

Eastern University, Sri Lanka

External Degree Examination in Science

First Year Examination in Science- 2010/2011(April /May 2017)

EXTBT 101, Plant Diversity

Special Repeat Examination

Time: TWO hours

Answer ALL questions

1. Distinguish between,
 - a). Asexual reproduction in *Chlamydomonas* and *Ectocarpus*.
 - b). Oogonium in *Oedogonium* and oogonium in *Dictyota*.
 - c). Hormogonium and Carpogonium.
 - d). Archegonium in *Anthoceros* and archegonium in *Pogonatum*.(24 marks)

2. a). How will you differentiate the sporophyte of *Marchantia* and *Sphagnum*.
 - b). (i). Define the term "Alternation of Generation".
(ii).with reference to suitable examples explain "Isomorphic alternation of generation" and "Heteromorphic alternation of generation".(25 marks)

3. a). What is a strobilus?
 - b). (i). Compare the strobilus of *Selaginella* with that of the female cone of *Pinus*.
(ii). State with reasons which of the above two would you consider to be advanced in evolutionary terms.(26 marks)

4. Describe the development of male gametophyte in *Cycas* with proper diagrams.
(25 marks)