THE FERN LIFE CYCLE

Fern Life Cycle Information:

How do plants develop and reproduce? Many plants can reproduce sexually - but what does this mean? Land plants are typified by a special life style, commonly referred to as the alternation of generations, in which two distinct phases occur defined by the events of meiosis and syngamy (fusion of gametes). In land plants, meiosis results in the production of haploid spores. Spores are single cells that germinate and develop under the appropriate conditions into multicellular plants that produce sex cells or gametes. The gametophytes not only bear the male and female gametes (spermatozoids and egg cells, respectively) but also serve as the site for fertilization. The completion of fertilization by the formation of the zygote initiates the diploid phase of the life cycle, the sporophyte. In both ferns and see plants, the sporophyte is the visibly dominant generation. The gametophyte of seed plants is very small and develops within special structures of the sporophyte, whereas in ferns the gametophyte, through tiny, develops and matures independent from the sporophyte.

Marking Scheme:

Prepare a 6-page write-up (excluding diagrams). You will be given an overall mark for the quality of your illustrations and the accuracy, detail, logic, and understanding of your text.

Introduction
  - ➢ 3 marks
  - ➢ Maximum 1 page
  - ➢ Background information. Do not recopy the introduction from the lab handout!
  - ➢ State the objective of the lab.

Material and Methods
  - ➢ 1/2 mark
  - ➢ Maximum 1/2 page
  - ➢ Brief paragraph describing materials and methods used.

Results/Discussion

  - ➢ 6 marks
  - ➢ Maximum 4 page excluding diagrams
  - ➢ Diagrams/drawings can be placed in this section, but must be labeled correctly with magnification, and titles must be shown accordingly and it must be clearly stated.
  - ➢ Include observations made over the four weeks and answer ALL the questions in paragraph form (in the lab manual in Lab 3).

References
  - ➢ 1/2 mark
  - ➢ Maximum 1 page
  - ➢ More than the lab manual!
  - ➢ No websites
  - ➢ Use journal articles or books

TOTAL 10 MARKS