
UNIVERSITI SAINS MALAYSIA

Final Examination
Academic Session 2007/2008

April 2008

JIB 215 – HISTOLOGY
[HISTOLOGI]

Duration : 2 hours
[Masa : 2 jam]

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

Answer **FOUR** questions. You may answer **either** in Bahasa Malaysia or in English.

All answers must be written in the answer booklet provided.

Each questions is worth 25 marks and the marks for each sub question is given at the end of that question.

Sila pastikan bahawa kertas peperiksaan ini mengandungi ENAM muka surat yang bercetak sebelum anda memulakan peperiksaan ini.

*Jawab **EMPAT** soalan. Anda dibenarkan menjawab soalan **sama ada** dalam Bahasa Malaysia atau Bahasa Inggeris.*

Setiap jawapan mesti dijawab di dalam buku jawapan yang disediakan.

Setiap soalan bernilai 25 markah dan markah subsoalan diperlihatkan di penghujung subsoalan itu.

1. Name the structures shown in figures (I) & (II) below and label parts (a) – (o). Explain where these structures can be found in the human body and describe their main functions.

Namakan struktur yang ditunjukkan dalam gambar rajah (I) & (II) dibawah dan labelkan bahagian (a) – (o). Terangkan di mana struktur itu boleh dijumpai di dalam badan manusia dan berikan fungsi utama kedua-dua struktur itu.

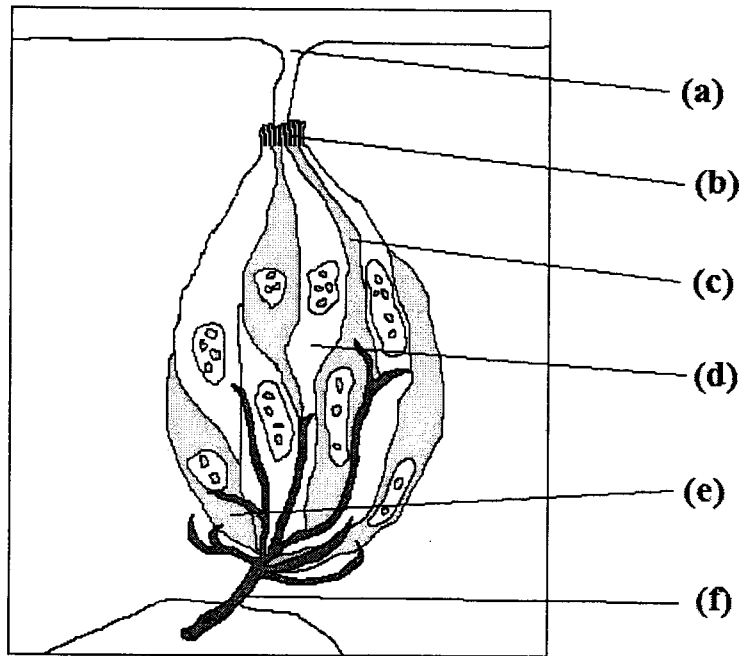


Figure I

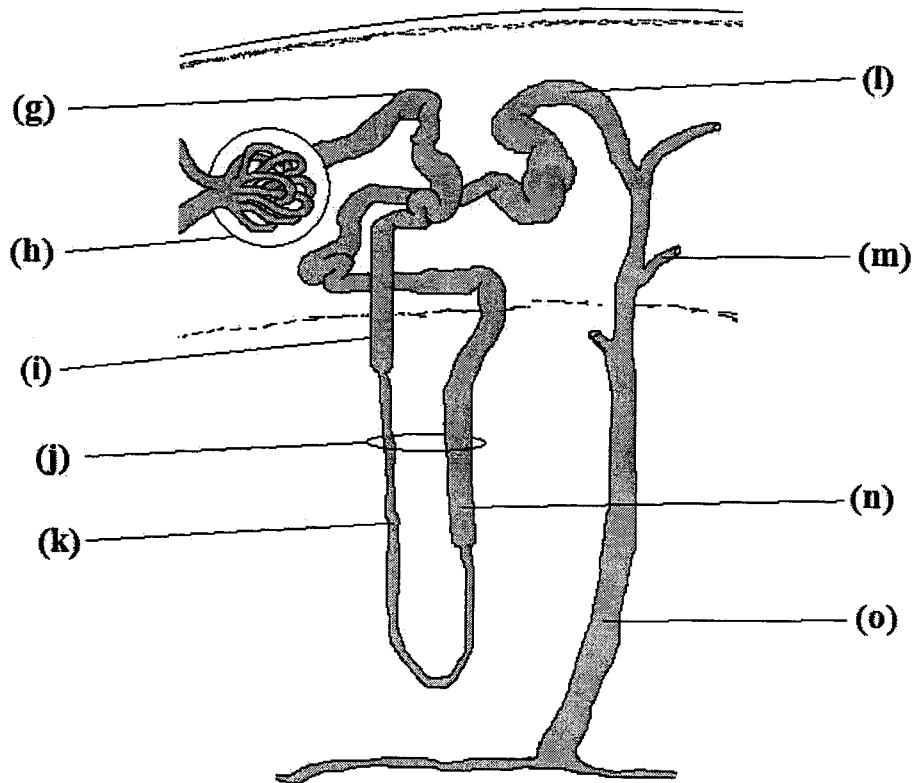


Figure II

(25 marks)

2. (a) There are eight types of covering epithelia in the human body. Explain the differences between the eight covering epithelia and give an example of where each can be found.

Terdapat lapan jenis selaput epitelium di dalam badan manusia. Terangkan perbezaan yang terdapat di antara lapan jenis selaput epitelium tersebut dan berikan contoh di mana setiap satu boleh dijumpai.

(15 marks)

- (b) (i) The small intestine is the final site for food digestion and nutrient absorption. How does the small intestine increase the rate of absorption of nutrients?

Usus kecil merupakan tapak akhir untuk penghadaman makanan dan penyerapan nutrien. Bagaimanakah usus kecil meningkatkan kadar penyerapan nutrien?

- (ii) The periodontium of a tooth consists of four parts. Name these four parts and explain the main function of the periodontium.

Bahagian periodontium gigi terdiri daripada empat bahagian. Namakan empat bahagian tersebut dan terangkan fungsi utama periodontium.

(10 marks)

3. Using labeled diagrams, describe the components of muscle tissue that are involved in muscle contraction and explain how these components function together.

Dengan menggunakan gambar rajah berlabel, huraikan komponen tisu otot yang terlibat dalam pengecutan otot dan terangkan bagaimana komponen itu berfungsi bersama.

(25 marks)

4. (a) Briefly explain the following terms and state their function(s) in the male reproductive system

Terangkan dengan ringkas istilah berikut dan berikan fungsinya dalam sistem pembiakan jantan :

- (i) Intratesticular genital ducts

Duktus genital intratestikular

- (ii) Excretory genital ducts

Duktus genital perembesan

(10 marks)

- (b) Using labeled diagrams describe the differences between the five types of ovarian follicles that are produced during follicle growth in the female reproductive system.

Dengan menggunakan gambar rajah berlabel, terangkan perbezaan antara lima jenis folikel ovari yang dihasilkan semasa proses tumbesaran folikel di dalam sistem pembiakan betina.

(15 marks)

5. (a) (i) One of the most important functions of the skin is to receive stimuli from the environment. How does the skin perform this function?

Salah satu fungsi penting kulit adalah menerima rangsangan dari persekitaran. Bagaimanakah kulit menjalankan fungsi ini?

- (ii) What are the other functions of the human skin?

Apakah fungsi lain kulit manusia?

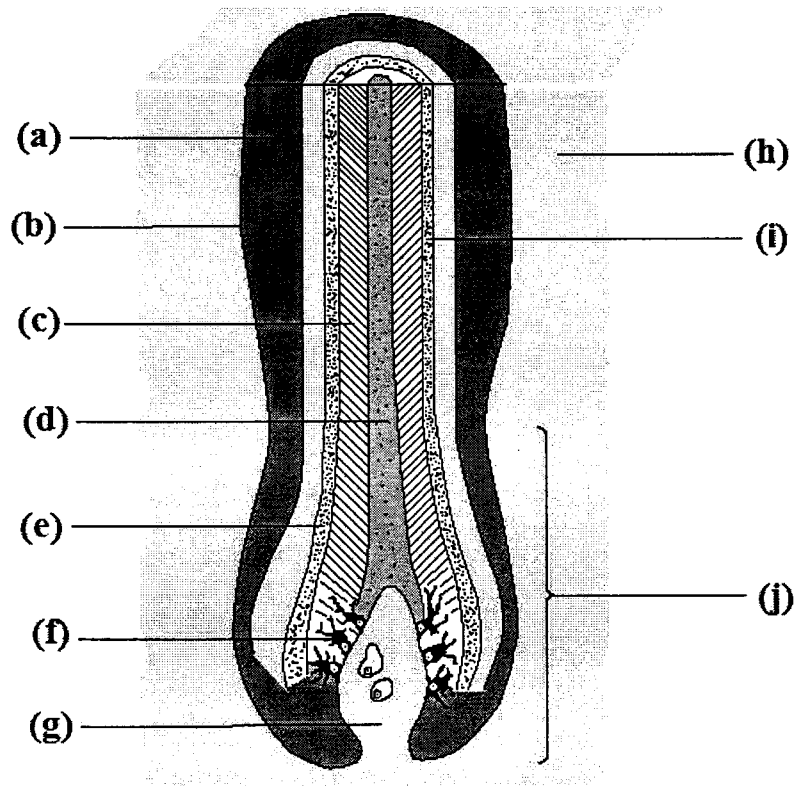
- (iii) Melanocytes, Langerhans cells and Merkel's cells are all components of the epidermal layer of the skin. What is the function(s) of these cells?

Melanosit, sel Langerhans dan sel Merkel adalah komponen lapisan epidermis kulit. Apakah fungsi sel-sel ini?

(15 marks)

- (b) The following diagram shows the structure of a hair follicle. Label parts (a) – (j).

Gambar rajah berikut menunjukkan struktur folikel rambut. Labelkan bahagian (a) – (j).



(10 marks)