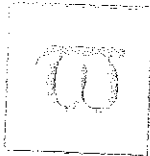


Sample



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THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES
ACADEMIC YEAR 2018/2019 – SEMESTER II



BACHELOR OF MEDICAL LABORATORY SCIENCES (BMLS) HONOURS
MDU5209 – ADVANCED TECHNIQUES IN MEDICAL LABORATORY SCIENCES
NBT II DURATION: 1 HOUR

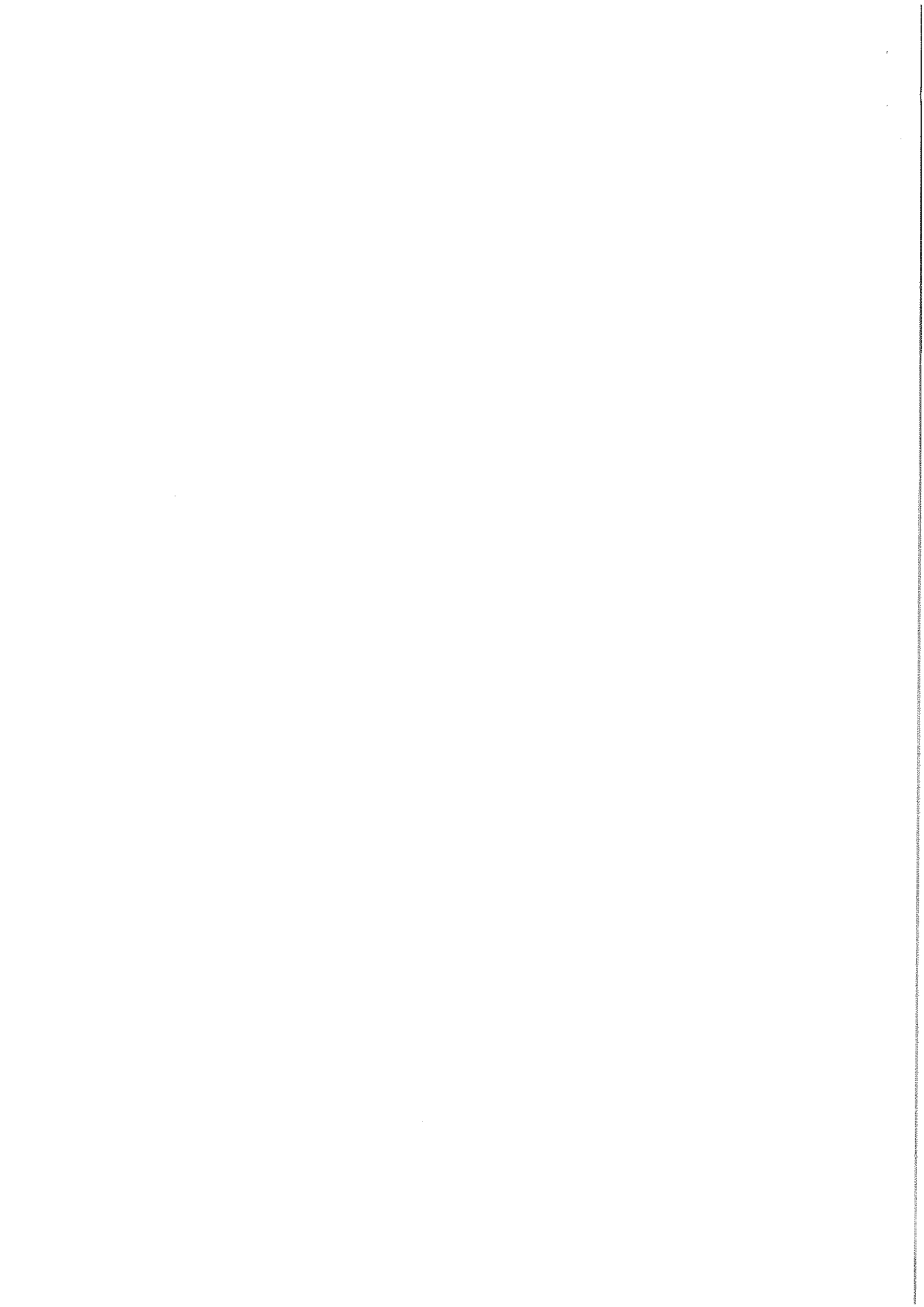
DATE: 27TH AUGUST 2019

TIME: 3.00 PM – 4.00 PM

Registration No:

IMPORTANT INSTRUCTIONS/ INFORMATIONS TO CANDIDATES

- This question paper consists of 07 pages with 10 Multiple Choice Questions (Part A), 02 Structured Essay Questions (Part B) and 01 Essay Question (Part C).
- Write your Registration Number in the space provided.
- Answer ALL questions.
- **Multiple Choice Questions (Part A):** Indicate the best answer for each question in the answer sheet provided by placing a cross (X) in INK in the relevant cage. (answers in pencil will NOT be marked)
- **Structured Essay Questions (Part B):** Write answers in given booklets (Question 01 and Question 02 should be written in two (02) separate booklets)
- **Essay Questions (Part C):** Write answers in given booklets (Should be written in separate booklet).
- Do not remove any page/part of this question paper from the examination hall.
- Mobile phones and any other electronic equipment are NOT allowed. Leave them outside.



PART B – Structured Essay Questions (80 marks)

1. Nanotechnology can improve traditional medical approaches of diagnostics and therapeutics by taking them to the cellular and molecular level thereby designing and making synthetic biomaterials on the nanoscale for therapies and replacements.

1.1. Name three (03) properties of nanoparticles used in healthcare applications.

(06 marks)

1.2. Briefly describe two (02) main types of nanofabrication techniques used for nanoparticle preparation and briefly state the difference among the two techniques.

(14 marks)

1.3. Taking an example, briefly explain a special type of nanoparticle used in healthcare applications.

(20 marks)

(Total: 40 marks)

2. Protein purification methods are used to isolate proteins from a mixture. It is important in the identification of protein functions, structure etc.

2.1. Name three (03) methods of protein purification depend on the size of protein.

(05 marks)

2.2. Name one example for positively charged resin which can be used in ion exchange chromatography.

(05 marks)

2.3. Briefly describe what is an isoelectric point of a protein?

(05 marks)

2.4. Name three (03) physical methods of cell lysis use in preparation of crude extracts.

(05 marks)

2.5. Name three (03) methods of protein precipitation.

(05 marks)

2.6. Briefly explain the process of “Salting in” effect of proteins.

(05 marks)

2.7. How can you identify the protein contain fractions in column chromatography?

(05 marks)

2.8. Name a reagent which is used to identify the presence of amino acid qualitatively.

(05 marks)

(Total: 40 marks)

PART C – Essay Questions

1. How can you maintain the animal welfare during the laboratory animal experiment?
(10 Marks)

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NBT II
REGISTRATION NO:

ANSWER SHEET FOR PART A

Q. No.	(a)	(b)	(c)	(d)
1				
2				
3				
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