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THE OPEN UNIVERSITY OF SRI LANKA
28 SEP 2022
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THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES
ACADEMIC YEAR 2020/2021 – SEMESTER II



BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU5209 – ADVANCED TECHNIQUES IN MEDICAL LABORATORY SCIENCES
FINAL EXAMINATION DURATION: 2 HOURS

DATE: 28th SEPTEMBER 2022 TIME: 1.30 PM – 3.30 PM

INDEX NO:

Part B: Structured Essay Questions (60 marks)

Q1.

1.1 List two (02) blood collection sites in laboratory animals that does not require anesthesia. (02 marks)

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1.2 Briefly discuss the precautions that need to be followed when handling laboratory rabbits for experiments. (08 marks)

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1.3 Briefly explain the techniques of handling laboratory animal carcasses based on their reliability for pathogen inactivation. (10 marks)

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(Total: 20 Marks)

Q2.

2.1 List three (03) animal models used for studying biological structure and function in humans, with the aim of each model. (09 marks)

Animal model	Aim

2.2 Briefly explain the following disease models related to laboratory animal experiments.

Negative models (03 marks)

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Orphan models (03 marks)

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2.3 Briefly state the necessity of animal studies in biomedical research. (05 marks)

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(Total: 20 Marks)

INDEX NO:

Q3

3.1 Name four (04) techniques use for physical disruption of cells in protein extraction. (02 marks)

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3.2 List major steps in the process of extraction & purification of proteins. (05 marks)

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3.3 Briefly describe the following.

Principle in sodium dodecyl sulfate–polyacrylamide gel electrophoresis (SDS-PAGE) (07 marks)

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Process of “salting in” (06 marks)

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(Total: 20 Marks)

Part C: Essay Question (20 marks)

01. The applicability of Quantum Dots (QDs) in bioimaging is remarkable. Explain this statement giving examples. (20 Marks)

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