

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – FOODS AND NUTRITION

ADVANCED FOOD SCIENCE

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Which of the following properties of colloids does not depend on the change on particles?
(i) Coagulation (ii) electro osmosis
(iii) electrophoresis (iv) Tyndall effect
2. The colour of anthocyanin change to----- in pH 7.
(i) Crimsom (ii) grey
(iii) purple (iv) greyish purple
3. The following are mollasks except
(i) Prawn (ii) oysters
(iii) scallops (iv) mussels
4. The following are fat substitutes except
(i) Caprenin (ii) Stellar
(iii) slendid (iv) Alitame
5. ----- is used to measure the butter content
(i) Polariscope (ii) butyrometer
(iii) pycnometer (iv) Hydrometer

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Bring out the factors affecting foam stability.
OR
b. Classify emulsions.
7. a. Sketch the sequence of reactions in enzymatic browning.
OR
b. State the factors affecting the cooking quality of pulses.
8. a. Classify poultry based on age.
OR
b. Stae the changes brought about in the spoilage of fish.
9. a. Summarize the physical properties of milk.
OR
b. Show the factors affecting fat absorption.

Cont...

10. a. Outline about Duo-trio test.
OR
b. How are beverages classified?

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a. Enumerate the properties of colloids.
OR
b. Highlight about modified starches and its applications in food industries.
12. a. Discuss the physiological changes during ripening of fruits.
OR
b. Summarize the uses of any six spices in Indian cookery.
13. a. Elucidate the heat induced changes in meat.
OR
b. Outline the methods to determine the quality of eggs.
14. a. Examine the stages of sugar cookery.
OR
b. Analyse the effect of heat on fat.
15. a. Discuss on the attributes of food quality.
OR
b. Identify the instruments used in evaluating food Quality

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
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MSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – FOODS AND NUTRITION

ADVANCED NUTRITION - I

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Find the acid produced in anaerobic metabolism.
(i) Carbonic acid (ii) lactic acid
(iii) pyruvic acid (iv) acetic acid
- 2 Which plays a catalytic role in citric acid cycle?
(i) Acetyl co A (ii) citrate
(iii) oxaloacetate (iv) alpha keto- glutarate
- 3 Mention the predominant site of fatty acid synthesis.
(i) Brain (ii) pancreas
(iii) kidney (iv) peripheral tissues
- 4 Choose the mechanism for transporting amino acids in cells.
(i) Active Transport (ii) Passive Transport
(iii) Simple diffusion (iv) Facilitated diffusion
- 5 State the fuel source of brain in an absorptive state.
(i) Glucose (ii) galactose
(iii) fructose (iv) Dextrin

SECTION - B (15 Marks)

Answer ALL Questions

ALL questions carry EQUAL marks

(5 x 3 = 15)

- 6 a Determine the role of High Energy Phosphate in energy storage.
OR
b Evaluate renal regulation of pH.
- 7 a Discuss on Glucose transporters.
OR
b Show the binding ability of Fibre.
- 8 a Determine the biological importance of lipids.
OR
b Explain ketone body formation.
- 9 a Proteins are immune protectors – Illustrate with suitable example.
OR
b Recommend the metabolism of Alanine.
- 10 a Determine the tissue specific metabolism during fasting.
OR
b State the thermic effect of food.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(5 x 6 = 30)

11 a Elucidate on components of cell.

OR

b Analyse the role of regulatory peptides in digestive process.

12 a Enumerate on Glycogenolysis.

OR

b Construct the characteristics of Functional Fibre.

13 a Evaluate the role of liver in lipid metabolism.

OR

b Elucidate on brown fat thermogenesis.

14 a Categorize the structure of protein.

OR

b Discuss on protein transcription and protein translation.

15 a Analyse the interrelationship between carbohydrate and lipid metabolism.

OR

b Predict the hormonal influences in body composition regulation.

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
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MSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – FOODS AND NUTRITION

NUTRITION THROUGH LIFE CYCLE / NUTRITION IN HEALTH

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Find the weight gain during the first three months of pregnancy ---
(i) 500-750 g (ii) 750-1000g
(iii) 1000-2000g (iv) 2000-3000g
2. Mention the hormone that stimulates milk production.
(i) Estrogen (ii) Progesterone
(iii) Prolactin (iv) Oxytocin.
3. Which oil is preferred for a child with PEM?
(i) Coconut oil (ii) Groundnut oil
(iii) Sesame oil (iv) sunflower oil
4. Which is not a symptom of Premenstrual Syndrome?
(i) Headache (ii) anxiety
(iii) irritability (iv) decreased appetite
5. State the product supplied from both circulating blood glucose and stored glycogen.
(i) Glucose (ii) galactose
(iii) Glucose 6 phosphate (iv) Fructose 6 phosphate

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Discuss on implantation and organogenesis during pregnancy.
(OR)
b. Explain the factors affecting birth weight of infants.
7. a. Determine the efficiency of milk production.
(OR)
b. Choose the nutrient characteristics of infant formula.
8. a. Watching television is associated with eating disorder- Justify it.
(OR)
b. Produce the tools and techniques for measuring head circumference and chest circumference of Preschool children.
9. a. Show the hormonal influence on growth and development in adolescents.
(OR)
b. Recommend nutritional considerations for old age persons.

Cont...

10. a. Discuss on an aerobic exercise.

(OR)

b. State the sports supplements for an athlete.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a. Analyse maternal physiological adjustments during pregnancy.

(OR)

b. Assess risk factors for poor pregnancy outcome in Teenage.

12. a. Illustrate the development of breast during Lactation.

(OR)

b. Compare feeding of preterm infant with full term infant.

13. a. Determine psychosocial interactions on appetite among preschool children.

(OR)

b. Construct the causes of obesity and anaemia in school children.

14. a. Plan a day's vegetarian menu for an adult male.

(OR)

b. Discuss on common health problems in old age.

15. a. Enumerate on Glucose homeostasis during exercise.

(OR)

b. Elucidate on nutritional needs of military persons.

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
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MSc DEGREE EXAMINATION DECEMBER 2022
(First Semester)

Branch – FOODS AND NUTRITION

FOOD PROCESSING TECHNOLOGY/TECHNIQUES IN FOOD PROCESSING

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Which of the following operation is related to extrusion?
(i) Hot working and Cold working (ii) Casting
(iii) Welding (iv) Fitting
- 2 Choose which process in legumes increases the digestibility, the microbial enzymes break down, the legume protein, enhances cooking process and improves palatability and nutritive value.
(i) Puffing (ii) Over cooking
(iii) Fermentation (iv) Milling or decortication
- 3 Which nutrient source is low in green leafy vegetables?
(i) Fiber (ii) Carbohydrates
(iii) Iron (iv) Vitamin K
- 4 Indicate the cold storage temperature of eggs.
(i) -20°C to -10°C (ii) -10°C to -9°C
(iii) -9°C to -5°C (iv) -1°C to 0°C
- 5 Name the process in which the temperature of food is lowered to about -20°C within 30 min.
(i) Refrigeration (ii) Slow freezing
(iii) Rapid freezing (iv) Irradiation

SECTION - B (15 Marks)

Answer ALL Questions

ALL questions carry EQUAL marks (5 x 3 = 15)

6. a) State the dry milling process for maize.
(OR)
b) Classify the breakfast cereals.
7. a) Elucidate the methods of oil extraction.
(OR)
b) Explain any three soya bean products.
8. a) Compare jaggery and sugar.
(OR)
b) Explain processing methods of coffee.
9. a) Discuss homogenised milk.
(OR)
b) Sketch the freezing process of mushrooms.
10. a) State the followings: i) Thermal death time ii) Thermal death point.
(OR)
b) Determine the advantages and disadvantages of Pulse electric field.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 6 = 30)

11. a) Interpret different types of wheat milling.
(OR)
b) Elucidate manufacturing processes for breakfast cereals.
12. a) Design the extraction of oil from oil seeds.
(OR)
b) Interpret the winterization process.
13. a) Enumerate the benefits of edible coatings.
(OR)
b) Appraise the medicinal properties of jaggery.
14. a) Interpret the processing of milk at Dairy farm.
(OR)
b) Assess the principles and importance of meat processing and preservation.
15. a) Determine the colouring agents of spices.
(OR)
b) Justify the role of Artificial Intelligence (AI) and Machine Learning (ML) in food industry.

Z-Z-Z END

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION DECEMBER 2022
(Second Semester)**

Branch – FOODS AND NUTRITION

PHYSIOLOGICAL ASPECTS OF NUTRITION

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Hexokinase is an example of

(i) Oxidoreductase	(ii) Transferase
(iii) Hydrolase	(iv) Lyase
- 2 Cones are responsible for ----- vision.

(i) scotopic	(ii) photopic
(iii) peripheral	(iv) night
- 3 Insulin secretion is inhibited by

(i) secretin	(ii) epinephrine
(iii) growth hormone	(iv) gastrin
- 4 Which of the following immunoglobulins has the highest mean serum concentration in humans?

(i) IgA	(ii) IgD
(iii) IgG	(iv) IgM
- 5 What phenomenon can occur in case of using a combination of drugs?

(i) Tolerance	(ii) Tachyphylaxis
(iii) Accumulation	(iv) Synergism

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a. Explain the site of pepsinogen secretion.
OR
- b. Discuss on production of free radicals in biological system.
- 7 a. Organize the histology of Tongue.
OR
- b. State the circadian rhythm in urine.
- 8 a. Analyze the mode of action of pituitary gland.
OR
- b. Show the functions of Gonads.
- 9 a. Discuss on Natural immunity.
OR
- b. Hypersensitivity is an immune disorder- Explain it.
- 10 a. Assess pharmaco dynamic interaction.
OR
- b. Penicillin demonstrates a bactericidal effect- Justify it.

Cont...

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL marks

(5 x 6 = 30)

- 11 a. Enumerate on physiology of amylase and lipase.
OR
b. Recommend any three antioxidants and its role for a patient with heart disease.
- 12 a. Categorize the common disorders of taste mechanism.
OR
b. Elucidate the mechanism of hearing.
- 13 a. Compare the mode of action of thyroid with parathyroid.
OR
b. Enumerate on hormones of kidney.
- 14 a. Develop antigen and antibody interaction.
OR
b. Analyze immune response and aging.
- 15 a. Construct clinical significance of drugs
OR
b. Evaluate on oral hypo glycaemic drugs.

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
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MSc DEGREE EXAMINATION DECEMBER 2022
(Second Semester)

Branch – FOODS AND NUTRITION

FOOD QUALITY AND SAFETY MANAGEMENT

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

1. Which of the following is covered under 'Raw Material Quality Assurance'?
(i) Specifications, services, feedback (ii) Survey
(iii) Service (iv) production
2. Which of the following is a step under process development regarding Quality?
(i) Establish tentative process specifications (ii) TQM
(iii) SQM (iv) Cost Calculation
3. The PFA act came into force on _____
(i) 1st June 1955 (ii) 1st July 1950
(iii) 5th July 1952 (iv) 5th June 1950
4. Analysis report format shall be followed by the food analyst under the FSSR 2011 is
(i) Form VIIA (ii) Form VIII
(iii) Form VB (iv) Form VI
5. FSSAI is located in 5 regions with head office located at
(i) Hyderabad (ii) Mumbai
(iii) Bangalore (iv) New Delhi

SECTION - B (15 Marks)

Answer ALL Questions

ALL questions carry EQUAL marks (5 x 3 = 15)

- 6 a. Classify the food quality attributes in detail.
OR
b. State the objectives of quality control in food industry.
- 7 a. Show the benefits of TQM.
OR
b. Sketch out the basic statistic tools to be followed in food industry.
- 8 a. Explain the principles of Standard Operating Procedure.
OR
b. Outline the purpose of Codex Alimentarius Commission.
- 9 a. Infer on validation of HACCP system.
OR
b. List out the steps to control measures of hazards.
- 10 a. Illustrate on Food Safety Standard Act 2006.
OR
b. Discuss the highlight of responsibilities and functions of food safety authorities in states.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(5 x 6 = 30)

- 11 a Elucidate the assessment of food microbial quality by using tools.
OR
b Justify the importance and need of measurement and indexing of quality in food products.
- 12 a Discuss about the principles and documentation to be maintained on ISO based quality management.
OR
b Enumerate the need to assess the total quality management.
- 13 a Categorize the history of Indian food regulation.
OR
b Prepare and design the label based on the requirement of GLP.
- 14 a Classify the different types of hazards with few examples.
OR
b Explain the principles and steps involved in framing HACCP.
- 15 a Illustrate the FSSR regulation on food products.
OR
b Enumerate the role of state and central government in implementing FFSSAI.

Z-Z-Z

END

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MSc DEGREE EXAMINATION DECEMBER 2022
(Second Semester)

Branch – FOODS AND NUTRITION

DISCIPLINE SPECIFIC ELECTIVE – I: BIOTECHNOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Name the phase of bacterial growth which has maximal rate of growth?
(i) Lag Phase (ii) Exponential Phase
(iii) Stationary Phase (iv) Death Phase
- 2 Which of the following does not have the property of production of secondary metabolites?
(i) Filamentous fungi (ii) Filamentous bacteria
(iii) Sporing bacteria (iv) Enterobacteria
- 3 Identify the source of Ti plasmid.
(i) E.Coli (ii) Agrobacterium sp
(iii) Bacillus sp (iv) Aspergillus sp
- 4 What is required for the transfer of recombinant plasmid into E.Coli cell?
(i) Heat treatment (ii) UV rays treatment
(iii) Calcium chloride treatment (iv) Lysis
- 5 Choose the foreign DNA carrying capacity of Plasmid.
(i) 5-15 kbps (ii) 4.5 kbps
(iii) 5-15 bps (iv) 4058 bps

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a) Explain the strain improvement methods.
OR
b) Show the general requirements of fermentation process?
- 7 a) Differentiate between primary and secondary metabolites with example.
OR
b) Illustrate the production method of lactic acid.
- 8 a) State the characteristics of Ideal cloning vector and highlight on PBR322.
OR
b) Organize the role of restriction enzymes in gene cloning.

Cont...

- 9 a) Sketch out the production of lactase enzyme on Industrial level.
OR
b) Discuss the types and importance of Enzyme Immobilisation.
- 10 a) Outline the uses of Ti plasmid.
OR
b) Describe the construction of stress tolerance transgenic plants.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

- 11 a) Highlight on the different types of fermentation with a suitable sketch.
OR
b) Enumerate on the applications of fermentation process.
- 12 a) Explain the production of commercially important amino acids.
OR
b) Elaborate on the production of citric acid and glutamic acid.
- 13 a) Elucidate the lytic and lysogenic pathway of bacteriophage.
OR
b) Explain the steps followed in gene cloning technique.
- 14 a) Construct a flow chart and explain the steps in Industrial production of Amylase and Protease Enzymes.
OR
b) Explain the methods of immobilization.
- 15 a) Outline the steps followed in construction of transgenic plants.
OR
b) Elucidate the application of DNA technology in transgenic plants with reference to - herbicidal resistance and improved storage proteins.

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
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MSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch – FOODS & NUTRITION

RESEARCH METHODOLOGY & STATISTICS

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The term research methodology refers to
 - (i) The rules for writing research report or research paper
 - (ii) A specific methodology to study data analysis
 - (iii) The paradigms for data collection, analysis and interpretation
 - (iv) To verify the validity of a scientific research
- 2 Information in the statistical research is
 - (i) Raw data
 - (ii) Organized data
 - (iii) Collected data
 - (iv) Processed data
- 3 In a regression line Y on X, the variable X is known as
 - (i) Independent variable
 - (ii) Outcome variable
 - (iii) Measured variable
 - (iv) Explained variable
- 4 The outcome of tossing a coin thrice are a variable of the type
 - (i) Discrete
 - (ii) Continuums
 - (iii) Qualitative
 - (iv) Quantitative
- 5 In research report, which one is not a major part
 - (i) Inference
 - (ii) Conclusions
 - (iii) Abstract
 - (iv) Foot note

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a What is the need arises to study the purposive sampling.
OR
b Write a note on objectives of research.
- 7 a Give an outline how to validate a questionnaire.
OR
b List the classification of data with an example.
- 8 a Write the disadvantages of measures of dispersion.
OR
b How will you interpret the scatter diagram.
- 9 a Write the applications of students t-test.
OR
b What are the basic principles of a design.
- 10 a Differentiate diagram and graph.
OR
b Write the importance of checking plagiarism.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a Explain the importance of census study.

OR

b Define sampling and explain in detail about probability sampling.

12 a Why data collection is important in research and write about the various methods data collection.

OR

b What is frequency distribution and explain discrete and continues frequency distribution with an example.

13 a Calculate the mean, median, mode for the following data pertaining to marks in Research Methodology paper out of 140 marks for 80 students in a class:

Marks more than	0	20	40	60	80	100	120
No. of students	80	76	50	28	18	9	3

OR

b A panel of men and women were asked by a consumer testing organization to rank 8 brands of tea according to their taste. The first rank is given to the best tasting tea and last rank is given to worst according to the given data:

Brand	A	B	C	D	E	F	G	H
Panel of Women	5	4	3	6	7	8	1	2
Panel of Men	4	5	6	3	8	7	2	1

Determine how men taste and women tastes in tea are related.

14 a The odds that A speaks the truth is 3:2 and the odds that B speaks the truth is 5:3. In what percentage of cases are they likely to contradict each other's on an identical point?

OR

b Two random samples are drawn from normal populations are:

Sample - I	20	16	26	27	23	22	18	24	25	19	---	---
Sample - II	27	33	42	35	32	34	38	28	41	43	30	37

Obtain the estimates of the variance of the population and test whether two populations have the same variance or not.

15 a The cheques cleared in Indian metropolitan cities in the year 2010 and 2011 are given below. Represent the following data by a suitable diagram.

City	Delhi	Mumbai	Calcutta	Chennai
2010	829	1070	108	313
2011	2670	2443	274	615

OR

b Explain the importance points in thesis writing with bibliography.

Z-Z-Z

END

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MSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch – FOODS AND NUTRITION

NUTRITION THERAPY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Indicate the base for Semi elemental diets used in enteral nutrition.
(i) Glucose (ii) Peptide
(iii) Lipid (iv) Minerals
- 2 Immediate allergic response due to food is mediated by
(i) IgA (ii) IgE
(iii) IgM (iv) IgG
- 3 Identify the condition in which inflammation initiate in colon and ends in rectum.
(i) Crohn's disease (ii) Tropical sprue
(iii) IBS (iv) Ulcerative colitis
- 4 Indicate the situation where Low cortisol is noticed?
(i) Cushing (ii) Addison
(iii) Acromegaly (iv) Grave's
- 5 Homocysteine level can be decreased by supplementation of
(i) Vit-B1, B6 & B12 (ii) Vit-B2, B3 & B6
(iii) Vit-B6, B9 & B12 (iv) Vit-B3, B6 & B12

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a As a dietitian what would be your objectives during diet plan for a patient with 30-40% burn.
OR
b Illustrate the route for enteral feeding- nasogastric, nasodudonal, nasojejunal, gastrostomy, jejunostomy and rectal feeding.
- 7 a State the clinical features and nutrients requirements in Tuberculosis.
OR
b Comment on the metabolic changes that a patient would go through in burns.
- 8 a Interpret the symptoms and clinical findings in peptic ulcer and what are the deficiency expected in this situation?
OR
b Categorize diarrhea and state the physiological disturbances in a person with severe diarrhea.
- 9 a Why glycemic index and glycemic load are important in diabetic menu plan and give the formula for its calculation.
OR
b Differentiate between the clinical and biochemical features of hypo and hyperthyroidism and list the important dietary consideration.

Cont...

- 10 a How rheumatoid arthritis differs from osteoarthritis and what modifications are necessary in both the conditions?
OR
b Justify the role of antioxidants in cancer prevention and during treatment.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Formulate total parental nutrition for adults and what are the complications that arise in TPN?
OR
b Categorize the type of foods suitable for enteral formulas along with the feeding requirements.
- 12 a Enumerate the Endocrine and Metabolic Consequences during Hystectomy and dietary consideration in pre and post-operative care.
OR
b What is immunonutrition and the important constituents of commercial immunonutrition formulas ?
- 13 a Analyze the biochemical and metabolic changes in cirrhotic patients and what are all the points to be taken care in diet plans.
OR
b Why acute renal failure is a medical emergency and how you will contribute to dietary management ?
- 14 a What are the metabolic outcomes of insulin resistance, complications and its management through nutrition?
OR
b Sketch out the metabolic error in phenylketonuria, bring out the symptoms and the nutritional support for better prognosis.
- 15 a Categorize the risk factors and the desirable lipid levels in CVD and give the principles of diet.
OR
b Women with HIV virus becomes pregnant, what are the prenatal and postnatal consideration during breastfeeding.

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch – FOODS AND NUTRITION

NUTRITIONAL BIOCHEMISTRY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

1. Enzymes catalyzing the synthetic reactions where two molecules are joined together are known as
(i) transferases (ii) lyases
(iii) ligases (iv) isomerases
2. DOPA can act as a co factor for
(i) Fumaryl hydrolase (ii) tyrosine transaminase
(iii) Phenylalanine hydroxylase (iv) tyrosinase
3. Purines are not synthesized in
(i) Liver (ii) brain
(iii) spleen (iv) kidney
4. Thyroid hormones stimulate the metabolic activities and increases the oxygen consumption in tissues except
(i) lungs (ii) erythrocytes
(iii) synovial fluid (iv) pancreas
5. Cushing syndrome is the set of symptoms that results when there is a surplus of ----- in the body.
(i) Glucagon (ii) adrenaline
(iii) cortisol (iv) norepinephrine

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6. a. Determine the relationship between insulin and diabetes.
OR
b. Illustrate the diagnostic value of Lactate dehydrogenase.
7. a. Discuss on Niemann-Pick disease.
OR
b. State the clinical significance of alpha macro globulin.
8. a. Explain hypouricemia.
OR
b. Show the normal constituents of Urine.
9. a. Analyze the clinical features of mal absorption syndrome.
OR
b. Choose the factors affecting thyroid concentration.

Cont...

- 10 a. Evaluate basal hormones function test.
OR
b. How do you assess pituitary function?

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a. Enumerate on clinical manifestations in Glycogen storage diseases.
OR
b. Compare reversible enzyme inhibition with irreversible enzyme inhibition.
- 12 a. Criticize the metabolism of LDL and HDL.
OR
b. Elucidate the clinical significance of retinol binding protein.
- 13 a. Assess the plasma protein levels in acute liver diseases.
OR
b. Enumerate on renal blood flow and filtration fraction.
- 14 a. Develop diagnostic test for *H.Pylori* infection.
OR
b. Construct indirect tests for an obese male subject with chronic pancreatitis.
- 15 a. Evaluate the action of Glucocorticoids.
OR
b. Comment on hyper aldosteronism.

Z-Z-Z

END