Sample assessment 2020

Multiple choice question book

Aerospace Systems





Queensland Curriculum & Assessment Authority

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Section 1

Instructions

- Answer all questions in the question and response book.
- This book will not be marked.

QUESTION 1

Aircraft are primarily de-iced for take-off so that

- (A) take-off speed is increased.
- (B) friction on aerofoil surfaces is decreased.
- (C) fuel efficiency during take-off is increased.
- (D) the shape of the aerofoil surface is maintained.

QUESTION 2

The captain and first officer of an aircraft have noted an airframe vibration that is difficult to identify or explain. The first officer has an understanding of what might be the cause, but does not discuss this with the captain.

The crew resource management skill involved is most likely

- (A) language.
- (B) leadership.
- (C) environment.
- (D) communication.

QUESTION 3

Primary surveillance radar is capable of

- (A) penetrating solid objects.
- (B) showing transponder codes.
- (C) providing aircraft range and location.
- (D) maintaining signal strength over long distances.

QUESTION 4



The instruments above indicate that the aircraft is

- (A) flying at a speed of 85 knots at an altitude of 600 ft.
- (B) flying at a speed of 85 knots at an altitude of 6000 ft.
- (C) flying at a speed of 90 knots at an altitude of 600 ft.
- (D) flying at a speed of 90 knots at an altitude of 6000 ft.

QUESTION 5

A pilot has performed a number of checks before entering Class A airspace.

This is most likely an example of the pilot having good situational awareness in the area of

- (A) psychological factors.
- (B) stress and workload.
- (C) preconceptions.
- (D) automation.

QUESTION 6

Hypoxia is a physical condition most accurately described as being caused by

- (A) poor physical fitness.
- (B) a loss of carbon dioxide from the blood.
- (C) a lack of oxygen in the brain and other organs.
- (D) an increased concentration of nitrogen in the blood.

QUESTION 7

An aircraft landing on runway 23 with a wind of 210 degrees at 20 knots will experience a crosswind of

- (A) 4 knots.
- (B) 7 knots.
- (C) 10 knots.
- (D) 17 knots.

QUESTION 8



The wing component indicated by the arrow above is

- (A) a rib.
- (B) a spar.
- (C) a stringer.
- (D) an aileron.

QUESTION 9

For a particular flight the planned ground speed was 120 knots and the planned flight time was 60 minutes. ATD was 2300 UTC. After 20 minutes, the aircraft encountered a 15-knot headwind. What is the revised ETA to the nearest minute?

- (A) 2356 UTC
- (B) 0008 UTC
- (C) 0006 UTC
- (D) 0000 UTC

QUESTION 10



The minimum safe altitude in clear sky for aircraft operations within the area indicated on the chart above would be

- (A) 2342 ft.
- (B) 1842 ft.
- (C) 1342 ft.
- (D) 942 ft.

References

Sentient Software 2017, AirNav VFR flight planner, www.sentientsoftware.com.au.

- Wikimedia Commons 2012, 3-view drawing of British WWII fighter Hawker Tempest Mk II, https://commons.wikimedia.org/wiki/File:Hawker_Tempest_Mk_II_3-view.svg.
- Wikimedia Commons 2007, *Wing with one spar*, https://commons.wikimedia.org/wiki/File:Wing with one spar.JPG.

XPlane11 2018, Flight simulation software, www.x-plane.com.

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