3-1-10

SUBJECT: CLINICAL NUTRITION & DEITIES
SEMESTER-I
PAPER: BASIC NUTRITION

Unit I

Definition and introduction to nutrition-good nutrition and mal nutrition Macro Nutrients - Classification, digestion, absorption, functions, dietary sources, RDA, clinical manifestations of deficiency and excess and storage in the body of the following in brief: Energy, Carbohydrates, lipids and proteins

Unit II

Classification, digestion, absorption, functions, dietary sources, RDA, clinical manifestations of deficiency and excess of the following in brief:

1) Fat soluble vitamins-A, D, E and K
2) Water soluble vitamins - thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B12 and vitamin-C
3) Minerals - calcium, iron, iodine, fluorine and zinc

Unit III

A) Energy value of foods and energy requirement - the body's for energy BMR activities, utilization of food to energy requirements.

B) Basal metabolism, factors affecting basal metabolic rate, calorigenic effect of food, specific dynamic action of food.

C) Acid base balance.

Unit IV

Importance of water and water balance - functions, sources, requirement - effect of deficiency.

Unit V

A) Interrelation between nutrients - nutrition and health - visible symptoms of good health.

B) Nutrition and Infection

PRACTICALS

1. Identification of nutrient rich sources of foods, their seasonal availability and price.
2. Study of nutrition labelling on selected foods.
3. List out low cost nutrient rich foods.
4. List out nutrient foods for different income groups.

REFERENCES

1. Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd.
2. Wardlaw MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition Mosby
3. Swaminadhan S, Advanced Text book on foods & nutrition, Vol. I&II (2nd revised and enlarge) Rappc. 1985.
4. Vijaya K hader, Food, nutrition & health, Kalyan Publishers, 2000.

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Signature of the Chairman (B.O.S.) (20.....Exams)

25

3-1-107

FIRST YEAR

Semester -I

CN-101 BASIC NUTRITION

Model Question Paper

Time: 3 hrs. **Max. Marks: 75**

Part-A

Answer any FIVE questions.

5x5=25

1. Write the classification of proteins.
2. Define acid base balance and how it is maintained in the body.
3. Write the functions of cardbohydrates.
4. Discuss the role of vitamin-A.
5. What are the visible symptoms of good health.
6. What are the functions of lipids.
7. Discuss the functions of B-complex vitamins in the body.
8. What about the dietary sources and recommend dietary allowance of calcium for different age groups.

Part-B

Answer any FIVE questions.

5x10=50

1. Give the relation between nutrition and infection.
2. What is BMR? What are the factors affect BMR.
3. Importance of water and water balance in the body.
4. Write in detail about flourine.
5. What do you know about Iron.
6. Discuss the interrelationship of the nutrients.
7. Write about the functions and sources of Iodine.
8. What are the dietary sources and functions of zinc.

Signature of the Chairman (B.O.S.) (20.....Exams)

3-1-112

SUBJECT: HOME SCIENCE

SEMESTER-I

Paper I: 102 Biochemistry

Unit-I

Chemistry of carbohydrates, chemical characteristics, classifications, Isomerism - (Stereo - Geometrical & optical isomerism) structure of glucose, properties and tests of mono, di and polysaccharides, ring structure & tautomeric forms of sugars, colour reactions of carbohydrates.

Unit-II

Chemistry of lipids - Classifications and properties of fatty acids, and lipids. Colour reactions of lipids.

Unit-III

Chemistry of proteins: Definition, properties, classification, structures of proteins and amino acids. Colour reactions of proteins.

Unit-IV

Enzymes - definition, properties, classification, nature mode of action, activation, inhibition and function , Factors effecting enzyme activity.

Unit-V

Nucleic acids- DNA structure, Types of RNA,Nucleoproteins - Their role in protein synthesis.

PRACTICALS

1.Qualitative analysis of carbohydrates- Monosaccharides (Glucose, Fructose),Disaccharides (Lactose, Maltose and Sucrose) and Polysaccharides(Starch).
2. Qualitative analysis of amino acids (Tyrosine, Tryptophan and Argenine).
3. Qualitative analysis of Lipids.

REFERENCES

1.A.V.S.S. Rama Rao, A Text book of Biochemistry, 6th edition, UBSPD publications.
2.J.L.Jain, Sunjay Jain, Nitin Jain, S.C.H and publications.
3.S.C.Rastogi, Biochemistry, TATA MC Graw Hill 2nd edition.
4.U.Satyanarayana, Biochemistry, Uppala Author publishers, 2nd edition.
5.BIOCHEMISTY - Saras publications

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BSc Home Science
Semester-I
HSc-102-Biochesmistry
Model Question Paper

3-1-112

Time : 3 hrs **Max. Marks :75**

Section – A

Answer any five Questions Each question carries 5 Marks
(Marks = 5x5 = 25 marks)

1) Write the colour reactions of carbohydrates.
కార్బోహైడ్రేట్‌ల రంగు, చర్యలను గురించి తెలుపుము

2) Explain ring structure of Glucose.
గ్లూకోస్ యొక్క వలయ నిర్మాణమును వివరించుము

3) Write about Phospholipids.
ఫాస్ఫోలిపిడ్‌లు గురించి వ్రాయుము

4) What are essential fatty acids.
ఆవశ్యక క్రొవ్వు ఆమ్లాలు అనగానేమి

5) Write about Isolation of proteins.
ప్రోటీన్ల పృథక్కరణను వివరించుము

6) Write about Ninhydrin reaction.
నిన్‌హైడ్రిన్ చర్య గురించి వ్రాయుము

7) Define enzymes
ఎంజైమ్‌లను నిర్వచింపుము

8) What are nucleotides.
న్యూక్లియోటైడ్‌లు అనగానేమి?

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3-1-112

Part – B

Answer any five Questions Each Question carries 10 marks
(Marks = 5x10 = 50 marks)

1. a) Write the chemical properties of carbohydrates.
   కార్బోహైడ్రేట్‌ల రసాయన ధర్మం గురించి వ్రాయుము

   b) Explain the Isomerism of carbohydrates.
   కార్బోహైడ్రేట్‌ల అణు సాదృశ్యమును తెలుపుము

2. a) Write the classification of lipids.
   లిపిడ్‌ల యొక్క వర్గీకరణను వ్రాయుము

   b) Explain the properties of fatty acids
   క్రొవ్వు ఆమ్లాల ధర్మాలను గురించి వివరించండి

3. a) Explain about the structure of proteins.
   ప్రోటీన్‌ల నిర్మాణాలను వివరించండి.

   b) Explain the classifications of proteins.
   ప్రోటీన్‌ల వర్గీకరణను వివరించండి

4. a) Describe different types of enzyme inhibition
   వివిధ రకముల ఎంజైమ్ నిరోధకములను వివరించండి

   b) Explain the nature and mode of enzyme action
   ఎంజైమ్ యొక్క స్థితి మరియు పనిచేయు విధానము తెలుపుము

5. a) Explain the strucutre of DNA
   DNA యొక్క నిర్మాణమును వ్రాయండి

   b)Explain the role of nucleoproteins in protein synthesis.
   ప్రోటీన్‌ల సంశ్లేషణలో న్యూక్లియో ప్రోటీన్‌ల పాత్రను తెలుపుము.

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3-1-113

SUBJECT: HOME SCIENCE

SEMESTER-I

Paper I: 103 Microbiology

UNIT-I

Introduction to Microbiology history and its value. Relation of Microbiology to other sciences. Microscopic world: Protozoa, Algal, Molds, Actinomycetales, Saccharomycetes, Bacteriaceae, Rickettsiae, Viruses, Classification - General characteristics of microorganisms, Morphology, Growth, Nutrition, Reproduction

UNIT -II

Microbial pathogenesis Important bacterial (Cholera, Typhoid, Leprosy, Tuberculosis, Diphtheria) Rickettsial (typhus, group of spotted fever) Viral (Measles, Encephalitis, Influenza, Poliomyelitis) Protozoa: Diseases (Amoebiases, Malarial disease of man)

A) Modes of infection, diagnosis, treatment, and control of infection of the above mentioned diseases

UNIT -III

A) Bacterial physiology, Motility, growth and death of Bacteria, growth requirements - Temperature Oxygen, P^H

B) Microorganisms in fermentation and decay

C) Bacterial Genetics - Variations, Mutations & Recombination

UNIT -IV

Microbiology of foods and dairy products (vegetables, fruits, eggs, meat, milk, fish),Methods of food preservation, Food borne infections, Food poisoningAfla toxins

UNIT -V

Microbiology of Special Environment

A) Study of microbes in soil, water, air sewage and plants, and animals

B) Sanitation of drinking water

C) Role of Microbes in carbon and nitrogen cycle

PRACTICALS

1. Precautions to be taken in the Microbiology laboratory
2. Study of Microscope and its parts
3. Sterilization procedures
   a) Autoclaving
   b) Hot air oven
4. Media preparation
   a) Nutrient agar
   b) Nutrient broth
   c) Macconkey's agar
   d) SDA

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(20.....Exams)

REFERENCES

1. Text book of Microbiology by P.D. Sharma.
2. General Microbiology by R.P. Singh.
3. General Microbiology by Pelczar.
4. College Microbiology by Sundar Rajan.
5. Microbiology by Saras Publications.

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(20.....Exams)

3-1-113

BSc Home Science
Semester-I
HSc-103 Microbiology
Model Question Paper

Time: 3 hrs Max. Marks:75

Part – A

Answer any five Questions Each question carries 5 Marks

(Marks = 5x5 = 25 marks)

1. Louis Pasteur
   లూయిస్ పాశ్చర్
2. Yeast structure
   ఈస్ట్ కణ నిర్మాణము
3. Soil Microorganisms
   అమీబియాసిస్
4. Disinfection
   మిాసిల్స్ (ఆటలమ్మ)
5. Logarithmic growth phase
   కోడిగుడ్లు చెడిపోవు విధానము
6. Asexual reproduction of fungi.
   శిలీంధ్రములలో అలైంగిక ప్రత్యుత్పత్తి
7. Carbon cycle.
   కర్బన వలయము
8. Bacterial nutrition.
   అఫ్లాటాక్సిన్లు

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(20.....Exams)

3-1-113

Part – B

Answer any five Questions Each Question carries 10 marks

(Marks = 5x10 =50 marks)

1. a) Explain the relation of Microbiology with other sciences.
   సూక్ష్మజీవ శాస్త్రమునకు ఇతర శాస్త్రములతో గల సంబంధమును వ్రాయుము

   b) Write about the structure of bacteria?
   బాక్టీరియా కణనిర్మాణమును వివరించుము?

2. a) Write about tuberculosis?
   క్షయవ్యాధి గురించి వివరించుము?

   b) Explain polio?
   పోలియోవ్యాధి గురించి వివరించుము?

3. a) Write about fermented foods?
   కిణ్వనము ద్వారా తయారయ్యే పదార్థములను గురించి వ్రాయండి?

   b) Explain bacterial growth curve?
   బాక్టీరియా పెరుగుదల రేఖను వివరించుము?

4. a) Spoilage of meat?
   మాంసము చెడుపోవుట గురించి వివరించుము?

   b) Food borne infections?
   ఆహారము ద్వారా వ్యాపించు వ్యాధులను గురించి వివరించుము?

5. a)Write about the role of microbes in N_2 cycle?
   నత్రజని వలయములో సూక్ష్మజీవుల పాత్రను వివరించుము?

   b) Microorganisms of soil?
   మట్టిలోని సూక్ష్మజీవులను గురించి వివరించుము?

JR

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