

BINDURA UNIVERSITY OF SCIENCE EDUCATION

DEPARTMENT OF BIOLOGICAL SCIENCES

BScBzH / HBSceDbz / BScBioTec

CELL BIOLOGY (BTEC122)

EXAMINATION
2 HOURS (100 MARKS)

NOV 2024

INSTRUCTIONS

Answer FOUR questions. You MUST answer QUESTION 1 (Section A) and any THREE questions from Section B. Each question carries 25 MARKS. Where a question contains subdivisions, the mark value of each subdivision is given in brackets. Illustrate your answers where appropriate with large, clearly labelled diagrams. You should not spend more than thirty minutes on each question.

SECTION A (COMPULSORY)

1. (a) Describe a practical procedure to prepare a slide for microscopic observation. (15 marks)
- (b) Distinguish between magnification and resolution. (10 marks)

SECTION B

2. Compare the structure and function of prokaryotic and eukaryotic cells
3. (a) Describe the fluid mosaic model structure of cell membranes. (15 marks)
- (b) Discuss the role of lipids in membrane structure. (10 marks)
4. Write brief note on **ANY FIVE** of the following:
 - (i) Endocytosis (5 marks)
 - (ii) Continuous cell culture (5 marks)
 - (ii) Cell Theory (5 marks)
 - (iv) Interphase (5 marks)
 - (v) Gram staining (5 marks)
 - (vi) Cell specialisation (5 marks)
5. (a) Describe the process of mitosis (12 marks)
- (b) Explain the significance of mitosis (13 marks)

6. Discuss the significance of cell line characterisation.

END OF EXAMINATION QUESTION PAPER.