
UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Pertama
Sidang Akademik 2006/2007
*First Semester Examination
2006/2007 Academic Session*

Oktober/November 2006
October/November 2006

ESA 371/3 – Elemen Sub-sistem Kapal Terbang
Aircraft Sub-system Kapal Terbang

Masa : [3 jam]
Hour : [3 hours]

ARAHAN KEPADA CALON :
INSTRUCTION TO CANDIDATES:

Sila pastikan bahawa kertas soalan ini mengandungi **LAPAN BELAS (18)** mukasurat bercetak dan **SEMBILAN (9)** soalan sebelum anda memulakan peperiksaan.
*Please ensure that this paper contains **EIGHTEEN (18)** printed pages and **NINE (9)** questions before you begin examination.*

Setiap pelajar harus menjawab soalan 1 dan dua soalan lagi dari soalan nombor 2 hingga 9 di bawah. Jumlah markah dikira daripada purata markah bagi tiga soalan. Semasa menjawab ketiga-tiga soalan tersebut para pelajar mesti mempertimbangkan 3 jenis pesawat yang berbeza.

Every student should answer the question No 1 and any two questions from those with numbers No 2 to 9 below. The total mark is calculated as the average of marks of three questions.

During answering these three questions the student should consider three different types of aircraft.

Soalan boleh dijawab dalam Bahasa Inggeris kecuali satu soalan mestilah dijawab dalam Bahasa Malaysia.

The question can be answered in English but one question must be answered in Bahasa Malaysia.

Setiap soalan mestilah dimulakan pada mukasurat yang baru.
Each questions must begin from a new page.

1. (a) Bagi **setiap jenis pesawat** (pilihan sendiri), sila nyatakan

For any type of aircraft (on your choice), please provide

(i) spesifikasi misi.

mission specifications.

(ii) keperluan teknikal.

technical requirements.

(10 markah/marks)

(b) Sila nyatakan juga

Please, provide also

(i) bentangan asas pandangan keseluruhan pesawat.

aircraft overall view with elementary layout.

(ii) komposisi dan tujuan sistem peralatan utama pesawat.

composition and purpose of the main onboard equipment systems.

(iii) bilangan anak kapal dan fungsinya

number of crew and their functions.

(90 markah/marks)

2. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any passenger aircraft (on your choice), please provide

(i) keperluan teknikal.

technical requirements.

(5 markah/marks)

(ii) bentangan asas pandangan keseluruhan pesawat.

aircraft overall view with elementary layout.

(15 markah/marks)

(b) Sila nyatakan juga keseluruhan sistem peralatan ruang penumpang dan terangkan yang berikut.

Please, provide also the overview of the passenger compartment equipment system and explain the following:

(i) tujuannya.

its purpose.

(ii) gambaran fizikal sistem.

the system physical description.

(iii) operasinya secara umum.

the general operation.

(iv) lokasi komponen utama.

the main components location.

3. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any type of aircraft (on your choice), please provide

- (i) keperluan teknikal.

technical requirements.

(5 markah/marks)

- (ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

- (b) Sila nyatakan juga keseluruhan sistem peralatan ruang anak kapal dan terangkan yang berikut:

Please, provide also the overview of the crew compartment equipment system and explain the following:

- (i) tujuannya.

its purpose.

- (ii) gambaran fizikal sistem.

the system physical description.

- (iii) operasinya secara umum.

the general operation.

- (iv) lokasi komponen utama.

the main components location.

4. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any type of military aircraft (on your choice), please provide

- (i) keperluan teknikal.

technical requirements.

(5 markah/marks)

- (ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

- (b) Sila nyatakan juga keseluruhan sistem peralatan khas (ketenteraan) dan terangkan yang berikut:

Please, provide also the overview of the special (military) equipment system and explain the following:

- (i) tujuannya.

its purpose.

- (ii) gambaran fizikal sistem.

the system physical description.

- (iii) operasinya secara umum.

the general operation.

- (iv) lokasi komponen utama.

the main components location.

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5. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any type of aircraft (on your choice), please provide

(i) keperluan teknikal.

technical requirements.

(5 markah/marks)

(ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

(b) Sila nyatakan juga keseluruhan sistem penghawa dingin dan terangkan yang berikut:

Please, provide also the overview of the air conditioning system and explain the following:

(i) tujuannya.

its purpose.

(ii) gambaran fizikal sistem.

the system physical description.

(iii) operasinya secara umum.

the general operation.

(iv) lokasi komponen utama.

the main components location.

6. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any type of aircraft (on your choice), please provide

- (i) keperluan teknikal.

technical requirements.

(5 markah/marks)

- (ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

- (b) Sila nyatakan juga keseluruhan **sistem penjanaan kuasa (hidraulik dan penumatik sistem)** dan terangkan yang berikut.

Please, provide also the overview of the power generation system (hydraulic and pneumatic systems) and explain the following:

- (i) tujuannya.

its purpose.

- (ii) gambaran fizikal sistem.

the system physical description.

- (iii) operasinya secara umum.

the general operation.

- (iv) lokasi komponen utama.

the main components location.

7. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any type of aircraft (on your choice), please provide

- (i) keperluan teknikal.

technical requirements.

(5 markah/marks)

- (ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

- (b) Sila nyatakan juga keseluruhan sistem penyah-sejukan dan anti-penyejukan dan terangkan yang berikut:

Please, provide also the overview of the de-icing and anti-icing system and explain the following:

- (i) tujuannya.

its purpose.

- (ii) gambaran fizikal sistem.

the system physical description.

- (iii) operasinya secara umum.

the general operation.

- (iv) lokasi komponen utama.

the main components location.

8. (a) Bagi setiap pesawat penumpang (pilihan sendiri), nyatakan

For any type of aircraft (on your choice), please provide

- (i) keperluan teknikal.

technical requirements.

(5 markah/marks)

- (ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

- (b) Sila nyatakan juga keseluruhan sistem pendaratan gear dan terangkan yang berikut:

Please, provide also the overview of the landing gear system and explain the following:

- (i) tujuannya.

its purpose.

- (ii) gambaran fizikal sistem.

the system physical description.

- (iii) operasinya secara umum.

the general operation.

- (iv) lokasi komponen utama.

the main components location.

9. (a) Bagi **setiap pesawat penumpang** (pilihan sendiri), nyatakan

For any type of aircraft (on your choice), please provide

- (i) keperluan teknikal.

technical requirements.

(5 markah/marks)

- (ii) bentangan asas pandangan keseluruhan pesawat

Aircraft overall view with elementary layout.

(15 markah/marks)

- (b) Sila nyatakan juga keseluruhan **sistem peruntukan keselamatan kecemasan** dan terangkan yang berikut.

*Please, provide also the overview of the **emergency safety provision system** and explain the following:*

- (i) tujuannya.

its purpose.

- (ii) gambaran fizikal sistem.

the system physical description.

- (iii) operasinya secara umum.

the general operation.

- (iv) lokasi komponen utama.

the main components location.