



EMBU UNIVERSITY COLLEGE
(A CONSTITUENT COLLEGE OF THE UNIVERSITY OF NAIROBI)
SECOND SEMESTER EXAMINATIONS 2013/2014

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE, BACHELOR OF SCIENCE BIOLOGY AND BACHELOR OF SCIENCE
MICROBIOLOGY AND BIOTECHNOLOGY

SZL 201: CELL BIOLOGY

DATE: APRIL 10, 2014

TIME: 2.00 – 4.00PM

INSTRUCTIONS:

ANSWER ANY TEN (10) QUESTIONS (7 MARKS EACH)

- 1. a) State three characteristics of a cell. (3marks)
- b) State four functions of the cell wall. (4marks)
- 2. Discuss the structure and functions of chloroplasts in a cell. (7marks)
- 3. Without lysosomes a cell will not survive. Discuss. (7marks)
- 4. Illustrate using a well labeled diagram the structure of a mitochondrion. (7marks)
- 5. Outline the role of peroxisome in cell. (7marks)
- 6. Outline the cell junctions and state their functions. (7marks)
- 7. Describe activities in G1 phases of the cell division cycle. (7mark)
- 8. Using Singer and Nicolson Model, illustrate the structure of cell membrane. (7marks)
- 9. With help of a well labeled diagram describe the process of receptor mediated endocytosis. (7mark)
- 10. a) With help of a diagram describe the structure of a microtubule (3marks)

- b) State any four (4) functions of microfilaments (4marks)
11. Describe a detailed procedure of preparing mitotic onion root cells for viewing under a microscope. (7marks)
12. Outline the items needed to initiate gene transcription and state their functions (7marks)

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