

B.OPTOM
(New Syllabus 2018-2019)

FIRST YEAR

PAPER I – GENERAL ANATOMY, GENERAL PHYSIOLOGY

Q.P. Code: 802731

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Define joints. Explain in details about classification, types, components and movements of synovial joint.
2. Define Erythropoiesis. Explain in details about stages and factors regulating it. Add note on pernicious anemia.
3. Name the respiratory centers. Describe the neural regulation of respiration. Add note on cyanosis

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

1. Structure and signal transmission across neuromuscular junction.
2. Briefly describe the conductive system of Heart.
3. Composition and functions of saliva.
4. Stages and factors affecting spermatogenesis.
5. Enumerate the functions of hypothalamus.
6. Distribution and functions of columnar epithelium.
7. Describe the division, blood and nerve supply and functions of paranasal sinus.
8. Explain the lobes, blood and nerve supply of prostate gland.

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

1. Temporary contraceptive methods.
2. Trace the visual pathway.
3. Mention the functions of skin.
4. Mention the plasma proteins and their functions.
5. Differences between dwarfism and cretinism.
6. List the muscles and nerve supply of tongue.
7. Lymphatic drainage of breast.
8. Non excretory Functions of kidney.
9. Mention the hormones of Thyroid gland and list the stages of thyroid hormone synthesis.
10. Refractory errors of the eye and its corrections.

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Q.P. Code: 802731

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Define Hemostasis. Explain in detail about the stages of permanent blood coagulation.
2. Define nephron. Describe the stages of urine formation.
3. Describe in detail about parts, surfaces, lobes, structures, blood and nerve supply of lungs.

II. Write notes on:

(8 x 5 = 40)

1. Neuromuscular junction.
2. Define cardiac output and factors regulating it.
3. Transport of Oxygen.
4. Functions of liver.
5. Contraceptive methods.
6. Describe the parts, relations, blood and nerve supply of duodenum.
7. Supports of uterus.
8. Articular surfaces and ligaments of knee joint.

III. Short answers on:

(10 x 3 = 30)

1. Tabulate the differences among muscle tissues.
2. Mention the mismatch blood transfusion reactions.
3. Mention the causes and types of Hypoxia.
4. Mention the functions of Thalamus.
5. List the causes and symptoms of Cushing syndrome.
6. Trace the auditory pathway.
7. Grave's diseases.
8. Mention the types of papillae of tongue.
9. Mention the structures of hyaline cartilage.
10. Structure and functions of sclera and cornea.

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

[AHS 0321]

MARCH 2021

Sub. Code: 2731

(AUGUST 2020 EXAM SESSION)

B.OPTOM

FIRST YEAR (Regulation 2018-2019)

PAPER I – GENERAL ANATOMY, GENERAL PHYSIOLOGY

Q.P. Code : 802731

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Define blood pressure and pulse pressure. Explain in details about factors regulating blood pressure.
2. Describe in details about the position, parts, capsules, relations, histology and blood and nerve supply of thyroid gland.
3. Define monarchy. Explain in detail about the uterine and ovarian changes of menstrual cycle.

II. Write notes on:

(8 x 5 = 40)

1. Classification and functions of leukocyte.
2. Secondary active transport.
3. Electrocardiogram.
4. Lung volumes and capacities.
5. Juxtaglomerular apparatus
6. Uterine ligaments and their functions.
7. Lacrimal apparatus
8. Parts, histology and functions of gall bladder

III. Short answers on:

(10 x 3 = 30)

1. Mention the functions of liver.
2. Functions of insulin.
3. Functions of cerebrospinal fluid.
4. Mention the refractive errors of eyes.
5. Mention the functions of platelets.
6. Draw and label the conductive system of heart.
7. Tracheobronchial tree.
8. Types and functions of neuroglial cells.
9. Histology of spleen.
10. Types of cells in connective tissues.

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

[AHS 0422]

APRIL 2022

Sub. Code: 2731

(FEBRUARY 2021 & AUGUST 2021 EXAM SESSIONS)

B.OPTOM

FIRST YEAR (Regulation 2018-2019)

PAPER I-GENERAL ANATOMY, GENERAL PHYSIOLOGY

Q.P NO. 802731

Time: Three Hours

Answer All questions

Maximum: 100 Marks

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

1. Classify glands with examples. Write in detail about pituitary gland.
2. Write in detail about the composition and functions of blood.
3. Explain in detail about the blood supply of heart.

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

1. Draw a neat labelled diagram of cell.
2. Cardiac cycle and heart sounds.
3. Physiology of hearing.
4. Contraceptive methods in female.
5. Histology of skeletal muscle.
6. Classify epithelium with examples.
7. Functions of skin.
8. Structure of blood vessel.

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

1. Parts of long bone.
2. Cerebrospinal fluid.
3. Name the endocrine secretion of pancreas.
4. pH of blood.
5. Structure of sperm.
6. Define vital capacity.
7. Functions of tongue.
8. Parts of small intestine.
9. Name the parts of upper respiratory tract.
10. Lobes of prostate.

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

[AHS 1122]

NOVEMBER 2022

Sub. Code: 2731

B.OPTOM
FIRST YEAR (Regulation 2018-2019)
PAPER I - GENERAL ANATOMY, GENERAL PHYSIOLOGY
Q.P NO. 802731

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on:

(3 X 10 = 30)

1. Describe the parts and functions of digestive system with a neat labelled diagram.
2. Describe multipolar neuron. Add a note on synapse.
3. Describe the structure of a cell and functions of various cell organelles with a neat labelled diagram.

II. Write notes on:

(8 X 5 = 40)

1. Erythropoiesis.
2. Lung volumes and capacities.
3. Define blood pressure and effects of exercise and posture on blood pressure.
4. Histology of cardiac muscle.
5. Pleura.
6. Parts and functions of pancreas.
7. Diaphragm.
8. Hormones secreted by pituitary gland and their functions.

III. Short answers on:

(10 X 3 = 30)

1. Name the plasma proteins.
2. Functions of saliva.
3. Pedal oedema.
4. Erythrocyte sedimentation rate.
5. Branches of Arch of Aorta.
6. Name the parts of upper respiratory system.
7. Name the neuroglial cells.
8. Hormones secreted by Adrenal gland.
9. Lobes of Cerebrum.
10. Micturition reflex.

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

[AHS 0423]

APRIL 2023

Sub. Code: 2731

B.OPTOM

FIRST YEAR (Regulation 2018-2019 onwards)

PAPER I-GENERAL ANATOMY, GENERAL PHYSIOLOGY

Q.P. Code: 802731

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe the location, structure of different types of Epithelial tissue.
2. Describe the anatomy of Female Reproductive System.
3. Classify the Hormones secreted by Adrenal cortex. Explain the actions and regulation of Secretion of Glucocorticoids.

II. Write notes on:

(8 x 5 = 40)

1. Fluid mosaic model of Cell membrane.
2. Enumerate the functions of Cerebral cortex.
3. How is CO₂ transported in blood?
4. Mechanism of Hydrochloric acid secretion in stomach.
5. Describe the functions of Placenta.
6. Describe the anatomy of the spleen.
7. Describe the location, anatomy of the esophagus.
8. Describe the anatomy of the ear.

III. Short answers on:

(10 x 3 = 30)

1. Megaloblastic anemia.
2. Name the parts of large intestine.
3. Name the layers of Heart wall.
4. Trace the olfactory pathway.
5. Micturition reflex.
6. Name the types of Muscle tissue.
7. Name the bones of the Axial skeleton.
8. Anatomical Planes through the human body.
9. Mention the properties of Cardiac muscle.
10. Steps in Phagocytosis by Neutrophil.

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 2731

B.OPTOM

FIRST YEAR (Regulation 2018-2019 onwards)

PAPER I-GENERAL ANATOMY, GENERAL PHYSIOLOGY

Q.P. Code: 802731

Time: Three Hours

Answer All questions

Maximum: 100 Marks

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

1. Describe the location, anatomy, histology of the Liver.
2. Describe the mechanisms that contribute to Blood coagulation.
3. Describe the structure of Nephron. Add a note on formation of Urine.

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

1. Active transport.
2. Structure of Neuron.
3. Hypoxia and its types.
4. Structure of Skeletal muscle.
5. Structure of Lymph node.
6. Cardiac cycle.
7. Describe Reproductive organs in males.
8. Draw the diagram of Bronchopulmonary segments.

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

1. Name five main types of Blood vessels.
2. Myopia and its correction.
3. Anatomical planes.
4. Stages of Sleep.
5. Female contraceptive pills.
6. Blood supply of Kidney.
7. Name the bones of the Appendicular Skeleton.
8. Name the layers of Skin.
9. What is Peristalsis?
10. Pacemaker potential.

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

[AHS 0424]

APRIL 2024

Sub. Code: 2731

B.OPTOM
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER I-GENERAL ANATOMY, GENERAL PHYSIOLOGY
Q.P. Code: 802731

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on:

(3 X 10 = 30)

1. Describe the Lungs in the following aspects- location, parts and coverings, differences between Right and Left Lungs. Add a note on Bronchopulmonary Segment.
2. Define Blood Pressure. Explain in detail about Baroreceptor reflex mechanism. Add a note on Hypertension.
3. Classify Joints. Explain Synovial joints with neat diagram and example.

II. Write notes on:

(8 X 5 = 40)

1. Draw a neat labelled diagram of Neuron.
2. Juxtaglomerular apparatus.
3. Mechanism of Gastric Acid Secretion.
4. Intrinsic mechanism of Blood coagulation.
5. Histology of Cardiac muscle.
6. Classify Epithelium with examples.
7. Oxygen dissociation curve.
8. Branches of Arch of Aorta.

III. Short answers on:

(10 X 3 = 30)

1. Define diffusion.
2. Transitional Epithelium.
3. What are the types of Plasma proteins?
4. Name the Endocrine Glands.
5. Lobes of Cerebrum.
6. Waves of E.C.G.
7. Chambers and Valves of Heart.
8. Parts of Small Intestine.
9. Functions of Cerebellum.
10. Parts of Uterus.

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

[AHS 1125]

NOVEMBER 2025

Sub. Code: 2731

B.OPTOM

FIRST YEAR (Regulation 2018-2019 onwards)

PAPER I-GENERAL ANATOMY, GENERAL PHYSIOLOGY

Q.P. Code: 802731

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe the structure of a typical long bone with a neat labelled diagram.
2. Define Gametogenesis. Write in detail about Spermatogenesis.
3. Classify glands. Write in detail about Pancreas.

II. Write notes on:

(8 x 5 = 40)

1. White Blood Cells.
2. Structure and Functions of Gall bladder.
3. Immunoglobulins.
4. Bronchopulmonary segments.
5. Functions of skin.
6. Histology of Hyaline Cartilage.
7. Glomerulus.
8. Sleep cycle.

III. Short answers on:

(10 x 3 = 30)

1. Define Erythropoiesis.
2. Types of Muscle.
3. Factors affecting the Blood Pressure.
4. Functions of Cerebellum.
5. Parts of Ear.
6. Structure of Mitochondria.
7. Goitre.
8. Name plasma proteins.
9. Define Cardiac Output.
10. Micturition reflex.
