



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF MASTER OF SCIENCE IN PUBLIC HEALTH
(MAIN CAMPUS)**

PMT 818: ANIMAL CELL AND TISSUE CULTURE

Date: 19th November, 2013

Time: 2.00 - 5.00pm

INSTRUCTIONS:

- Answer QUESTION ONE and any other FOUR questions.
- All questions carry equal marks.

PMT 818-ANIMAL CELL AND TISSUE CULTURE

TIME: 3 Hours

INSTRUCTIONS: Answer question ONE and any other FOUR questions. ALL questions carry equal marks.

1. a). Discuss the roles of animal cell and tissue culture in medical biotechnology.
b). Describe the types and sources of cell culture contaminants and ways by which contamination can be avoided.
2. a). Write an essay on the design and equipment required for cell and tissue culture laboratory.
3. a). Discuss hybridoma technique and its application in the production of monoclonal antibodies.
b). Describe the therapeutic and diagnostic applications of monoclonal antibodies.
4. Discuss the physiological and physicochemical requirements for cell and tissue culture.
5. a). Describe the most commonly used substrates in cell cultures and modifications of their surfaces to enhance cell attachment and growth.
a). Give a detailed account of cryopreservation and thawing techniques of named cell line.
6. Discuss the techniques used for organ culture, including its advantages, limitations and biomedical applications.
7. Discuss the different categories of media used for cell and tissue culture.