes and nutritional requirements in space travel. Add a note on type of space foods.
16. 'Breast milk is the best milk for infants'. Elaborate on this statement.
17. Plan a model menu for an elderly person. Justify your selection of foods.
18. Elaborate on physiological and metabolic changes in Pregnancy. Add a note on weight gain in Pregnancy.

(2 × 5 = 10 weightage)



**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)  
EXAMINATION, NOVEMBER 2020****(CBCSS)****Home Science (Nutrition and Dietetics)****HND 1C 01—HUMAN PHYSIOLOGY****(2019 Admissions)****Time : Three Hours****Maximum : 30 Weightage****General Instructions**

1. *In cases where choices are provided, students can attend all questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

**Part A****Answer any four questions each in one paragraph.***Each question carries a weightage of 2.*

1. Write a note on the ESR of blood and its significance.
2. Comment on Differential Leucocyte Count (DLC).
3. Write a note on heart sounds and their significance.
4. Discuss the functions of Saliva.
5. Write a note on fetal circulation.
6. What is Dyspnea ? Comment on reasons for the same.
7. Comment on Tachycardia and Bradycardia.

**(4 × 2 = 8 weightage)**

**Part B**

Answer any **four** questions, each within **one page**.

*Each question carries a weightage of 3.*

8. Elaborate on the significance and factors affecting blood pressure.
9. Explain the digestion of proteins in the digestive system.
10. Comment on heart rate and factors regulating heart rate.
11. Write a note on the secretions of the pancreas and its significance.
12. Explain the mechanism of coagulation of blood.
13. Detail the cardiovascular modification during exercise.
14. Comment on the different movements in the digestive system.

(4 × 3 = 12 weightage)

**Part C**

Answer any **two** questions.

*Each question carries a weightage of 5.*

15. Detail the structure and function of the heart with the aid of a figure.
16. Explain the structure and function of the respiratory system.
17. Write an essay on the structure and function of the digestive system.
18. Elaborate on the anatomy of male reproductive system and etiology of male infertility.

(2 × 5 = 10 weightage)

**FIRST SEMESTER M.Sc. DEGREE (SUPPLEMENTARY) EXAMINATION  
NOVEMBER 2020****(CUCSS)****Home Science (Nutrition and Dietetics)****ND 1C 03—ADVANCED FOOD SCIENCE****(2018 Admissions)****Time : Three Hours****Maximum : 36 Weightage****Part A***Write a short note on the following **ten** questions each in **one** paragraph.**Each question carries a weightage of 1.*

1. Ant nutritional factors
2. Amylase Rich Foods.
3. Protein Isolates.
4. Allosteric enzymes.
5. FSSAI.
6. Functions of food packaging.
7. Carotenoids and Anthocyanins.
8. Enzymatic browning.
9. Parboiling.
10. UHT and HTST.
11. Fermentation.
12. Polyphenols.

**(10 × 1 = 10 weightage)**

**Part B**

Answer any **six** questions each within **one page**.

*Each question carries a weightage of 3.*

13. Comment on the post-mortem changes in meat.
14. Write a note on the effect of heat on cereal starches.
15. Bring out the role of probiotics in health.
16. Bring out the importance of fish in human nutrition.
17. Discuss the role of food fortification in combating nutritional deficiencies.
18. What are mandatory food labels ? Discuss.
19. Discuss the nutraceutical benefits of any *two* foods.
20. What is Parboiling ? Explain the importance of parboiling of Rice.

(6 × 3 = 18 weightage)

**Part C**

Answer any **two** questions.

*Each question carries a weightage of 4.*

21. What is a sensory evaluation ? Explain the different tests to detect the sensory quality of food.
22. Describe the role of various food additives in improving the shelf life of foods.
23. Explain egg under the following heads : a) Structure ; b) Nutritive value ; and c) Quality evaluation.
24. Explain about different non starch polysaccharides and their applications in food industry.

(2 × 4 = 8 weightage)

**FIRST SEMESTER M.Sc. DEGREE (SUPPLEMENTARY) EXAMINATION  
NOVEMBER 2020**

(CUCSS)

Home Science (Nutrition and Dietetics)

ND IC 01—HUMAN PHYSIOLOGY

(2013 Admission onwards)

Time : Three Hours

Maximum : 36 Weightage

I. Answer *all* questions in one or two sentences. Each question carries a weightage of 1 :

- 1 Write a note on plasma proteins.
- 2 Briefly comment on the composition and functions of lymph.
- 3 Write a note on tachycardia and bradycardia.
- 4 What is phagocytosis ?
- 5 Write a note on resuscitation.
- 6 What is renal threshold level ?
- 7 List the functions of bile salts.
- 8 Comment on the abnormal constituents of urine.
- 9 Write a note on synaptic transmission.
- 10 Write a note on menopause.

(10 × 1 = 10 weightage)

II. Answer any six questions in a *paragraph*. Each question carries a weightage of 3 :

- 11 Explain the composition and functions of blood.
- 12 Discuss haemorrhage and the compensatory changes after haemorrhage.
- 13 Comment on the exchange of respiratory gases in lungs and tissues.
- 14 Explain the digestion of proteins in the human digestive system.
- 15 Elaborate on the role of kidneys in maintaining the pH of blood.
- 16 Explain the structural classification of the nervous system.

- 17 Discuss the role of the thyroid gland in the human body.
- 18 Elaborate the structure of the male reproductive system with the aid of a figure.

(6 × 3 = 18 weightage)

III. Answer any *two* questions. Each question carries a weightage of 4 :

- 19 Explain the composition and functions of gastric and pancreatic secretions.
- 20 Write an essay on the role of the adrenal gland in the human body.
- 21 Elaborate on the structural and functional aspects of blood cells and vessels.
- 22 Explain fertilization, conception and implantation in the female reproductive system.

(2 × 4 = 8 weightage)