

B.Sc. RADIOGRAPHY & IMAGING TECHNOLOGY
(New Syllabus 2018-2019)

FIRST YEAR

PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY
RELEVANT TO RADIOLOGY

Q.P. Code: 801841

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Enumerate the parts of digestive system? Add a note on external features of stomach?
2. Explain the steps in involved in urine formation?
3. Draw and label the parts of Respiratory tract. Add a note on lungs?

II. Write notes on:

(8 x 5 = 40)

1. Erythroblastosis fetalis.
2. Time for ovulation.
3. Anticoagulants.
4. Functions of lymph.
5. Nephron.
6. Cretinism.
7. Functions of saliva.
8. Juxta glomerular apparatus.

III. Short answers on:

(10 x 3 = 30)

1. Hormones of posterior pituitary gland.
2. Physiological jaundice.
3. Types of tumor.
4. Function of thyroid hormone.
5. Name some neuromuscular blockers.
6. Any two functions of CSF.
7. Types of injuries.
8. Methods of contraception.
9. List the Lobes of cerebrum.
10. Types of fractures.

B.Sc. RADIOGRAPHY & IMAGING TECHNOLOGY
(New Syllabus 2018-2019)

FIRST YEAR

PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY
RELEVANT TO RADIOLOGY

Q.P. Code: 801841

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Draw the C/S of Heart. Describe the conducting system of heart with cardiac cycle.
2. What is Diabetes Mellitus? Describe its etiology, Pathophysiology and treatment?
3. Describe the steps involved in Excitation – contraction coupling?

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

1. A typical Lumbar Vertebrae.
2. Para Nasal Sinuses.
3. Describe Cerebellum.
4. Draw a cell and Label. What are Golgi apparatus?
5. Explain Nephron with diagram.
6. Describe the classification of joints with example.
7. Describe Spleen.
8. Name the parts of Female Reproductive system and their functions.

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

1. What are the anatomical regions of Abdomen? What are Rugae and where are they found?
2. What is Myocardium?
3. Types of jaundice.
4. Draw Biliary tree and Label.
5. What are the types of bones? Give example.
6. Name the glands in Endocrine glands.
7. What are Axial and Appendicular skeleton?
8. What are the Layers of Alimentary Canal?
9. What is Omentum?
10. What are the Intercostal Muscles?

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

[AHS 0321]

MARCH 2021

Sub. Code: 1841

(AUGUST 2020 EXAM SESSION)

B.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY

FIRST YEAR (Regulation 2018-2019)

**PAPER I – HUMAN ANATOMY, PHYSIOLOGY AND PATHOLOGY
RELEVANT TO RADIOLOGY**

Q.P. Code : 801841

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the vertebral column in detail.
2. Explain the physiology of micturition
3. Define anaemia, its classification, symptoms and pathophysiology

II. Write notes on:

(8 x 5 = 40)

1. Portal circulation
2. Conducting system of heart
3. Mechanism of breathing
4. Blood supply of brain.
5. Explain synovial joint and give examples
6. Structure and Functions of skin
7. Neuromuscular junction.
8. Importance of Radio imaging of mammary gland

III. Short answers on:

(10 x 3 = 30)

1. Pulmonary circulation.
2. Contraceptives.
3. Name the cranial nerves.
4. Bones of pelvis.
5. Hypothyroidism
6. Deep venous thrombosis
7. Parts of male urethra
8. Classification of Bones
9. Cardiac cycle
10. Olfactory pathway

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

[AHS 0422]

APRIL 2022

Sub. Code: 1841

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSION)

B.Sc., RADIOGRAPHY & IMAGING TECHNOLOGY

FIRST YEAR (Regulation 2018-2019)

PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY

RELEVANT TO RADIOLOGY

Q.P. Code: 801841

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on : (3X10=30)

1. Write in detail about the physiology of urine formation.
2. Define cardiac cycle and explain about the different phases of cardiac cycle.
3. Draw the neuromuscular junction and write the sequence of events in the neuromuscular junction.

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

1. Pathophysiology of anaemia.
2. Name the cell organelles and write the functions of any 2.
3. Factors determining blood pressure.
4. Anatomy of portal circulation.
5. Classification of joints and explain ball and socket joint.
6. Rods and cones.
7. Circulation of cerebrospinal fluid.
8. Anterior pituitary.

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

1. Cretinism.
2. What is antero-posterior view in Radiology?
3. Define Stroke volume and its normal value.
4. Exocrine glands in the skin.
5. Cell division.
6. Structure and functions of middle ear.
7. Phases of Menstrual cycle.
8. Connective tissue.
9. Parts of alimentary tract.
10. Lobes of cerebrum.

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

[AHS 1122]

NOVEMBER 2022

Sub. Code: 1841

B.Sc. RADIOGRAPHY & IMAGING TECHNOLOGY

FIRST YEAR (Regulation 2018-2019)

**PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY RELEVANT
TO RADIOLOGY**

Q.P. Code: 801841

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on : (3X10=30)

1. Write in detail about the physiology of skeletal muscle contraction with suitable diagrams.
2. Elaborate on the histology of Liver. Write in detail about the types and pathophysiology of Jaundice.
3. Discuss in detail about the parts of the respiratory system. Explain with a neat diagram, the structure and functions of Lung.

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

1. Anatomical planes of the body.
2. Conducting system of heart.
3. Erythroblastosis fetalis.
4. Types of tumours and their spread.
5. Connective tissue.
6. Functions of bile.
7. Structure of male and female pelvis.
8. Rh Incompatibility.

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

1. Hormones of Anterior Pituitary Gland.
2. Name any three types of Anaemia and mention its features.
3. Blood supply of brain.
4. Taste pathway.
5. Define cardiac output and stroke volume with normal values.
6. Name the bones of the upper limbs.
7. Name three Cranial Nerves.
8. Clavicle.
9. Write the chambers of the heart.
10. Dwarfism.

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

[AHS 0423]

APRIL 2023

Sub. Code: 1841

**B.Sc., RADIOGRAPHY & IMAGING TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY
RELEVANT TO RADIOLOGY
Q.P. Code: 801841**

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on : (3 X 10 = 30)

1. Write in detail about the Endocrine system and the various glands involved in it.
2. Write in detail about the structure and functions of Kidneys.
3. Write about the classification of Joints and movements at the Joints.

II. Write Notes on : 8 X 5 = 40)

1. Composition of Blood.
2. Valves of the Heart.
3. Connective tissue.
4. Structure and functions of Stomach.
5. Neuron.
6. Physiology of Digestion.
7. Bronchopulmonary segments.
8. Urinary bladder.

III. Short Answers on: (10 X 3 = 30)

1. Portal hypertension.
2. Blood grouping.
3. Bones of Pelvis.
4. Fontanelles.
5. Function of Large Intestine.
6. Fallopian tube.
7. Difference between Male and Female Urethra.
8. Bones of Thoracic cage.
9. Physiology of Hearing.
10. Cardiac cycle.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 1841

**B.Sc., RADIOGRAPHY & IMAGING TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY
RELEVANT TO RADIOLOGY
Q.P. Code: 801841**

Time: Three Hours

Maximum : 100 Marks

Answer All questions

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

1. Write in detail about the physiology of Respiration.
2. Write about the composition of Blood and its functions.
3. With a neat diagram, explain in detail the structure of the Heart. Add a note on Blood supply of Heart.

II. Write Notes on : **(8 X 5 = 40)**

1. Micturition reflex.
2. Functions of Bile.
3. Anatomy of Portal vein.
4. Wound healing.
5. Conducting system of heart.
6. Bronchopulmonary segments.
7. Phases of Menstrual cycle.
8. Functions of CSF.

III. Short Answers on: **(10 X 3 = 30)**

1. Hormones of Endocrine pancreas.
2. Name three Cranial nerves.
3. Draw Mitochondria and write its functions.
4. Functions of Kidney.
5. Classification of Joints.
6. List out the Plasma Proteins and write any two functions.
7. Importance of Imaging Mammary glands.
8. Landsteiner's law.
9. Surface marking of Arch of Aorta.
10. Portal hypertension.

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

[AHS 0424]

APRIL 2024

Sub. Code: 1841

B.Sc., RADIOGRAPHY & IMAGING TECHNOLOGY

FIRST YEAR (Regulation 2018-2019 onwards)

**PAPER I – HUMAN ANATOMY, PHYSIOLOGY &
PATHOLOGY RELEVANT TO RADIOLOGY**

Q.P. Code: 801841

Time: Three Hours

Answer All questions

Maximum : 100 Marks

I. Elaborate on :

(3 X10 = 30)

1. Describe the Anatomy and Functions of Stomach.
2. Write in detail about Anatomy of Uterus and Ovary. Add a note on Physiology of Ovulation.
3. Describe the Vertebral Column in detail.

II. Write Notes on :

(8 X 5 = 40)

1. Mechanism of Respiration.
2. Circle of Willis.
3. Physiology of Taste.
4. Draw and label parts of Large Intestine.
5. Anatomy of Eye.
6. Functional unit of Kidney.
7. Cardiac cycle.
8. Deglutition.

III. Short Answers on :

(10 X 3 = 30)

1. Define Thrombocytopenia.
2. Define Meningitis.
3. Mention hormones of Thyroid gland.
4. Types of Bones.
5. Types of nerve fibers.
6. Name the ventricles in Brain.
7. Functions of Liver.
8. Define systolic and diastolic Blood Pressure.
9. What is Blood Brain Barrier?
10. Pathophysiology of Edema.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 1841

**B.Sc., RADIOGRAPHY & IMAGING TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I – HUMAN ANATOMY, PHYSIOLOGY & PATHOLOGY
RELEVANT TO RADIOLOGY
*Q.P. Code: 801841***

Time: Three Hours

Answer All questions

Maximum : 100 Marks

I. Elaborate on :

(3 x 10 = 30)

1. Describe the structure and functions of Pancreas with neat labelled diagram.
2. Define Cardiac cycle and explain the pressure changes in detail.
3. With a neat labelled diagram, explain about the spinal cord and its blood supply in detail.

II. Write Notes on :

(8 x 5 = 40)

1. Structure and functions of Thymus.
2. Blood grouping.
3. CSF and its functions.
4. Structure of a long bone and its blood supply.
5. Biceps.
6. Testis and its importance in imaging.
7. Pathophysiology of acute renal failure.
8. Structure and functions of tongue.

III. Short Answers on :

(10 x 3 = 30)

1. Types of Muscles.
2. Oedema.
3. Name the intercostal muscles for respiration.
4. Functions of mitochondria.
5. Name any four anticoagulants.
6. Name the constrictions in Ureter.
7. Name the bones forming temporomandibular joint.
8. Define Neoplasia.
9. Write the functions of Small intestine.
10. What is posteroanterior view of X-ray?
