
UNIVERSITI SAINS MALAYSIA

Second Semester Examination
Academic Session 2007/2008

April 2008

BOT 205/3 – Microscopy and Histological Techniques
[Teknik Mikroskopi dan Histologi]

Duration: 3 hours
[Masa : 3 jam]

Please ensure that this examination paper contains FIVE printed pages before you begin the examination.

[Sila pastikan bahawa kertas peperiksaan ini mengandungi LIMA muka surat yang bercetak sebelum anda memulakan peperiksaan ini.]

Instructions: Answer **FIVE** (5) out of **SIX** (6) questions, in English or Bahasa Malaysia. Each question carries 20 marks.

Arahan: Jawab **LIMA** (5) daripada **ENAM** (6) soalan yang diberikan dalam Bahasa Inggeris atau Bahasa Malaysia. Tiap-tiap soalan bernilai 20 markah.]

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1. [a] Artifacts always occur on the tissue slide of the final product. Discuss how and at which stages the artifacts are formed?
(10 marks)
- [b] Staining is very important in histology. Discuss the types of dyes that are commonly used in histological slide preparation.
(10 marks)
2. Many important stages are involved in histological slide preparation.
- [a] Name all the stages.
(10 marks)
- [b] Is the "embedding stage" critical? Discuss your answer.
(10 marks)
3. Give short notes on:
- [a] Artifacts.
[b] Chatter.
[c] Tissue sectioning.
[d] Tissue mounting.
(20 marks)
4. With the help of simple diagrams explain how lenses magnify an object.
(20 marks)

1. [a] Artifak sering terbentuk pada slaid tisu produk akhir. Bincangkan bagaimana dan di peringkat mana artifak terbentuk?
(10 markah)
- [b] Pewarnaan amat penting dalam histologi. Bincangkan jenis pewarna yang sering digunakan dalam penyediaan slaid histologi.
(10 markah)
2. Banyak langkah penting dalam penyediaan slaid histologi.
- [a] Nyatakan semua langkah yang terlibat.
(10 markah)
- [b] Adakah peringkat pembenaman itu kritikal? Bincangkan.
(10 markah)
3. Berikan nota ringkas untuk:
- [a] Artifak.
[b] "Chatter".
[c] Hirisan tisu.
[d] "Mounting" tisu.
(20 markah)