KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
(Declared as Deemed-to-be-University u/s 3 of the UGC Act, 1956)
Accredited 'A' Grade by NAAC (2nd Cycle) **Placed in 'A' Category by MHRD (GoI)**

B.SC. MLT/ RADIOGRAPHY / ALLIED HEALTH SCIENCES
B.SC. IN RENAL DIALYSIS TECHNOLOGY
B.SC. OPTOMETRY
I SEMESTER – MARCH 2021

Time: 3 Hours Max. Marks: 60

HUMAN ANATOMY

Q.P. Code:1901

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Question Number **Marks**

LONG ESSAY QUESTIONS(Answer any TWO): **2 X 10 = 20**

1. Name the parts of respiratory system. Describe the gross anatomy of right lung.
2. Describe the superolateral surface of brain under following headings.
   a. Lobes
   b. Sulci and Gyri
   c. Functional areas.
3. Describe the heart under following headings:
   a. External features
   b. Blood supply
   c. Applied anatomy

SHORT ESSAY QUESTIONS (Answer any FIVE): **5 X 5= 25**

4. Classification of synovial joints left.
5. Bronchopulmonary segments of lung.
6. Blood supply of long bones.
7. Draw and label microscopic structure of elastic cartilage.
8. Venous drainage of heart.
9. Blood supply of nerve supply of lateral wall of nose.
10. Types of epithelium.

SHORT ANSWER QUESTIONS(All are compulsory): **5 X 3 = 15**

11. Name the paired and unpaired cartilages of larynx.
12. Anatomical position.
13. Name the parts of pharynx.
14. Name the bones of axial skeleton.
15. Name the types of pleura.

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Time: 3 Hours **Max. Marks: 60**

HUMAN PHYSIOLOGY-I AND BIOCHEMISTRY

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
Use separate answer books for Section A and Section B

SECTION A : HUMAN PHYSIOLOGY-I Q.P. CODE : 1902 [30 Marks]

Question Number **Marks**

LONG ESSAY QUESTIONS (Answer any ONE): **1 X 10 = 10**

1. Define & classify Immunity. Discuss the mechanism of cellular immunity in detail. Add a note on AIDS. (3+4+3)
2. Define and classify synapses. Discuss properties of synapses in detail. (1+3+6)

SHORT ESSAY QUESTIONS (Answer any TWO): **2 X 5 = 10**

3. List various phases of action potential in a nerve fibre & discuss its ionic basis. (2+3)
4. State Landsteiner's law. Explain about Rh blood group system. (1+4)
5. Explain any **two** tests that are used to test colour blindness.

SHORT ANSWER QUESTIONS (All are compulsory): **5 X 2 = 10**

6. Classify body fluid compartments and write their normal values.
7. Function of middle ear.
8. State **five** differences between smooth muscle and cardiac muscle.
9. Classify nerve fibers.
10. Name the mechanism of heat loss & gain in the body.

SECTION B : BASICS OF BIOCHEMISTRY…Q.P. CODE : 1903 [30 Marks]

Question Number **Marks**

LONG ESSAY QUESTIONS (Answer any ONE): **1 X 10 = 10**

1. Define amino acid. Classify amino acids based on structure, polarity and metabolic fate with suitable examples. (1+9)
2. Define lipids. Classify lipids with suitable examples. And mention the functions of lipids. (1+5+4)

SHORT ESSAY QUESTIONS (Answer any TWO): **2 X 5 = 10**

3. Mention the names & any **five** biologically important peptides and write their uses. (1+4)
4. What are homopolysaccharides? Give examples with their composition and function. (1+1+1.5+1.5)
5. Write in brief about various safety measures followed in the laboratory

SHORT ANSWER QUESTIONS (All are compulsory): **2 X 5 = 10**

6. What is denaturation? Mention the various denaturing agents.
7. Mention the types of RNA & list their functions.
8. Define the following- a) Molarity b) Atomic weight
9. Write the names of any **two** phospholipids along with their function.
10. Mention the precautions to be taken during weighing in a chemical balance.

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B.SC. IN RENAL DIALYSIS TECHNOLOGY
B.SC. OPTOMETRY
I SEMESTER – MARCH 2021

Time: 3 Hours **Max. Marks: 60**

HEMATOLOGY & CLINICAL PATHOLOGY AND MICROBIOLOGY-I

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.

Use separate answer books for Section A and Section B

SECTION A : PATHOLOGY- BASIC HAEMATOLOGY Q.P. CODE : 1904 [30 Marks]

Question Number **Marks**

LONG ESSAY QUESTIONS (Answer any ONE): **1 X 10 = 10**

1. What is hemoglobin? What are the normal values in adult male and female? Describe in detail the principle, procedure, advantages of hemoglobin estimation by cyanmethhemoglobin method. (2+2+6)
2. Enumerate the different types of blood films. Describe the techniques of preparation and staining of various types of blood films. (3+7)

SHORT ESSAY QUESTIONS (Answer any TWO): **2 X 5 = 10**

3. Describe RBC and WBC pipette and mention their uses.
4. What are the various blood group systems? Describe the procedure of determination of ABO blood group.
5. Describe the morphology od eosinophil. Describe briefly the method of absolute eosinophil count. Mention the normal values.

SHORT ANSWER QUESTIONS (All are compulsory): **5 X 2 = 10**

6. Enumerate the RBC indices and their normal values.
7. Reticulocyte count and its clinical significance.
8. Name the anticoagulants in hematology laboratory.
9. What is the composition of Giemsa stain?
10. List the sites of bone marrow aspiration.

SECTION B : MICROBIOLOGY-I…Q.P. CODE : 1905 [30 Marks]

Question Number **Marks**

LONG ESSAY QUESTIONS (Answer any ONE): **1 X 10 = 10**

1. What is sterilization? Classify the methods. Describe the autoclaving. (1+3+6)
2. Enumerate the types of microscopes used in diagnostic laboratories. Describe the mechanism, disadvantages and applications of fluorescent microscope. (2+2+2+4)

SHORT ESSAY QUESTIONS (Answer any TWO): **2 X 5 = 10**

3. Filtration as a method of sterilization.
4. Contributions of Louis Pasteur.
5. Principle of electron microscope and its uses.

SHORT ANSWER QUESTIONS (All are compulsory): **5 X 2 = 10**

6. UV Radiation as a method of sterilization.
7. Mention any one important contribution of
    a. Alexander Fleming
    b. Robert Koch
    c. Paul Ehrlich
8. Draw a neat labeled diagram of Bacterial Growth Curve.
9. Name any three disinfectants.
10. Name any three articles sterilized by Hot Air Oven.

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