

Part B: Structured Essay Questions (40 marks)

Q1

A 65-year-old male presented with fever for 1 week and cough with blood-stained sputum. He was suspected of having pulmonary tuberculosis.

1.1 List the features of an ideal specimen container to be used for collection of sputum for laboratory diagnosis of above infection? (1 mark)

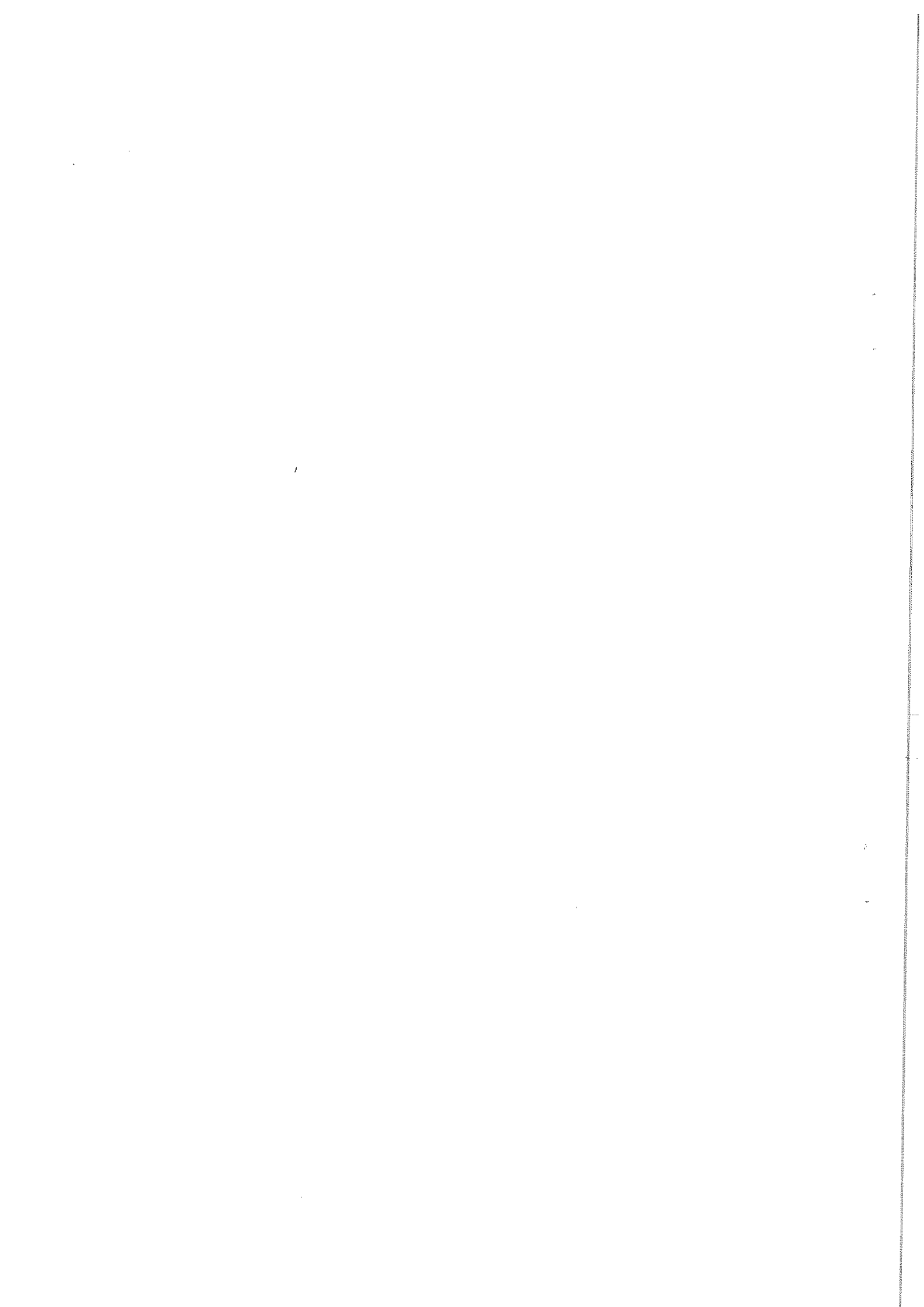
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1.2 Write the principle of acid-fast staining. (3 marks)

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1.3 Outline the features of *Mycobacterium tuberculosis* in acid-fast stain. (2 marks)

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2.3 Briefly outline the laboratory diagnosis of *Helicobacter pylori* from the specimen mentioned in 2.2. (5 marks)

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2.4 The therapy given against *Helicobacter pylori* had not been successful for eradication of the infection. State the main reason. (1 mark)

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2.5 Briefly explain the mode of action of clarithromycin. (2 marks)

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(Total – 10 marks)

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(Total - 10 marks)

Q4

4.1 Define the term “Minimum inhibitory concentration (MIC)” of an antibiotic. (1 mark)

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4.2 List three (03) methods available to detect MIC. (3 marks)

- i.
- ii.
- iii.

4.3 State the disk diffusion methods of antibiotic sensitivity tests (ABST) available in Sri Lanka. (1 mark)

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