



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

BACHELOR OF MEDICAL LABORATORY SCIENCE HONOURS
MDU6301 – CYTOGENETICS AND MOLECULAR GENETICS
FINAL EXAMINATION DURATION: THREE HOURS

DATE: 21th MARCH 2019 TIME: 09.30 AM – 12.30 PM

Part B: Structured Essay Questions (40 marks)

Q 1

1.1 What is inheritance? (2 marks)

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1.2 Give four (04) non-medallion inheritance patterns (4 marks)

I.....
II.....
III.....
IV.....

1.3 Draw the punnet square to show the human blood patterns inheritance (4 marks)

Index No.

Q 2

2.1 What is genotyping? (2 marks)

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2.2 Why do we apply genotyping? (2 marks)

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2.3 Briefly describe following method of genotyping

a) Genotyping by DNA sequencing (3 marks)

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b) Single nucleotide polymorphisms (SNP) Genotyping (3 marks)

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(Total – 10 Marks)

Index No.

Q 4

4.1 What is a karyotype? (2 marks)

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4.2 Briefly explain following karyotyping techniques

a) Classical karyotyping (2 marks)

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b) Spectral karyotyping (2 marks)

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4.3 Briefly describe the utilization of karyotyping in disease diagnosis giving examples (4 marks)

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Part C: Short Essay Questions (30 marks)**Q 1**

1.1 What is Assisted Reproductive Techniques (ART)? (3 marks)

1.2 Describe the techniques in Assisted Reproductive Techniques (ART)? (12 marks)

(Total – 15 Marks)

Q 2

2.1 Briefly describe the role of bioinformatics in molecular medicine. (7 marks)

2.2 Explain how bioinformatics helps in day today life. (8 marks)

(Total – 15 Marks)

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