UNIVERSITI SAINS MALAYSIA

First Semester Examination
Academic Session 2009/2010

November 2009

BMT 202/3 – Mycology
[Mikologi]

Duration: 3 hours
[Masa : 3 jam]

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

[Sila pastikan bahawa kertas peperiksaan ini mengandungi TUJUH 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.]*

In the event of any discrepancies, the English version shall be used.

[Sekiranya terdapat sebarang percanggahan pada soalan peperiksaan. versi Bahasa Inggeris hendaklah diguna pakai].

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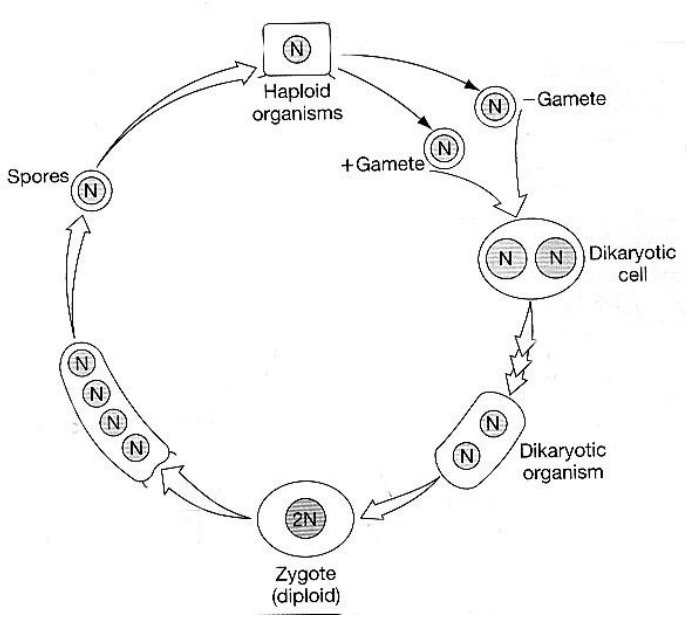
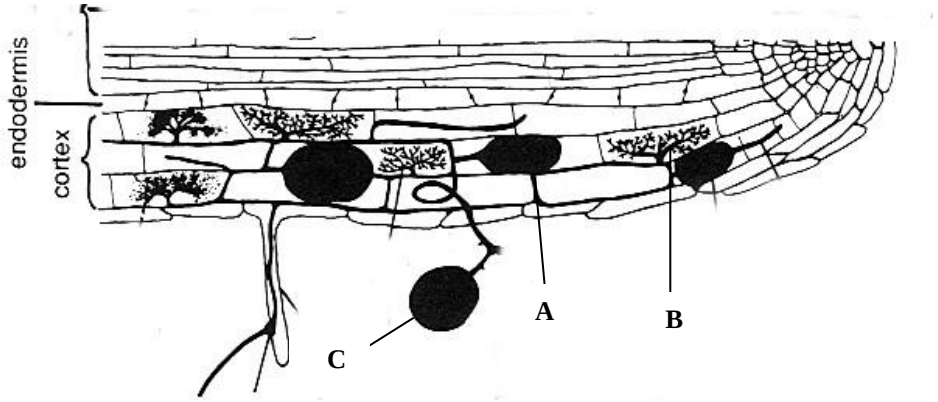
1. [a] Describe the structure of the basic unit of most fungal thalli. Where does growth occur?

(10 marks)



[b] Describe the method of reproduction in fungi as shown in the diagram.

(10 marks)



2. [a] The diagram above depicts a mutualistic association between two organisms.
Label structures A, B and C. Write short notes on the association and how it benefits both organisms.

(10 marks)

[b] Write short notes on the characteristics of Oomycota.

(10 marks)

3. Provide a brief definition for each of the following terms.

[a] microfungi

[b] mycoparasite

[c] sporangiola

[d] apical growth

[e] sac fungi

[f] imperfect fungi

[g] biological species concept

[h] septa

[i] zoospore

[j] coenocytic hypha

(20 marks)

4. In the Ascomycetes, there are **FOUR** (4) ways of bearing asci. Explain each way and give one example of genus for each way.

(20 marks)

5. Based on the conidium formation of mitosporic fungi, describe Kananakis terms and the successive development of conidial loci.

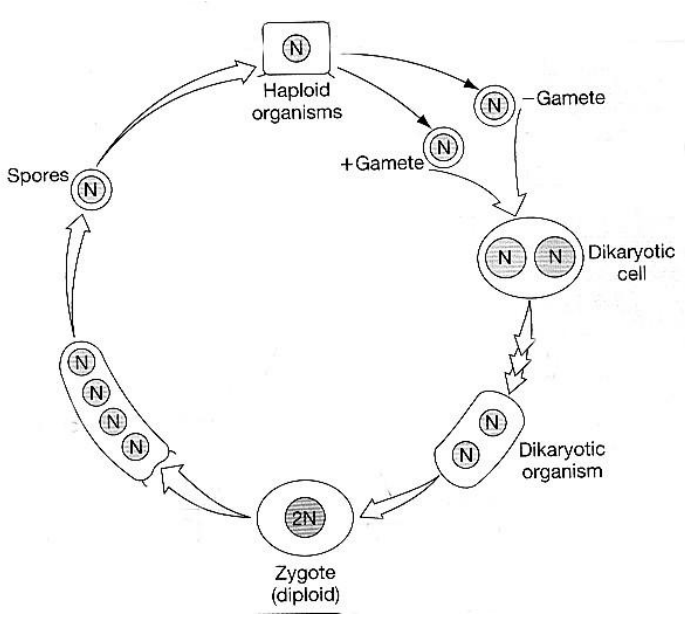
(20 marks)

6. In the Basidiomycetes, describe the life cycle of rust fungi.

(20 marks).

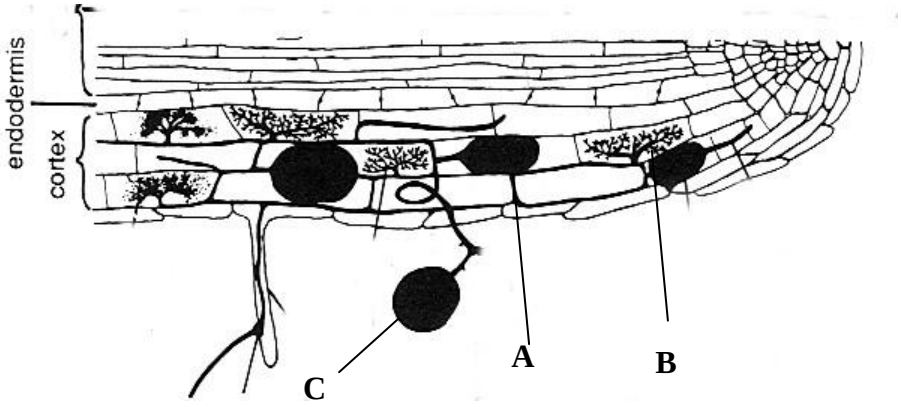
1. [a] Huraikan struktur asas kebanyakan talus kulat. Dimanakah pertumbuhan berlaku?

(10 markah)



[b] Huraikan cara pembiakan kulat yang ditunjukan dalam gambarajah di atas.

(10 markah)



2. [a] Gambarajah di atas menunjukkan hubungan mutualistik di antara dua organisma.
Label struktur A, B dan C. Tulis nota ringkas tentang hubungan tersebut dan bagaimana ia memberikan manfaat kepada kedua-dua organisma.

(10 markah)

[b] Tulis nota ringkas tentang ciri-ciri Oomycota.

(10 markah)

3. Berikan takrifan ringkas setiap istilah berikut:

[a] mikrokulat

[b] mikoparasit

[c] sporangiola

[d) pertumbuhan apikal

[e] kulat kantung

[f] kulat tidak sempurna

[g] konsep spesies biologi

[h] septum

[i] zoospora

[j] hifa senosit

(20 markah)

4. Pada Ascomycetes, terdapat **EMPAT** (4) cara pembetukan askus. Terangkan setiap cara pembentukan dan beri satu contoh genus untuk setiap cara tersebut.

(20 markah)

5. Berdasarkan pada pembentukan konidium oleh kulat mitospora, huraikan istilah Kananakis dan perkembangan berterusan pada lokus konidia.

(20 markah)

6. Pada Basidiomycetes, terangkan kitaran hidup kulat karat.

(20 markah)

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