

B.Sc. CLINICAL NUTRITION
(New Syllabus 2018-2019)

FIRST YEAR

PAPER II – HUMAN PHYSIOLOGY

Q.P. Code: 803002

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Define Erythropoiesis. Explain in detail about stages and factors affecting it. Add a note on pernicious anemia.
2. Define blood pressure and pulse pressure. Briefly describe the short term regulation of blood pressure.
3. Define menarchy. Explain in detail about uterine and ovarian changes during menstrual cycle.

II. Write notes on:

(8 x 5 = 40)

1. Structure and signal transduction of Neuromuscular Junction.
2. List the functions of lymph.
3. Stages and factors affecting spermatogenesis.
4. Functions of Skin.
5. Structure and functions of Juxtaglomerular apparatus (JGA).
6. Composition and functions of saliva.
7. Refractory errors and its correction.
8. List the functions of thyroxine.

III. Short answers on:

(10 x 3 = 30)

1. Mention the functions of mitochondria.
2. What are types and functions of Hemoglobin?
3. Mention the lung volumes and its normal values.
4. Name the hormones of posterior pituitary and their functions.
5. Functions of neuroglial cells.
6. List the functions of placenta.
7. Test for Hearing.
8. Mention the parts of conductive system of heart.
9. Mention the functions of Hydrochloric acid (HCL).
10. List the puberty changes in male.

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PAPER II – HUMAN PHYSIOLOGY

Q.P. Code: 803002

Time: Three Hours

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Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Define cardiac cycle. Explain the detail about stages of cardiac cycle.
2. Name the hormones of adrenal cortex. Briefly describe the functions of cortisol.
3. Mention the types of Nephron. Explain briefly the process of urine formation.

II. Write notes on:

(8 x 5 = 40)

1. Classification and functions of leucocytes.
2. Baroreceptor reflex mechanism.
3. Composition and functions of bile.
4. Phases of menstrual cycle.
5. Trace the auditory pathways.
6. Spirogram.
7. Functions of hypothalamus.
8. List the functions of growth hormone.

III. Short answers on:

(10 x 3 = 30)

1. Mention the functions of Erythrocytes.
2. Mention the functions of platelets.
3. Mention the functions of sertoli cells.
4. Test for ovulation.
5. Mention the functions of testosterone.
6. Wallerian degeneration.
7. Define sarcomere. Mention different muscle proteins.
8. Mention the functions of juxta glomerular apparatus (JGA).
9. Errors of refraction.
10. Mention the muscles for respiration.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321]

MARCH 2021

Sub. Code: 3002

(AUGUST 2020 EXAM SESSION)

B.Sc. CLINICAL NUTRITION

FIRST YEAR (Regulation 2018-2019)

PAPER II – HUMAN PHYSIOLOGY

Q.P. Code : 803002

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. What is meant by Hemostasis? Explain in detail about stages of blood coagulation.
2. Define cardiac output and stroke volume. Briefly describe factors regulating cardiac output.
3. Name the ascending tracts. Explain in detail about the origin, course and termination of pain pathway.

II. Write notes on:

(8 x 5 = 40)

1. Physiological basis of blood groups.
2. Compositions and functions of pancreatic juice.
3. Define glomerular filtration rate (GFR) and factors affecting it.
4. Differentiate between upper motor and lower motor lesions.
5. Uterine changes of menstrual cycle.
6. Visual pathway and its lesions.
7. List the functions of liver.
8. List the functions of spleen.

III. Short answers on:

(10 x 3 = 30)

1. Types and functions of endoplasmic reticulum.
2. Mention the functions of granulocytes.
3. Define sarcomere. Mention different muscle proteins.
4. Mention the non – respiratory functions of lungs.
5. List the changes of puberty in female.
6. Mention the functions of sertoli cells.
7. What are the functions of middle ear?
8. Define vital capacity and factors affecting it.
9. List the functions of insulin.
10. Mention the functions of cerebro spinal fluid (CSF).

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[AHS 0422]

APRIL 2022

Sub. Code: 3002

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSIONS)

**B.Sc. CLINICAL NUTRITION
FIRST YEAR (Regulations 2018-2019)
PAPER II – HUMAN PHYSIOLOGY
Q.P NO. 803002**

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on : (3X10=30)

1. Explain in detail the process of urine formation.
2. Elaborate on the structure and function of ear.
3. Draw structure of heart and label the parts.

II. Write Notes on : (8X5=40)

1. Illustrate the cell structure.
2. Explain the functions of spleen.
3. Write about bone deformities.
4. Explain about
 - a) Pituitary gland- its secretion and functions.
 - b) Thyroid gland- its secretion and functions.
5. Explain the functions of Skin.
6. Write short notes on placenta and its function.
7. Write about lung volume and lung capacity.
8. Brief about the common diseases of eyes.

III. Short Answers on : (10X3=30)

1. Write about Anaemia.
2. Define heart rate.
3. List down the components of a cell.
4. Differentiate sensory and motor nervous system.
5. What is respiratory quotient?
6. List down the enzymes involved in digestion.
7. List the parts of central nervous system.
8. Differentiate between sympathetic and para sympathetic nervous system.
9. Write short notes on coagulation factors.
10. What is active transportation?

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[AHS 1122]

NOVEMBER 2022

Sub. Code: 3002

**B.Sc. CLINICAL NUTRITION
FIRST YEAR (Regulation 2018-2019)
PAPER II – HUMAN PHYSIOLOGY
Q.P NO. 803002**

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on :

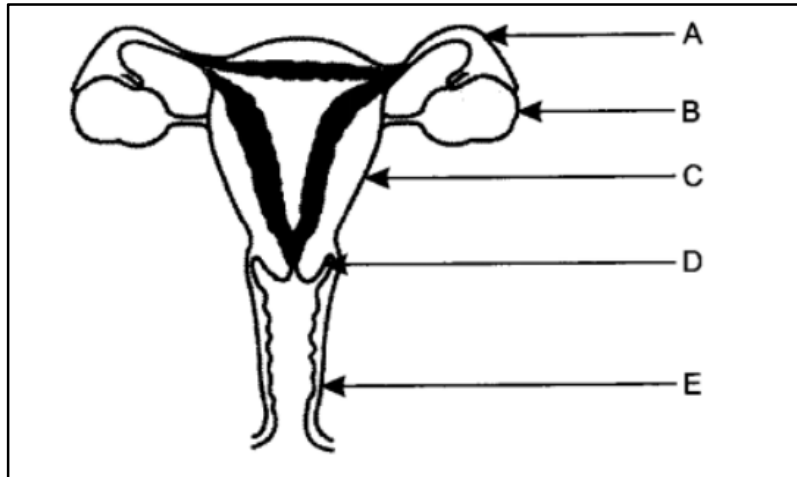
(3X10=30)

1. Draw structure of nephron and explain the mechanism of urine formation.
2. Describe the conducting system of heart with suitable diagram.
3. Define Cardiac output. Write about the factors regulating the cardiac output.

II. Write Notes on :

(8X5=40)

1. How does exchange of gases take place in alveoli of lungs?
2. Draw a neutrophil. Describe its functions.
3. Phases of menstrual cycle.
4. What are the functions of skin?
5. Mechanism of skeletal muscle contraction.
6. Name the parts labelled A, B, C, D, E and their functions.



7. What is placenta? List the functions of placenta.
8. List the important functions of lymphatic system.

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III. Short Answers on :

(10X3=30)

1. Name the hormones secreted by adrenal medulla.
2. Effect of sympathetic activation on heart.
3. Define Erythropoiesis.
4. What are the components of blood?
5. What are neuroglial cells?
6. What is haemophilia?
7. Structure of Sarcomere.
8. What is anaemia?
9. What is Wallerian degeneration and how is it caused?
10. What is synapse?

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423]

APRIL 2023

Sub. Code: 3002

**B.Sc. CLINICAL NUTRITION
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II – HUMAN PHYSIOLOGY**

Q. P. Code: 803002

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Draw and label the parts of digestive tract. Explain in detail about the formation and function of bile.
2. Define Erythropoiesis. Describe in detail the stages of Erythropoiesis.
3. Name the different chambers of heart. Write in detail about the blood supply of heart.

II. Write notes on: **(8 x 5 = 40)**

1. Hemoglobin.
2. Functions of thyroid hormone.
3. Peptic ulcer.
4. Dietary fiber.
5. Neuro muscular junction.
6. Functions of skin.
7. Errors of refraction.
8. Cell membrane.

III. Short answers on: **(10 x 3 = 30)**

1. Pernicious anemia.
2. Functions of lysosomes.
3. Non respiratory functions of lung.
4. Heart sounds.
5. Major blood group system.
6. Placental hormones.
7. Juxta glomerular apparatus.
8. Ovulation.
9. Name the hormones secreted from pancreas.
10. Neuroglial cells.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1123]

NOVEMBER 2023

Sub. Code: 3002

B.Sc. CLINICAL NUTRITION
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II – HUMAN PHYSIOLOGY

Q. P. Code: 803002

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(3 x 10 = 30)

1. Classify the types of Immunity and add a note on Cell Mediated Immunity.
2. Name the hormones secreted by anterior Pituitary. Briefly describe the functions of growth hormone and add a note on Pituitary dwarfism.
3. Explain in detail about the transport of Oxygen in the blood with a suitable diagram and add a note on Oxygen haemoglobin dissociation curve.

II. Write notes on:

(8 x 5 = 40)

1. Illustrate the structure of Cell membrane with neat diagram.
2. Explain the pathway of Blood coagulation.
3. Explain the process of digestion and absorption of Fats.
4. Write short notes on Regulation of Body Temperature.
5. List out the features of Hyperthyroidism.
6. Explain the Milk ejection reflex.
7. Describe the mechanism of Hearing.
8. Brief about role of Kidney in regulation of acid base balance.

III. Short answers on:

(10 x 3 = 30)

1. Differentiate between Isometric and Isotonic Muscle contraction.
2. Classify Diuretics and give two examples for each.
3. Name the Hormones involved in bone remodeling.
4. What is Mean arterial pressure? How is it calculated?
5. What is Cytoskeleton?
6. List the parts of Central nervous system.
7. What is Tidal volume? What is its Normal value?
8. What is the composition of Pancreatic juice?
9. What is Jugular venous pressure?
10. What is Glomerular filtration rate?

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0424]

APRIL 2024

Sub. Code: 3002

**B.Sc. CLINICAL NUTRITION
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II – HUMAN PHYSIOLOGY
Q. P. Code: 803002**

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on :

(3 X 10 = 30)

1. Define Cardiac cycle. Describe the changes occurring in different phases of Cardiac cycle.
2. Explain in detail the process of digestion in alimentary tract.
3. Write in detail about Menstrual Cycle.

II. Write notes on :

(8 X 5 = 40)

1. Explain the functions of cell organelles.
2. Types of White Blood Cells and their functions.
3. Factors regulating cardiac output.
4. Name the pancreatic hormones and explain their functions.
5. Illustrate the structure of Nephron and mention its functions.
6. Lung volumes and capacities.
7. Events at Neuromuscular junction.
8. Functions of skin.

III. Short Answers on :

(10 X 3 = 30)

1. What are the components of blood?
2. Define Ejection fraction.
3. Define Hypertension.
4. What is Wallerian degeneration?
5. Brief about Hypo and hyperventilation.
6. Functions of Platelets.
7. Heart sounds.
8. Functions of Lungs.
9. Name the hormones secreted by Anterior Pituitary Gland.
10. Name the Refractive errors of the Eye.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1125]

NOVEMBER 2025

Sub. Code: 3002

B.Sc. CLINICAL NUTRITION
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II – HUMAN PHYSIOLOGY
Q. P. Code: 803002

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on :

(3 x 10 = 30)

1. Define Immunity. Classify Immunity. Explain in brief about T cell mediated Immunity.
2. Explain briefly about volumes and capacities of Lung.
3. What is a Neuron? Draw a neat labeled diagram of Neuron. What are the different types of Neuron? Add a note on Wallerian Degeneration.

II. Write notes on:

(8 x 5 = 40)

1. Intrinsic mechanism of Coagulation pathway.
2. Short term regulation of Blood pressure.
3. Conducting system of Heart.
4. Neuromuscular junction.
5. Juxtaglomerular Apparatus.
6. Functions of Growth hormone.
7. Spermatogenesis.
8. Contraceptive methods in Female.

III. Short answers on:

(10 x 3 = 30)

1. Functions of Cell membrane.
2. What is Diffusion?
3. Functions of Haemoglobin.
4. Functions of Eosinophil.
5. Actin and Myosin.
6. Functions of Bile salts.
7. Draw a neat labelled diagram of Nephron.
8. What is Diabetes Mellitus?
9. Functions of Lymphatic system.
10. Functions of Skin.
