



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**  
**SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES**  
**DEPARTMENT OF BIOLOGICAL SCIENCES**  
**3<sup>RD</sup> YEAR FIRST SEMESTER 2016/2017 ACADEMIC YEAR UNIVERSITY**  
**EXAMINATION FOR THE DEGREE BACHELOR OF SCIENCE IN BIOLOGICAL**  
**SCIENCES**  
**REGULAR**

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**COURSE CODE:** SBI 3317:  
**COURSE TITLE:** PHYCOLOGY  
**EXAM VENUE:** STREAM: (BSC. BIO)  
**DATE:** EXAM SESSION:  
**TIME: 2 HOURS**

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

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1. Provide an overview of cellular respiration in algae (3 marks)
2. Name the three main components of diatomite (3 marks)
3. (i) Name two components of pigment phycobillins present in the division Rhodophyta (2 marks)  
(ii) State the function of the pigment phycobillins in the Rhodophyta (1 mark)
4. Describe algal habitation of the littoral zone of the fresh water environment (3 marks)
5. Differentiate between Epiphytic and lithophytic species of algae (3 marks)
6. Name any three filamentous algae (3 marks)
7. Describe autocolony formation in Volvox (3 marks)
8. Briefly describe Carragenan (3 marks)
9. Differentiate between hypnospores and autospores in algae (3 marks)
10. Explain the pioneering activity of algae on land (3 marks)

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

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11. Discuss industrial uses of algae (20 marks)
12. Discuss the division Chlorophyta (20 marks)
13. Discuss sexual reproduction in algae (20 marks)
14. Discuss photosynthetic light absorbing pigments in Spirulina (20 marks)