

Total No. of Questions : 3]

SEAT No. :

PE-13057

[Total No. of Pages : 2

[6521]-1001
M.Sc. (Health Sciences)
SHS-501MJ : Fundamentals of Epidemiology (T)
(2024 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates :

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*

Section - I

Explain the following Epidemiological terms and concepts.

Any Five each for two marks :

[5 × 2 = 10]

- Q1)** a) Herd Immunity
- b) Tertiary Prevention
- c) Epidemiological Transmission
- d) Relative Risk
- e) Disease Elimination
- f) Disease control
- g) Point prevalence
- h) ICD – 11
- i) Person Time
- j) Ambispective Cohort

P.T.O.

Section - II

Long answer questions attempt any two questions : each carries ten marks. **[2 × 10 = 20]**

- Q2)** a) Explain and define the term DALYs and its applications. Justify that DALYs are a good fit for measuring mortality and disease burden by taking suitable examples. Write a note on the timeline of the initiation and progression of Global Burden of Disease studies, as well as the tools and reports.
- b) Explain the frame work of the Natural history of disease using a diagram, detailing its phases and clarify the concept of Epidemiological Triad using relevant examples.
- c) Define and distinguish indices used to summarize information - rates, ratios and proportions-by using relevant examples and elaborating on the properties of these indices that are of concern.

Section - III

Short notes : Any two 2.5 marks each : **[2 × 2½ = 5]**

- Q3)** a) Dr Edward Jenner's contribution to preventive actions.
- b) Disease Dynamics and Levels of Prevention.
- c) Reasons for the decline in death rates of key infectious diseases from 1860 to 1950s in England and Wales
- d) Epidemiological Triad of Malaria.



Total No. of Questions : 4]

SEAT No. :

PE-13058

[Total No. of Pages : 2

[6521]-1002
M.Sc. (Health Science)
SHS-502-MJ: HUMAN PHYSIOLOGY
(2024 Pattern) (Semester - I)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) *All questions are compulsory.*
- 2) *Draw a diagram/flow chart wherever relevant.*

Q1) Describe organs involved in respiratory system and explain the function of respiration. **[15]**

Q2) Write short notes (any five) : **[25]**

- a) Functions of kidney
- b) Cardiac cycle
- c) Ovarian hormones
- d) Temperature regulation
- e) Homeostasis
- f) Functions of blood.

P.T.O.

Q3) Explain the functions of following organs (any four) :

[20]

- a) Pituitary
- b) Retina
- c) Spleen
- d) Lymph nodes
- e) Liver
- f) Hypothalamus

Q4) Discuss the differences between the following (any four) :

[10]

- a) Serum and plasma
- b) Positive and negative feedback
- c) Intracellular and extracellular fluid
- d) Skeletal and smooth muscles
- e) Internal and external respiration
- f) Exocrine and endocrine glands.



Total No. of Questions : 7]

SEAT No. :

PE-13059

[Total No. of Pages : 1

[6521]-1003

M.Sc. (Health Sciences)

SHS - 503 - MJ : BASIC HUMAN GENETICS (T)

(2024 Pattern) (2 Credits)(Semester - I)

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates:

- 1) *Answer any 5 Questions.*
- 2) *Each question carries 7 marks.*

- Q1)** What are the causes of birth defects and how can birth defects be prevented?
- Q2)** Write a detailed note on DNA mutations and describe the causes of DNA mutations.
- Q3)** Describe the process of DNA transcription and mRNA processing.
- Q4)** Describe the process of DNA replication.
- Q5)** Write notes on Reciprocal translocation and Robertsonian translocation.
- Q6)** Define euploidy and aneuploidy. What are the causes of aneuploidies. Discuss aneuploidies of autosomes and sex chromosomes giving one example of each.
- Q7)** Write a detailed note on X-chromosome inactivation and its role in dosage compensation of genes on X chromosome.



Total No. of Questions : 8]

SEAT No. :

PE-13060

[Total No. of Pages : 1

[6521]-1004

M.Sc. (Health Sciences)

**SHS - 505 - MJ : INTRODUCTION TO PUBLIC HEALTH
(2024 Pattern) (Credits : 2)(Semester - I)**

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates:

- 1) *Answer any 5 Questions.*
- 2) *Each question carries 7 marks.*

- Q1)** What are the social, environmental, behavioural determinants of health?
- Q2)** What is the purpose of the new "One Health" agreement from public health perspective?
- Q3)** How did the concept of "intersectoral collaboration" form the foundation of PHC?
- Q4)** What are the key-activities (functions) of the public health services in India?
- Q5)** How does public health differentiate between "equality" and "equity"?
- Q6)** What are some of the major public health issues in India?
- Q7)** What role do public health professionals play in prevention of diseases and health promotion?
- Q8)** What are the 8 essential elements of primary health care identified in 1978 Alma-Afa declaration?



Total No. of Questions : 9]

SEAT No. :

PE-13061

[Total No. of Pages : 1

[6521]-1005

M.Sc. (Health Sciences)

**SHS - 511OE - ENVIRONMENT, HEALTH AND SAFETY (T)
(2024 Credit Pattern) (2 Credits)(Semester - I)
(Open Elective)**

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Figures to the right indicate full marks.*

SECTION - I

Long Answer Questions. Any three questions. Each question carries 10 marks.

(3 × 10 = 30)

- Q1)** Distinguish between environmental and human ecology, and explain their importance for the SDGs and further elaborate on environmental laws and policies in India.
- Q2)** Elaborate on integrated rodent pest management and its key components.
- Q3)** Describe in detail the forms/types, sources and health effects of radiation.
- Q4)** Elaborate on various types of methods of refuse/waste disposal.
- Q5)** Explain climate change by using examples and elaborating on its adverse effects on human health.

SECTION - II

Short Answer Questions. Any Two Questions carries 2½ marks each.

(2 × 2½ = 5)

- Q6)** Vector and Entomological Surveillance
- Q7)** Wildfire smoke and strategies to reduce exposure
- Q8)** Farm-to-Fork model for Food Safety
- Q9)** SDG targets for Environmental health.



Total No. of Questions : 7]

SEAT No. :

PE-13062

[Total No. of Pages : 1

[6521]-1006

F.Y. M.Sc. (Health Sciences)

SHS - 512 - OE : OCCUPATIONAL HEALTH (T)

(2024 Pattern) (2 Credits) (Semester - I)

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates:

- 1) *Answer any 5 Questions.*
- 2) *Each question carries 7 marks.*

Q1) Describe chemical hazards and their effects.

Q2) Write a note on Personal Protective Equipment (PPE).

Q3) Describe the Employees State Insurance (ESI) Scheme and its benefits.

Q4) Explain the importance of legislation in occupational health.

Q5) Write diagnostic features of Silicosis.

Q6) Explain ergonomic hazards.

Q7) Define occupational disease. Give one example of a notifiable occupational disease. Discuss the impact of occupational disease on workers.



Total No. of Questions : 7]

SEAT No. :

PE-13064

[Total No. of Pages : 2

[6521]-1011

F.Y. M.Sc. (Health Science Dietetics)

DIT501MJ : PRINCIPLES OF NUTRITION

(2024 Pattern) (Semester - I)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Question No. 1 is compulsory.
- 2) Solve any 5 questions from Q.No. 2 to Q.No 7.
- 3) Questions no 2 to 7 carry equal marks.

Q1) Answer the following questions (any 5) :

[5 × 2 = 10]

- a) Lactose intolerance.
- b) Total energy expenditure.
- c) Glucemic index.
- d) Define essential aminoacid.
- e) Define PEM.
- f) Enlist the minor mineral.
- g) What are eletrolyte im balance.

Q2) Attempt the following :

- a) Explain the role of fiber in human health. **[4]**
- b) Describe the function of Vitamin A and Vitamin D. **[4]**
- c) What are the function of protein. **[4]**

Q3) Attempt the following :

- a) Factors affecting Basal metabolic rate. **[4]**
- b) Explain essential fatty acid. **[4]**
- c) Classification of aminoacid. **[4]**

P.T.O.

Q4) Attempt the following :

- a) Write on Evaluation of protein quality. [4]
- b) Explain function and deficiency of vitamin K. [4]
- c) Write on factors affecting calcium absorption. [4]

Q5) Attempt the following :

- a) Write on function of fat. [4]
- b) Explain function of carbohydrate. [4]
- c) Enlist the water soluble vitamin. [4]

Q6) Attempt the following :

- a) Role of water in our body. [4]
- b) What are the function and sources of Iron and Iodine. [4]
- c) Write on cholesterol. [4]

Q7) Attempt the following :

- a) Write the function and Deficiency of magnesium and selenium. [4]
- b) Physiological value food. [4]
- c) Write PDCAAS. [4]



Total No. of Questions : 7]

SEAT No. :

PE-13065

[Total No. of Pages : 2

[6521]-1012

**F.Y. M.Sc. (Health Science Dietetics)
DIT-502-MJ : MEAL MANAGEMENT
(2024 Pattern) (Semester - I)**

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Question No. 1 is compulsory.*
- 2) *Solve any 5 questions from Q.No. 2 to Q.No 7.*
- 3) *Questions no 2 to 7 carry equal marks.*

Q1) Answer the following questions (any 5) :

[5 × 2 = 10]

- a) Write principles of planning a diet.
- b) Colostrum.
- c) Reference man and Reference woman.
- d) Anorexia nervosa.
- e) Growth chart.
- f) Adolescent anemia.
- g) Osteoporosis.

Q2) Attempt the following :

- a) Give RDA suggested by ICMR (2020) for a male and female executive.**[4]**
- b) Points to be remember while planning weaning food. **[4]**
- c) Immunisation schedule. **[4]**

Q3) Attempt the following :

- a) Write nutritional related problems of preschooler. **[4]**
- b) Points to be remember in planning a packed lunch. **[4]**
- c) Importance of Breakfast. **[4]**

P.T.O.

Q4) Attempt the following :

- a) Write a note on Anemia in preschooler. [4]
- b) Explain Anorexia nervosa and bulimia. [4]
- c) Dietary guideline for pregnant mother. [4]

Q5) Attempt the following :

- a) Explain factors affecting the volume and composition of breast milk.[4]
- b) Nutritional requirement during infant. [4]
- c) Bring out the importance of calcium and fiber during old age. [4]

Q6) Attempt the following :

- a) Dietary guideline during adulthood. [4]
- b) Explain nutrition related problems of adolescent. [4]
- c) How can you prevent dental problems in children. [4]

Q7) Attempt the following :

- a) Describe the complication during pregnancy. [4]
- b) Explain nutritional requirement during school age children. [4]
- c) Explain physiological changes during old age. [4]



Total No. of Questions : 5]

SEAT No. :

PE-13066

[Total No. of Pages : 2

[6521]-1013

F.Y. M.Sc. Health Science (Dietetics)

DIT-503-MJ : PHYSIOLOGY

(2024 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates:

- 1) Question No. 1 is compulsory.***
- 2) Solve any three questions from Q.No. 2 to Q.No 5.***
- 3) Question 2 to 5 carry equal marks.***

Q1) Solve any five of the following : **[5]**

- a) Heart muscle also known as.
- b) Which are the common symptoms of cardiovascular illness.
- c) What are the primary sex organs of female.
- d) Name of the Hormons secreted by liver.
- e) Which are the cellular organelles.
- f) Define Menstrual cycle.

Q2) Attempt the following :

- a) What are the functions of Saliva. **[2]**
- b) Which are the functions of Trachea. **[4]**
- c) Explain the structure and functions of kidney. **[4]**

Q3) Attempt the following :

- a) Listout the systems in human body. **[2]**
- b) Which are the physical characteristics of blood. **[4]**
- c) Explain the structure and function. **[4]**

P.T.O.

Q4) Attempt the following :

- a) Which Hormones secreted by pancreases. [2]
- b) Explain about brief structure and functions of lung. [4]
- c) Write about Hormones secreted by Endocrine gland. [4]

Q5) Attempt the following :

- a) Write about the structure of Bone and also Explain the types of Bone.[2]
- b) Explain the Gastrointestinal tract of Human Body with diagram. [4]
- c) What are the structure and functions of female Reproductive System.[4]



Total No. of Questions : 5]

SEAT No. :

PE-13067

[Total No. of Pages : 2

[6521]-1014

F.Y. M.Sc. Health Science (Dietetics)

DIT-510-OE : DIET THERAPY

(2024 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 35

Instructions to the candidates:

- 1) *Question 1 is compulsory.*
- 2) *Solve any three questions from Q.No. 2 to Q.No 5.*
- 3) *Questions 2 to 5 carry equal marks.*

Q1) Solve any five of the following : **[5]**

- a) Define therapeutic diet.
- b) What is constipation.
- c) Define hyperlipidemia.
- d) What are the types of diabetes mellitus.
- e) What is BMI.
- f) Explain the causes of Anemia.

Q2) Attempt the following :

- a) Write the dietary guidelines for a patient with diarrhoea. **[2]**
- b) Discuss the dietary modification of obesity. **[4]**
- c) Write the principles of diet therapy. **[4]**

Q3) Attempt the following :

- a) Explain the role of diet in prevention of cardiovascular disease. **[2]**
- b) Explain the dietary management in fever. **[4]**
- c) Describe the effects of undernutrition on health. **[4]**

P.T.O.

Q4) Attempt the following :

- a) Why is adequate protein intake important in illness. [2]
- b) Discuss the dietary management in hypertension. [4]
- c) Write the symptoms and nutritional care of cirrhosis. [4]

Q5) Answer any two of the following :

- a) Explain the Medical Nutritional therapy of Hepatitis. [5]
- b) Explain the causes and dietary modification of ulcerative colitis. [5]
- c) Write the types of fever and dietary guidelines for fever. [5]



Total No. of Questions : 3]

SEAT No. :

PE-13068

[Total No. of Pages : 2

[6521]-1015

M.Sc. Health Sciences (Dietetics)

FSN-541-RM : RESEARCH METHODOLOGY

(2024 Pattern) (4 Credits) (Semester - I)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the condidates:

- 1) All questions are compulsory.***
- 2) Figures to the right indicate full marks.***

Q1) Write short answers any Five :

[25]

- a) What are the different non-parametric tests? Explain any one in details.
- b) Explain pearson and spearman correlation methods.
- c) Explain difference between quantitative and qualitative research.
- d) Describe formation and testing of hypothesis.
- e) Explain sampling methods.
- f) Explain types of research approaches.

Q2) Explain the following :

[25]

- a) Describe reliability of tools.
Describe tabulation of data.
- b) Explain classification of data.
Explain interpretation of data.
- c) Describe binomial distribution.
Describe measures of variability.
- d) Explain Chi-square test.
Explain scatter diagram method.
- e) Explain data management in research.
Explain mean, median and mode.

P.T.O.

Q3) Answer the following any 10 :

[20]

- a) Two characteristics of research.
- b) Two types of research design.
- c) Two sources of review of literature.
- d) Two qualitative data collection methods.
- e) Two components of feasibility study.
- f) Two benefits of using statistics in dietetics research.
- g) Two measures of central tendency.
- h) Two non-parametric tests.
- i) Two uses of computer in research.
- j) Two parametric tests.
- k) Two measures of variability.
- l) Two needs of research in dietetics.

