

[LK 0217]

FEBRUARY 2017

Sub.Code: 2701

**B. OPTOM**  
(New Syllabus 2015-2016)

**FIRST YEAR**

**PAPER I – GENERAL ANATOMY, GENERAL PHYSIOLOGY AND  
BASIC BIOCHEMISTRY**

***Q.P. Code: 802701***

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Structure and Functions of Nephron.
2. Thyroid function and its associated disorders.
3. Classify Immunoglobulin's with its functions.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Cardiac cycle.
2. Diabetes Mellitus.
3. Pathway of Taste.
4. Histology of skin and its appendages.
5. Blood supply of stomach.
6. Electrophoresis.
7. Biologically important peptides.
8. Calcium regulation and its disorders.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Functions of Hypothalamus.
2. Obesity.
3. Mention the different lung volumes.
4. Wald's visual cycle.
5. Parts of the ear.
6. Cartilage and its function.
7. Different parts of eye.
8. Essential fatty acid.
9. Structure and function of salivary gland.
10. Structure of neuron.

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[LL 0817]

AUGUST 2017

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*Q.P. Code: 802701*

**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Discuss the structure and functions of heart.
2. Write in detail about menstrual cycle.
3. Explain EMP Pathway.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Function of liver.
2. Classification of joints.
3. Functions of white blood cell.
4. Describe in brief the anatomy of the lungs.
5. Structure and functions of skin.
6. Water soluble vitamins.
7. Classification of carbohydrates.
8. Lipo-proteins.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Composition of blood.
2. Draw the figure and mention the parts of neuron.
3. Name the hormones produced by anterior pituitary.
4. What is erythropoiesis?
5. Hypoxia.
6. Male sex hormones.
7. Name the digestive juices.
8. Fibers.
9. Amino acids.
10. Fatty acids.

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**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

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

1. Composition of blood and their functions.
2. Draw structure of nephron. Explain in detail the steps involved in formation of urine.
3. Explain the classification of carbohydrates with example.

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

1. Menstrual cycle.
2. Cardiac cycle.
3. Structure and functions of mouth.
4. Classification of bones.
5. Structure of brain.
6. Classification of protein based on structure and hydrolytic products.
7. Classification of enzymes.
8. Urea cycle.

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

1. Function of platelets.
2. Lung volume and capacities.
3. Structure of skin.
4. Contraceptive methods.
5. Functions of salivary glands.
6. Appendix.
7. Name the organ of excretory system.
8. Starch.
9. Lipo proteins.
10. Cholesterol.

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**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Name the parts of the digestive system. Describe the stomach in detail including its blood supply and functions.
2. Define homeostasis and describe body fluid compartments. Add a note on transport across cell membranes.
3. Classify proteins and explain its properties.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Tongue.
2. Mechanics of respiration.
3. Classification of bones.
4. Functions of liver.
5. Anatomy of thyroid gland.
6. Cholesterol, its derivatives and their significance.
7. Red blood cells and their functions.
8. Functions and deficiency manifestations of vitamins.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Structure and functions of skeletal muscle.
2. Functions of skin.
3. Different parts of eye.
4. Spleen.
5. Parts of excretory system.
6. Iron.
7. Functions of autonomic nervous system.
8. Female sex hormones.
9. Normal constituents of urine.
10. Electrophoresis.

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**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Describe the chambers of the heart in detail.
2. Describe the renal circulation and formation of urine.
3. Classify lipids and explain its properties.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Brief anatomy of lungs.
2. Immunoglobins.
3. Histology of cornea.
4. Visual pathway.
5. Structure of skin.
6. Functions and disorders of pituitary gland.
7. Coagulation of blood.
8. Sodium and potassium regulation and associated disorders.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Structure of synovial joint.
2. Plasma proteins.
3. Salivary glands.
4. Properties of cardiac muscle.
5. Parts of male reproductive system.
6. Muscles of respiration.
7. Principles of contraceptive methods.
8. Synapse.
9. Co-enzymes.
10. Vitamin K.

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**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Describe the lungs in detail – position, coverings, lobes, fissures and blood supply.
2. Define blood pressure. Write about regulation of blood pressure and the factors affecting blood pressure.
3. Describe in detail about the steps involved in glycolysis.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Anatomy of liver.
2. Functions of proteins.
3. Physiology of thyroid gland.
4. Structure of a nephron.
5. Functions of gastric juice.
6. Classification of enzymes.
7. Skin and its appendages.
8. Cardiac cycle.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Types of muscles.
2. Suprarenal glands.
3. Neuromuscular junction.
4. Parts of ear.
5. Types of white blood cells.
6. Name three disaccharides and their composition.
7. Triglycerides.
8. Name three functions of kidney.
9. Name the pancreatic hormones with their source.
10. Give any three functions of copper.

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**Time: Three Hours**

**Maximum: 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Describe the heart in detail – position, relations, chambers, flow of blood through heart and coronary circulations.
2. TCA cycle.
3. Describe in detail functions of pituitary gland and its control.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Anatomy of pancreas and blood supply.
2. Components of blood.
3. Classification of joints.
4. Anatomy of testes and its functions.
5. Parts of excretory system.
6. Normal and abnormal constituents of urine.
7. Fat soluble vitamins.
8. Menstrual cycle.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Name types of cartilage.
2. Juxtaglomerular apparatus.
3. Structure of a neuron.
4. Immunoglobulins.
5. Hypoxia.
6. Name the digestive juices.
7. Cholesterol and its significance.
8. Name three essential aminoacids.
9. Role of rhodopsin in vision.
10. Tongue.

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