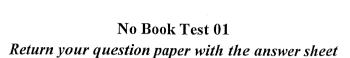
The Open University of Sri Lanka Bachelor of Medical Laboratory Sciences (B.MLS)

MLU1247- General Microbiology

Semester 01- Academic year 2015/2016



Date: 20.10.2015

Duration $-1 \frac{1}{2}$ hours

Time: 01.30 p m - 03.00 p m

Registration No.....

Please read the following instructions carefully before you answer the paper. (100 marks)

Part - A (20 marks)

There are 10 multiple choice questions in this paper, each question with five responses. Select the **correct response** and mark in the given answer sheet.

Part - B (10 marks)

You are given 10 matching questions. Match the answers given in the column B with the descriptions given in the column A. Write the correct letter in the given space.

Part C (40 marks)

You are given 2 short answer questions. Each question contains four parts. Answer all the questions in given spaces.

Part - D (30 marks)

There is an one structured essay questions. The question contains five parts. Answer all the questions in given spaces.

Good Luck!

Registration	No:
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Matching Questions

	A				$^{\cdot}$ B
1	The most common pathway for the oxidation of glucose	-()	a)	Calvin-Benson
2	The pathway is used to metabolize five-carbon sugars	-()	b)	anaerobic respiration
3	The mechanism that O_2 functions as the final electron acceptor.	-()	c)	Glycolysis
4	The pathway that the final electron acceptor is usually an inorganic molecule other than O_2	-()	d)	Photo synthesis
5	The pathway that decarboxylation of pyruvic acid produces one CO ₂ molecule and one acetyl group	-()	e)	Anabolism
6	The pathway which releases energy from sugars or other organic molecules by oxidation	-()	f)	pentose phosphate pathway
7	The mechanism of conversion of light energy from the sun into chemical energy	- ()	g)	aerobic respiration
8	The pathway which uses CO ₂ to synthesize sugars	-()	h)	Entner-Doudoroff pathway
9	A alternative pathway to glycolysis	-()	i)	Fermentation
10	A series of chemical reactions in which simpler substances are combined to form more complex	-()	j)	Kreb cycle

molecules

(10 marks)

1.	Short answer questions	
a)		
		••••••
	•	(06 marks)
b)	Name two major categories of cellular respiration	
		(06 marks)
c)	Write two electron acceptor in cellular respiration	
,		
		(04 marks)
d)	Name two alternative pathways for glycolysis	
		••••••

Registration No:

(04 marks)

_ a)	Write two basic shape of bacteria
	(4 marks)
b)	Write two types of cell arrangements common for above (a) basic shapes
	(4 marks)
c)	Give four advantages to the bacterium from cell membrane
•)	
	(4 marks)
d)	Write the principle behind Gram's stain procedure
	••••••
	(8 marks)

2.

Registration No:....

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Structured essay questions (30 marks)

a)	Compare genotype and phenotype	
		• • • • • • • • • • • • • • • • • • • •
		• • • • • • • • • • • • • • • • • • • •
		• • • • • • • • • • • • • • • • • • • •
		(5 marks)
b)	Briefly explain the term "mutation"	
		• • • • • • • • • • • • • • • • • • • •
		• • • • • • • • • • • • • • • • • • • •
		(5 marks)
c)	Name three types of mutations that can be occured in DNA replication	
		• • • • • • • • • • • • • • • • • • • •
		• • • • • • • • • • • • •
		• • • • • • • • • • • • • • •
		(6 marks)
d)	Briefly explain the effects of above mentioned (c) mutations in the protein	synthesis
	•••••••••••••••••••••••••••••••••••••••	• • • • • • • • • • • •
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		(6 marks)
		(o mans)

	Registration No:
e)	Explain the role of RNA in protein synthesis
	(8 marks)