

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY****FIRST YEAR****PAPER I – HUMAN ANATOMY & PHYSIOLOGY, RELEVANT TO RADIOLOGY***Q.P. Code : 841401***Time : Three Hours****Maximum : 100 marks****Answer ALL questions in the same order****I. Elaborate on:**

	<b>Pages (Max.)</b>	<b>Time (Max.)</b>	<b>Marks (Max.)</b>
--	-------------------------	------------------------	-------------------------

- |  |   |         |    |
|--|---|---------|----|
| 1. What are Blood Groups and Write about Coagulation of Blood?                     | 7 | 20 min. | 10 |
| 2. What are the various parts of Respiratory System and Physiology of Respiration? | 7 | 20 min. | 10 |
| 3. Write Anatomy of Uterus and Ovaries.  | 7 | 20 min. | 10 |

**II. Write notes on:**

- |  |   |        |   |
|--|---|--------|---|
| 1. Brain and its parts.                      | 4 | 9 min. | 5 |
| 2. Physiology of digestion in the stomach.   | 4 | 9 min. | 5 |
| 3. Structure and Functions of Heart.         | 4 | 9 min. | 5 |
| 4. Pathophysiology of Renal Diseases.        | 4 | 9 min. | 5 |
| 5. Hormones and Functions of Adrenal Gland.  | 4 | 9 min. | 5 |
| 6. External Carotid Artery and its Branches. | 4 | 9 min. | 5 |
| 7. Locations of Lymph Glands.                | 4 | 9 min. | 5 |
| 8. Anatomy and Parts of Shoulder Joint.      | 4 | 9 min. | 5 |
| 9. Structure and function of Human Cell.     | 4 | 9 min. | 5 |
| 10. Anatomy and functions of Ear.            | 4 | 9 min. | 5 |

**III. Short Answers on:**

- |                                   |   |        |   |
|-----------------------------------|---|--------|---|
| 1. Define Physiology.             | 1 | 3 min. | 2 |
| 2. What are the Sinuses of Skull? | 1 | 3 min. | 2 |
| 3. Retroperitoneum.               | 1 | 3 min. | 2 |
| 4. Name the Salivary Glands?      | 1 | 3 min. | 2 |
| 5. Sagittal View.                 | 1 | 3 min. | 2 |
| 6. What is Proximal and Distal?   | 1 | 3 min. | 2 |
| 7. Brachial Artery.               | 1 | 3 min. | 2 |
| 8. What is Superior and Inferior? | 1 | 3 min. | 2 |
| 9. What are Tarsal Bones?         | 1 | 3 min. | 2 |
| 10. Lumbar Vertebrae.             | 1 | 3 min. | 2 |

[LC 0212]

FEBRUARY 2013

Sub. Code: 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code : 841401*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. The structure and functions of the Human Cell.
2. The endocrine glands – their location and functions in human body.
3. Parts of the Digestive system and the physiology of digestion.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Surface markings of lungs.
2. Axillary group of lymph nodes.
3. Neuron.
4. Physiology of muscle contraction.
5. Secretions of pancreas and their functions.
6. Blood supply of heart.
7. Bronchopulmonary segments.
8. Functions of liver.
9. Erythrocyte.
10. Thymus.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Pronation and supination.
2. Branches from arch of aorta.
3. Divisions of pharynx.
4. Parts of a long bone.
5. Layers of cornea.
6. Blood supply of cerebellum.
7. Lobes of liver.
8. Number of spinal nerves.
9. Normal blood pressure.
10. Functions of saliva.

\*\*\*\*\*

[LD 0212]

AUGUST 2013

Sub. Code: 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code : 841401*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Describe anatomy of heart and systematic circulation.
2. Describe various parts of female reproductive system and functions of ovaries?
3. Name three Meningeal layers and state their functions.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Draw a labeled diagram of typical synovial joint.
2. Describe brief about paranasal air sinuses.
3. Describe layers and functions of skin.
4. Describe anatomy of hip joint.
5. Name the bones of skull.
6. List important functions of saliva.
7. Describe the structure of Nephron.
8. What are the parts of brain?
9. Describe brief the structure of eye.
10. Describe about neurotransmitters.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Branches of Abdominal aorta
2. What is mid Sagittal plane?
3. What is Proximal and Distal?
4. Differences between right lung and left lung?
5. Name the Ossicles of middle ear.
6. Define peristalsis.
7. What are the parts of brain stem?
8. What is medial and lateral?
9. List four important roles of muscles in the body.
10. What are the functions of hair?

\*\*\*\*\*

[LF 0212]

AUGUST 2014

Sub. Code: 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code : 841401*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Name the endocrine glands in human body; discuss in detail about thyroid gland.
2. Discuss about stomach under the following headings-location, parts, relations, blood supply and lymphatic drainage.
3. Write in detail about the physiology of urine formation.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Coagulation of blood.
2. Appendix.
3. Synovial joint.
4. Neuron.
5. Prostate.
6. Axillary group of lymph nodes.
7. Arch of aorta.
8. Tongue.
9. Reflex arc.
10. Functions of bile.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Adduction and abduction.
2. Name the hormones secreted by pancreas.
3. Skeletal muscle.
4. Glomerular filtration rate.
5. Pericardium.
6. Sino atrial node.
7. Aponeurosis.
8. Ear ossicles.
9. Cisterna chyli.
10. Sulci and gyri.

\*\*\*\*\*

[LG 0215]

FEBRUARY 2015

Sub. Code: 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code : 841401*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. The parts of a long bone – discuss humerus in detail.
2. The male reproductive system – parts – and their functions.
3. Physiology of digestion and absorption.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Pancreas.
2. Spinal cord.
3. Thyroid gland.
4. Kidneys – external features and interior structure.
5. Shoulder joint-type , bones forming it and ligaments.
6. Cardiac output.
7. Menstruation.
8. Coagulation of blood.
9. Oxygen transport.
10. Internal ear.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Pneumatic bones.
2. Nucleus.
3. Lymph node.
4. Visual cortex.
5. Pharynx.
6. Acromegaly.
7. Reflex arc.
8. Implantation.
9. Cholelithiasis.
10. Hernia.

\*\*\*\*\*

[LH 0815]

AUGUST 2015

Sub. Code: 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code : 841401*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain the structure and function of the uterus.
2. Describe the part of lungs with diagram and explain the mechanism of respiration.
3. With a neat diagram, discuss the function of large intestine.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Spinal cord.
2. Heart.
3. Biliary tree.
4. Portal circulation.
5. Anatomical planes of the body.
6. Cardiac cycle.
7. Islets of Langerhans.
8. Atlas.
9. Blood.
10. Kidneys.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Neuron.
2. Small intestine.
3. Liver.
4. Rectum.
5. Fertilisation.
6. Sternum.
7. Arch of Aorta.
8. Mitral valve.
9. Regions of the abdomen.
10. Pituitary gland.

\*\*\*\*\*

[LI 0216]

FEBRUARY 2016

Sub. Code: 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code : 841401*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Draw and Label the cross section of heart and describe the cardiac cycle.
2. Describe the cross section of kidney and the formation of urine.
3. Explain the types of joints and explain knee joint with diagram.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Alveoli.
2. Stomach.
3. Shoulder joint.
4. Urinary bladder.
5. Salivary gland.
6. Biliary tree.
7. Spinal cord.
8. Circle of willis.
9. Eye.
10. Thyroid.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Diaphragm.
2. Prostate gland.
3. Neuron.
4. Ovary.
5. Epiglottis.
6. Gall bladder.
7. Pancreas.
8. Caecum.
9. Lymph nodes.
10. Aortic valve.

\*\*\*\*\*

[LJ 0816]

AUGUST 2016

Sub. Code : 1401

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR**

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

*Q.P. Code: 841401*

**Time : Three hours**

**Maximum: 100 Marks**

Answer **ALL** questions.

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Discuss the elbow joint and their movements.
2. Neat diagram of heart and describe the chambers.
3. Process of urine formation.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Blood Transfusion hazards.
2. Histology of liver.
3. Sarcomere.
4. Taste Buds.
5. Muscles of Expiration.
6. Cushing's syndrome.
7. Menstrual cycle.
8. Cretinism.
9. Intestinal juice.
10. Parts of cerebral hemisphere.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Tetany.
2. Testosterone.
3. Barium enema.
4. Thyroid function tests.
5. Mitochondria.
6. Osteoclasts.
7. Saliva and its functions.
8. Spinal cord.
9. Platelets and their function.
10. Muscles of expiration.

\*\*\*\*\*



**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY  
FIRST YEAR  
PAPER I – HUMAN ANATOMY AND PHYSIOLOGY,  
RELEVANT TO RADIOLOGY**

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

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

1. Describe shoulder joint and movements of it.
2. Histology and functions of Thyroid gland.
3. Composition and functions of blood.

**II. Write notes on:** **(10 x 5 = 50)**

1. Blood groups.
2. Structure and functions of Heart.
3. Neat diagram of Eye and labell the parts.
4. Surface marking of liver.
5. Anterior pituitary hormones.
6. Cuboidal epithelium.
7. Nephron.
8. Intercostal muscles.
9. Pancreatic enzymes.
10. Functions of cerebellum.

**III. Short answers on:** **(10 x 2 = 20)**

1. Aorta.
2. Thymus.
3. Neuron.
4. Ovarian hormones.
5. Bile.
6. Pedal edema.
7. Functions of Gall Bladder.
8. Structure of human cell.
9. Myopia.
10. Heparin.

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**  
**FIRST YEAR**  
**PAPER I – HUMAN ANATOMY AND PHYSIOLOGY,**  
**RELEVANT TO RADIOLOGY**

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. a) Draw and label the parts of liver.      b) Describe the functions of liver.
2. a) Draw and label parts of stomach.    b) Layers of stomach.  
    c) Functions of stomach.                  d) Gastric Juice
3. What are the types of joints? Give example for each. Describe shoulder joint with diagram.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Pharynx.
2. Hip Joint.
3. Mandible.
4. CSF.
5. Draw the structures in female and male pelvis and label.
6. Hypothalamus and its functions.
7. Structure and functions of liver.
8. Pancreatic juice.
9. Structure of breast.
10. Nephron.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Arch of aorta and its branches.
2. Axis.
3. Draw and label lobes of Brain.
4. Intercostal muscles.
5. Humerus.
6. Fallopian tubes.
7. Draw cross section of eye ball and label.
8. Name the ossicles of ear.
9. What is omentum?
10. Draw biliary tree and label.

\*\*\*\*\*

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY  
FIRST YEAR**

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

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. a) Draw a diagram of human lung and label its parts.  
b) Write the mechanism of respiration.
2. Draw the gross section of kidney and label, write the formation of urine.
3. Draw the Parts of alimentary canal. Describe the digestive juices.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Testes.
2. Cerebellum.
3. Name the bones, structure of skull with diagram and write function of skull.
4. Lymph node.
5. Pancreas.
6. Appendix.
7. Conducting system of heart.
8. Explain the anatomy of Nephron with diagram.
9. Write on Arch of aorta and branches.
10. Draw a cell and label. What are golgi apparatus? Mention their function.

**III. Short answers on:**

**(10 x 2 = 20)**

1. What are axial and appendicular skeleton.
2. What is a Trigone?
3. Write types of muscles with examples.
4. Draw and label a typical lumbar vertebrae.
5. Write the components of synovial joint.
6. Vocal cords.
7. Muscles of Respiration.
8. What are the types of circulation?
9. Layers of alimentary canal.
10. Name the tarsal bones.

\*\*\*\*\*

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY  
FIRST YEAR  
PAPER I – HUMAN ANATOMY AND PHYSIOLOGY,  
RELEVANT TO RADIOLOGY**

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Draw the cross sectional view of the heart. Describe the conducting system with cardiac cycle.
2. Draw the gross section of kidney and label. Write elaborately the formation of urine.
3. Name the endocrine glands. Describe the pituitary hormones.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Typical lumbar vertebrae.
2. Calcification of joints with example.
3. Larynx.
4. Spleen.
5. Circle of Willis.
6. Salivary glands.
7. Prostate.
8. PNS.
9. Draw and label cross section of skin and write the function of skin.
10. Name the parts of female reproductive system and their functions.

**III. Short answers on:**

**(10 x 2 = 20)**

1. What are the anatomical regions of abdomen?
2. Write the boundaries of Thoracic cavity.
3. Name the parts of male urethra.
4. What are Rugae and where they are found?
5. Name the glands in endocrine system.
6. Draw a neuron and name the parts.
7. What are synovial joints?
8. Define internal and external respiration.
9. Composition of blood.
10. Myocardium.

\*\*\*\*\*

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY  
FIRST YEAR  
PAPER I – HUMAN ANATOMY AND PHYSIOLOGY,  
RELEVANT TO RADIOLOGY**

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Classify muscle. Tabulate the differences between the muscles.
2. Describe anatomy of heart and Write in detail about systemic circulation.
3. Describe in detail about urinary tract anatomy.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Describe briefly about paranasal air sinuses.
2. Describe forearm bones.
3. Draw the cross section of spinal cord.
4. Name the bones of skull.
5. Liver.
6. Bronchopulmonary segments.
7. Erythropoiesis.
8. Name the parts of male reproductive system. Write the function of testosterone.
9. Barium meal tests.
10. Cerebro spinal fluid.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Draw and label the parts a cell.
2. Mention the types of white blood cells.
3. Functions of large intestine.
4. Sulci and gyri.
5. Define blood pressure and mention the normal blood pressure.
6. Lumbar Vertebrae.
7. Cretinism.
8. Layers of cornea.
9. What is Proximal and Distal?
10. Brachial Artery.

\*\*\*\*\*

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY  
FIRST YEAR**

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

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Classify joints. Describe in detail about synovial joints with examples.
2. Name the endocrine glands in human body and discuss in detail about thyroid gland.
3. Draw the Parts of alimentary canal. Describe the digestive juices.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Testes.
2. Lymph node.
3. Write on Arch of aorta and its branches.
4. Nephron.
5. Thymus.
6. Anterior pituitary hormones.
7. Write types of muscles with examples.
8. Muscles of Inspiration and Expiration.
9. Anatomical planes of the body.
10. Functions of cerebellum.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Draw and label the waves of ECG.
2. Adduction and abduction.
3. Name the Ossicles of middle ear.
4. Cholelithiasis.
5. Sesamoid bones.
6. Define Glomerular filtration rate with its normal value.
7. Regions of the abdomen.
8. Intravenous pyelogram.
9. Differences between right lung and left lung?
10. Tetany.

\*\*\*\*\*

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**  
**FIRST YEAR**  
**PAPER I – HUMAN ANATOMY AND PHYSIOLOGY,**  
**RELEVANT TO RADIOLOGY**

*Q.P. Code: 841401*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain in brief about physiology of respiration.
2. Draw the stomach and label the parts. Write in detail about the functions of stomach.
3. Classify muscles. Explain in detail about physiology of muscle contraction.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Thyroid gland.
2. Name the different types of joints present in our body with examples.
3. Draw the cross sectional view of the heart and write about conducting system of heart.
4. Composition of blood and write about the functions of blood.
5. Spleen.
6. Physiology of Urine formation.
7. Importance of blood grouping.
8. Name the parts of female reproductive system. Write the phases of menstrual cycle.
9. Kidney function tests.
10. Mention the different types of taste with examples.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Draw and label the parts a neuron.
2. Write four functions of plasma proteins.
3. Define edema.
4. Write four functions of saliva.
5. Write the function of skin.
6. Anatomical position in human.
7. Gross anatomy of human eye.
8. Pneumatic bones.
9. Suprarenal gland.
10. Lobes of brain.

\*\*\*\*\*

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

[AHS 0321]

**MARCH 2021**

**Sub. Code: 1401**

**(AUGUST 2020 EXAM SESSION)**

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**FIRST YEAR (Regulation 2010-2011)**

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

***Q.P. Code : 841401***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Draw a neat diagram of Human Cell and Write the functions of cell organelles.
2. Write the parts of the Digestive system with suitable diagram.
3. Name the Endocrine Glands, Discuss in detail about Pituitary.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Shoulder Joint.
2. Draw and Label the diagram of Left Lung.
3. Menstrual Cycle.
4. Chambers of the Heart.
5. Functions of the Skin.
6. Urinary Bladder.
7. Draw and label the diagram of Neuron.
8. Diaphragm.
9. Difference between Male and Female Pelvis.
10. Clavicle.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Irregular Bone.
2. Example for Smooth Muscle.
3. Regions of the Abdomen.
4. Parts of the Pharynx.
5. Types of Tooth.
6. Ear Ossicles.
7. Functions of Gall bladder.
8. Heparin.
9. Lumbar Puncture.
10. Functions of Platelets.

\*\*\*\*\*