

External assessment 2023

Multiple choice question book

Aerospace Systems

General instruction

- Work in this book will not be marked.

Section 1

- Respond to these questions in the question and response book.
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QUESTION 1

A city council has received numerous noise complaints from homeowners who live under a flight path. Determine the best course of action to mitigate the noise caused by the jet engine aircraft over the city.

- (A) prioritise land-use planning strategies; don't implement a curfew on operations; use a quota system for arrivals and departures
- (B) only allow turbojet engine aircraft; use noise abatement approach and departure procedures; implement a curfew on operations
- (C) only allow aircraft with a noise certificate; use noise abatement approach and departure procedures; implement a curfew on operations
- (D) rezone the land around the airport to residential; use a quota system for arrivals and departures; use noise abatement approach and departure procedures

QUESTION 2

What would be displayed on a HUD?

- (A) attitude, heading, TCAS, vertical speed
- (B) altitude, attitude, balance, vertical speed
- (C) attitude, airspeed, engine pressure, flight director guidance
- (D) altitude, attitude, course deviation indicator, radio frequency

QUESTION 3

Using Stimulus 1 in the stimulus book, determine the location and minimum height required for an aircraft entering controlled airspace and travelling on a track of 330° T inbound to Karratha Aerodrome.

- (A) 2000 ft overhead Rosemary Island
- (B) 2000 ft 3 NM south-east of Radio Hill Mine
- (C) 2500 ft 7 NM south-west of Table Hill
- (D) 2500 ft 7 NM north of Rosemary Island

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QUESTION 4

During a flight, a pilot notices that the pointer of the centre-zero ammeter is indicating on the minus side. Which component has failed?

- (A) battery
- (B) alternator
- (C) circuit breaker
- (D) primary busbar

QUESTION 5

Which system uses pneumatically inflated rubber boots on the leading edges of airfoil surfaces?

- (A) de-icing
- (B) airframe
- (C) hydraulic
- (D) pressurisation

QUESTION 6

The symptoms of hypoxia are

- (A) itching, vomiting and diarrhoea.
- (B) gasping, paranoia and fast reaction time.
- (C) anger, high energy and pain in the hands.
- (D) euphoria, visual impairment and cyanosis.

QUESTION 7

Which scenario would give the pilot the perception they are too low on approach?

- (A) a false horizon
- (B) a narrow runway
- (C) a runway that is sloping away
- (D) the terrain sloping down from the threshold

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QUESTION 8

An aircraft is tracking to an airfield with a ground speed of 135 kts with an ETA of 1325 local time. ATC required the aircraft to change track, creating an extra distance of 25 NM and an extra headwind of 10 kts. Determine the new ETA.

- (A) 1335
- (B) 1337
- (C) 1343
- (D) 1345

QUESTION 9

One cause of physiological and psychological effects in ground crew is

- (A) poor diet.
- (B) dehydration.
- (C) inadequate training.
- (D) constant prolonged noise.

QUESTION 10

What effect does a decrease in air density have on a piston engine's performance?

- (A) no effect
- (B) reduces performance
- (C) increases performance
- (D) creates a better air-fuel mixture

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