

Sample paper for the Post of Airworthiness (Avionics) EG-01

English

- 1) Identify the sentence written in the **correct passive voice**:
 - A) The committee will have been reviewing your proposal.
 - B) Your proposal will have been reviewed by the committee.
 - C) Your proposal will have reviewed by the committee.
 - D) The proposal will have reviewing by the committee.
- 2) Identify the sentence written in the **correct passive voice**:
 - A) The committee will have been reviewing your proposal.
 - B) Your proposal will have been reviewed by the committee.
 - C) Your proposal will have reviewed by the committee.
 - D) The proposal will have reviewing by the committee.

Mathematics

- 3) If $x^2 - 5x + 6 = 0$, what are the values of x ?
 - A) 1 and 6
 - B) 2 and 3
 - C) 3 and 5
 - D) 4 and 6
- 4) The **area** of a circle is 154 cm^2 . What is the **radius**?
(Take $\pi = 3.14$)
 - A) 5 cm
 - B) 6 cm
 - C) 7 cm
 - D) 8 cm

General Knowledge and IQ

- 5) Which country is known as the **Land of the Rising Sun**?
 - A) China
 - B) Japan
 - C) Thailand
 - D) South Korea
- 6) Which number is the **odd one out**?
121, 144, 169, 196, 225, 242
 - A) 121
 - B) 169
 - C) 225
 - D) 242

Electrical and Electronics fundamentals

- 7) What happens to the current in a circuit if the **resistance is doubled** while the **voltage remains constant**?
 - A) Current becomes half
 - B) Current becomes double
 - C) Current remains the same
 - D) Current becomes zero

- 8) The component used to **store electric charge** in a circuit is called a:
- A) Resistor
 - B) Inductor
 - C) Capacitor
 - D) Transformer

Basic Aerodynamics

- 9) The **angle of attack** is the angle between:
- A) The wing and the fuselage
 - B) The chord line of the wing and the direction of airflow
 - C) The wing and the horizon
 - D) The thrust line and the tailplane
- 10) When the **angle of attack** increases beyond a certain point, the airflow separates from the upper surface of the wing, causing a sudden loss of lift. This condition is called:
- A) Drag
 - B) Stall
 - C) Slip
 - D) Spin

Propulsion system and IC engines

- 11) In a **turbojet engine**, the **turbine** drives which main component?
- A) Combustion chamber
 - B) Compressor
 - C) Nozzle
 - D) Afterburner
- 12) In a **four-stroke diesel engine**, the **fuel is ignited by**:
- A) Spark plug
 - B) Compression heat
 - C) Electric arc
 - D) Glow plug continuously

Avionics System Design

- 13) The primary function of an **avionics system** in an aircraft is to:
- A) Increase aerodynamic lift
 - B) Control engine fuel flow only
 - C) Manage communication, navigation, and flight control systems
 - D) Provide only passenger entertainment
- 14) In modern aircraft, the **Flight Management System (FMS)** integrates data from which of the following sources?
- A) Only the altimeter
 - B) Air data sensors, GPS, and inertial navigation systems
 - C) The fuel system only
 - D) Engine temperature sensors only

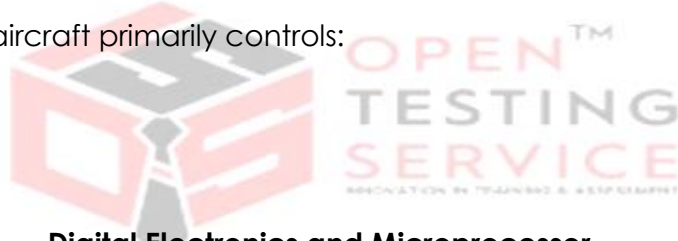
Aircraft Navigation and Control

15) The **Gyroscope** used in aircraft navigation provides information about:

- A) Airspeed
- B) Altitude
- C) Direction and attitude stability
- D) Fuel consumption

16) The **rudder** of an aircraft primarily controls:

- A) Roll
- B) Yaw
- C) Pitch
- D) Lift



Digital Electronics and Microprocessor

17) The basic building block of a **digital circuit** is:

- A) Resistor
- B) Diode
- C) Logic gate
- D) Transformer

18) The **Arithmetic Logic Unit (ALU)** of a microprocessor performs:

- A) Memory storage functions
- B) Arithmetic and logical operations
- C) Input/output operations only
- D) Power regulation

Thermodynamics

19) In a **closed system**, which of the following quantities remains constant?

- A) Mass
- B) Volume
- C) Temperature
- D) Pressure

20) The **Second Law of Thermodynamics** states that:

- A) Energy cannot be created or destroyed
- B) Heat cannot flow from a colder body to a hotter body without external work
- C) The total energy of the universe is constant
- D) Work done is always greater than heat supplied

