



First Semester Examination
2022/2023 Academic Session

February 2023

**BET304 – Parasitologi Pengenalan
(Introductory Parasitology)**

Duration: 2 hours
[Masa: 2 jam]

Please check that this examination paper consists of FIVE (5) pages of printed material before you begin the examination.

[Sila pastikan bahawa kertas peperiksaan ini mengandungi LIMA (5) muka surat yang bercetak sebelum anda memulakan peperiksaan ini.]

Instructions: Answer **FOUR (4)** out of **FIVE (5)** questions, in English or Bahasa Malaysia. Each question carries 25 marks.

Arahan: Jawab **EMPAT (4)** daripada **LIMA (5)** soalan yang diberikan dalam Bahasa Inggeris atau Bahasa Malaysia. Tiap-tiap soalan bernilai 25 markah.]

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

[Sekiranya terdapat sebarang percanggahan pada soalan peperiksaan, versi Bahasa Inggeris hendaklah digunapakai].

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1. [a] Summarise the stages in the association between the relationship of a parasite and its host.
[Ringkaskan peringkat dalam asosiasi antara hubungan parasit dan perumahnya.]

(10 marks / 10 markah)

- [b] A form of indirect transmission refers to the transfer of an infectious agent from a reservoir to a host by animate intermediaries. Demonstrate the different types of animate intermediaries and the possible transmission process.
[Satu bentuk transmisi tidak langsung merujuk kepada pemindahan agen berjangkit dari takungan kepada perumah oleh perantara bernyawa. Tunjukkan pelbagai jenis perantara bernyawa dan proses transmisi yang mungkin.]

(15 marks / 15 markah)

2. [a] Explain the morphology and life cycle of *Pulex irritans*. Your explanation should include the diagnostic and infective stage of this species.
[Terangkan morfologi dan kitaran hidup Pulex irritans. Penerangan anda perlu mengandungi peringkat diagnostik dan infektif spesies ini.]

(10 marks / 10 markah)

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- [b] Development of total immune escape capacity within a mammalian host is not beneficial for any parasite, as it will result in the accelerated death of the host itself. Therefore, demonstrate the innate immune response of the host towards *Trypanosoma* spp. infection and the adaptation approach that the parasite goes through to avoid destruction by the host immune response.

[Perkembangan jumlah kapasiti pelepasan imun dalam perumah mamalia tidak bermanfaat untuk mana-mana parasit, kerana ia akan mengakibatkan kematian yang cepat kepada perumah itu sendiri. Oleh itu, tunjukkan tindak balas imun semula jadi perumah kepada jangkitan Trypanosoma spp. dan adaptasi yang dilalui oleh parasit untuk mengelakkan kemusnahan oleh tindak balas imun perumah.]

(15 marks / 15 markah)

3. [a] Distinguish and explain proposed helminth therapy mechanisms in allergic responses.

[Beza dan jelaskan cadangan mekanisme terapi helmin dalam tindak balas alergik.]

(10 marks / 10 markah)

- [b] Prepare a morphology-based experimental plan for detecting the parasite in a suspected *Wuchereria bancrofti* infection.

[Sediakan satu pelan eksperimen berasaskan morfologi untuk mengesan parasit dalam suspek jangkitan Wuchereria bancrofti.]

(15 marks/ 15 markah)

4. [a] Distinguish the tapeworm's morphology, Order Cyclophyllidea and Pseudophyllidea.

[Bezakan morfologi cacing pita, Order Cyclophyllidea dan Pseudophyllidea.]

(10 marks / 10 markah)

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[b]



Exhibit A
[Eksibit A]

Exhibit A is the eggs of a human parasitic worm mainly found in children. Based on your observation of Exhibit A, identify the species. Write a full report of the parasite and its complete life cycle. Your report should include the parasite's common name, phylum, family, physical characteristics of the eggs, adult's distinctive features, infective stage, and name of the disease.

[Eksibit A adalah telur kepada cacing parasit manusia yang dijumpai terutamanya pada kanak-kanak. Berdasarkan pemerhatian anda dari Eksibit A, kenal pasti spesies cacing parasit tersebut. Tuliskan laporan lengkap parasit dan kitar hidupnya. Laporan anda perlu merangkumi nama biasa parasit, filum, famili, ciri fizikal telur, ciri dewasa tersendiri, peringkat infektif, dan nama penyakit.]

(15 marks / 15 markah)

...5/-

5. [a] Explain the life cycle of a trematode and its relation to human cercarial dermatitis infections.
[Terangkan kitar hidup trematod dan kaitannya dengan jangkitan dermatitis serkaria manusia.]

(10 marks / 10 markah)

- [b] Provide a diagram to show possible protozoan transmission routes caused by the Plasmodiidae family. Explain your answer.
[Sediakan gambar rajah untuk menunjukkan laluan transmisi mungkin protozoa yang disebabkan oleh famili Plasmodiidae. Jelaskan jawapan anda.]

(15 marks/ 15 markah)

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