

(b)

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BACHELOR OF MEDICAL LABORATORY SCIENCES - LEVEL 03
MLU1247-GENERAL MICROBIOLOGY
FINAL EXAMINATION - 2018/19

INDEX NO:

Part B –Short Answer Questions

[40marks]

Write answers in the space provided.

1. (a) Name the **two (02)** main groups which can be separated by using the Gram's staining techniques

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[02 marks]

- (b) On what basis it can be separated into groups as mentioned in (a). Explain.

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[04 marks]

(c) Name a differential staining technique used for the identification of microorganisms which doesn't stain by Gram's staining method.

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[02 marks]

(d) Write the steps involved in the technique mentioned in (c).

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[02 marks]

2. (a) Name a medium which could be used for the isolation of (i) bacteria and (ii) fungi in the laboratory.

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[02 marks]

(b) (i) Name **four (04)** different type of tests/techniques used in identification of bacteria from an environmental sample.

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[04 marks]

(ii) Which method is considered to be the most preferred method to confirm a bacterial species. Why?

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[01 mark]

(c) Give the steps involved in identifying the bacteria using the above method mentioned in (b) (ii).

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[02 marks]

(d) If you want to analyse DNA sequences of an unknown bacteria, name the website which would be used to confirm the identification of the unknown bacteria.

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[01 mark]

3. (a) Write four (04) main characteristics of fungi?

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[04 marks]

(b) What types of reproduction occur in fungi? Briefly explain.

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[02 marks]

(c) What is meant by the term "Fruiting Bodies"?

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[02 marks]

(d) "Lichens are formed through symbiotic relationship". Explain.

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[02 marks]

4. (a) Write **four (04)** important guidelines related to health and safety that should be followed in a microbiology laboratory.

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[02 marks]

- (b) Name **four (04)** groups of hazards found in laboratory workplaces.

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[02 marks]

- (c) List **six (06)** safe work practices to prevent injury and accidents.

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[03 marks]

(d) Give **three (03)** factors considered when selecting the biological safety cabinet.

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[03 marks]

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Part C – Essay Questions

(30 marks)

1. (a) Describe briefly the industrial uses of fungi. [8 marks]

(b) Discuss the steps involved in the lytic cycle of the viral replication.

[7 marks]

2. Describe the procedures involved in handling of microbial cultures which practices in a microbiology laboratory

[15 marks]

