



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST YEAR FIRST SEMESTER EXAMINATIONS FOR THE DEGREE OF MASTER OF SCIENCE IN BIOMEDICAL SCIENCES

CITY CAMPUS

PMT 818: ANIMAL CELL AND TISSUE CULTURE

Date: 17th March, 2018

Time: 4.00 - 7.00pm

INSTRUCTIONS:

- Answer Question ONE and any other FOUR.



1. Describe the design and equipment required for cell and tissue culture laboratory (20 marks).
2. a). Discuss the application of hybridoma technique in biotechnology (10 marks).
b). Describe the therapeutic and diagnostic applications of monoclonal antibodies (10 marks).
3. Discuss the physiological and physicochemical requirements for cell and tissue culture (20 marks).
4. Discuss the various techniques used for organ culture, including the advantages, limitations and biomedical applications of organ culture (20 marks).
5. Give a detailed description of peripheral blood mononuclear cells (PBMC) separation from whole blood and the cells cryopreservation and thawing techniques (20 marks).
6. a). Discuss the applications of animal cell and tissue culture in medical biotechnology (10 marks).
b). Describe the techniques used to scale-up animal cell cultures (10 marks).