



Faculty of Health Sciences
BSc (Hons) in Biomedical Sciences
BSM 1153 Introduction to Biomedical Science
Batch - 08
1st Year 1st Semester
End Semester SEQ Examination

Date : 08th of August 2024
Time : 9.00 am. - 12.00 pm. (Three Hours)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of SIX questions.
Answer ALL questions.
You should write legibly in black or blue ink.

QUESTION 1 (100 Marks)

1.1 Define the term of "gene" in the chromosome. (25 marks)

Dotted lines for writing answer to 1.1

1.2 State the types of nitrogen bases present in DNA molecule. (25 marks)

Dotted lines for writing answer to 1.2

1.3 State the structure of DNA. (25 marks)

Dotted lines for writing answer to 1.3

1.4 What is the method of DNA extraction using whole blood in eukaryotes. (25 marks)

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QUESTION 02 (100 Marks)

2.1 Define the process of DNA replication. (25 marks)

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2.2 Differentiate the structures of leading strand and lagging strands. (25 marks)

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2.3 What is meant by the formation of Okaszaki fragments? (25 marks)

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2.4 State the importance of DNA replication.

(25 marks)

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QUESTION 03

(100 Marks)

3.1 Define the term post-transcriptional modification.

(25 marks)

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3.2 State the types of RNA structures found in cell.

(25 marks)

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3.3 Name the function of each type of RNA.

(25 marks)

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3.4 Illustrate the structure of mRNA and label the diagram.

(25 marks)

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QUESTION 04

(100 Marks)

4.1 Define the term of protein synthesis.

(25 marks)

4.2 State the steps of transcription process.

(25 marks)

4.3 State the coding strand and mRNA strand of the template strand given below.

5'GCTAAAATTTAGCCCAAACGTAAAA 3'

(25 marks)

4.4 What is the process of termination in transcription?

(25 marks)

QUESTION 05

(100 Marks) 00012

5.1 State the function of each phase of interphase.

(25 marks)

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5.2 What are the stages of meiosis I ?

(25 marks)

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5.3 Illustrate the process of mitosis.

(25 marks)

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5.4 State the key difference of mitosis and meiosis.

(25 marks)

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QUESTION 06

(100 Marks)

6.1 State the basic principle of centrifugation.

(25 marks)

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6.2 Mention the types of refrigerators find in biomedical science laboratory. (25 marks)

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6.3 State the importance of LIMS system in laboratory. (25 marks)

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6.4 State the types of personal protective equipment in the laboratory. (25 marks)

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Faculty of Health Sciences
BSc (Hons) in Biomedical Sciences
BSM 1153 Introduction to Biomedical Science
Batch – 08
1st Year 1st Semester
Mid Semester Repeat SEQ Examination

Date : 2024.08.08
Time : 1.30 p.m. – 2.30 p.m. (One hour)

INSTRUCTIONS TO CANDIDATES

- This question paper consists of **TWO** questions.
- Answer **ALL** questions.
- You should write legibly in black or blue ink.

QUESTION 1 **(100 Marks)**

1.1 Define the term of “chromosome”. (25 marks)

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1.2 State the structure of a nucleotide molecule. (25 marks)

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1.3 State the linear polymerization of DNA. (25 marks)

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1.4 State the complementary base pairing theory.

(25 marks)

Dotted lines for writing the answer to question 1.4.

QUESTION 02

(100 Marks)

2.1 Define the process of DNA replication.

(25 marks)

Dotted lines for writing the answer to question 2.1.

2.2 State the process of DNA replication.

(25 marks)

Dotted lines for writing the answer to question 2.2.

2.3 What is the translation process in protein synthesis ?

(25 marks)

Dotted lines for writing the answer to question 2.3.

2.4 State the importance of meiosis in eukaryotic cell.

(25 marks)

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