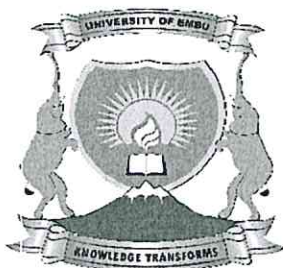


Reg. No.



UNIVERSITY OF EMBU

2016/2017 ACADEMIC YEAR

FIRST SEMESTER EXAMINATIONS

**FIRST YEAR MAIN EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (BIOLOGY) (ENVIRONMENTAL CONSERVATION AND NATURAL
RESOURCES MANAGEMENT) AND BACHELOR OF SCIENCE**

SBT 103: LOWER PLANTS

DATE: DECEMBER 5, 2016

TIME: 8:30-10:30AM

**INSTRUCTIONS: Answer ALL Questions from SECTIONS A and B, and ONE
Question selected from Section C.**

SECTION A: Multiple Choice Questions (1 Mark each)

Please tick in the box opposite the correct answer.

1. Which of the following is not essential in the primary classification of algae?
 - Nature of the pigment constitution in the cell
 - Type of reproduction
 - Nature and number of flagella
 - Chemical composition of the cell wall
2. Which of the following statement is incorrect?
 - All algae are microscopic
 - Algae are thallophytes
 - Algae are grouped into four major divisions: blue-green algae, green algae, brown algae and red algae
 - Algae manufacture food

3. Which are the most primitive algae?
- Red algae
 - Blue-green algae
 - Green algae
 - Brown algae
4. In algae the cell wall is made up of?
- Chitin
 - Suberin
 - Cellulose
 - Cutin
5. Which of the following algae is rich in proteins?
- Chlorella
 - Spirogyra
 - Ulothrix
 - Oscillatoria
6. Vascular cryptogams are:
- Bryophytes
 - Spermatophytes
 - Pteridophytes
 - None of the above
7. Moss peat is used as packing material for sending flowers and live plants to distant places because:
- It is hygroscopic
 - It reduces transpiration
 - It serves as a disinfectant
 - It is easily available

8. Algal members of classes Euglenophyceae and Chlorophyceae are similar in:

- Cell wall structure
- Reserve food
- Pigment composition
- Structure of flagella
- None of the above

9. Which of the following statements does not apply to bryophytes?

- Water is essential for fertilization
- Presence of archegonia
- Presence of ciliated sperms
- Presence of autotrophic independent sporophyte

10. Bryophytes differs from Pteridophytes in being

- Non vascular
- Seeded
- Sporophytic
- Vasculate

11. Which are the most primitive vascular plants?

- Brown algae
- Sphagnum
- Cycads
- Blue green algae

12. Gametophyte of fern is called:

- Prothallus
- Protocorm
- Thallus
- Gametangia

13. Ferns differ from moss in having:

- An independent gametophyte
- An independent sporophyte
- Presence of archegonia
- Swimming of antherozoids

14. The collective name given to sporangia in fern is:

- Sorus
- Sporangium
- Spathe
- Sporangiphore

15. Liverworts are closely related to

- Algae
- Fungi
- Lichen
- Mosses

SECTION B: SHORT ANSWER QUESTIONS (5 Marks Each)

Your answers should be brief and to the point (Use the examination answer book provided)

16. Explain the role of lichens in nitrogen fixation.
17. Explain briefly the evolution of lower plants from algae to pteridophytes.
18. Describe the importance of conserving lower plants.
19. Briefly describe the morphological structure of pteridophytes.
20. Explain five general characteristics of Bryophytes.

SECTION C: ESSAY QUESTIONS (25 Marks Each)

Write an essay on any ONE of the following topics (Use the examination answer book provided)

21. Discuss the four major divisions of algae.
22. Describe the structure and life cycle of bryophytes.
23. Using illustrations, discuss the life cycle of Pteridophytes.

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