



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**

**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**

**DEPARTMENT OF BIOLOGICAL SCIENCES**

**UNIVERSITY RESIT EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
BIOLOGICAL SCIENCES**

**3<sup>rd</sup> YEAR FIRST SEMESTER 2016/2017 ACADEMIC YEAR**

**MAIN CAMPUS - REGULAR**

---

**COURSE CODE:** SBI 3315  
**COURSE TITLE:** Histology  
**EXAM VENUE:** STREAM: (BSC BIO)  
**DATE:** EXAM SESSION:  
**TIME: 2 HOURS**

---

**Instructions:**

- 1. Answer ALL questions in Section A and Any two questions in Section B**
  - 2. Candidates are advised not to write on question paper**
  - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
-

## **SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)**

---

1. Briefly explain the principle behind Periodic Acid-Schiff (PAS) staining. (3 marks)
2. Differentiate between phase-contrast and Fluorescence microscopy. (3 marks)
3. Give three examples of enzymes that can be located histochemically and the specific tissues where they are found. (3 marks)
4. Outline six functions of the basal membrane. (3 marks)
5. Draw a labelled diagram of any three types of neurons and state the function of each. (3 marks)
6. Describe the structure of elastic tissue fibers. (3 marks)
7. Mention and give the distinguishing characteristics of the three types of cartilage. (3 marks)
8. Explain the three modes of secretion by exocrine glands. (3 marks)
9. Draw the structure of a skeletal muscle. (3 marks)
10. Name and give the function of any three cell-cell junctions. (3 marks)

## **SECTION B: ESSAY QUESTIONS (40 MARKS)**

---

11. Give an account of the major cells of the connective tissue. (20 marks)
12. Describe the structure, distribution and functions of different types of stratified epithelia. (20 marks)
13. Describe bone tissue with respect to types of cells, types of bones and the Harversian system. (20 marks)
14. Describe the process of development and destruction of erythrocytes. (20 marks)