

Sample Paper for Assistant Director Airworthiness (Aerospace)(EG-01)

English

- 1) Identify the sentence that contains a **dangling modifier**:
 - A) After finishing the assignment, the TV was turned on.
 - B) After finishing the assignment, I turned on the TV.
 - C) I turned on the TV after finishing the assignment.
 - D) The assignment was finished before I turned on the TV.
- 2) Choose the sentence that uses the **subjunctive mood** correctly:
 - A) If I was you, I would take the job.
 - B) If he was here, we could start.
 - C) If I were you, I would take the job.
 - D) If she was rich, she will travel.

Mathematics

- 3) If $3x + 5 = 20$, what is the value of x ?
 - A) 3
 - B) 4
 - C) 5
 - D) 6
- 4) The square root of 144 is:
 - A) 10
 - B) 11
 - C) 12
 - D) 13

General Knowledge and IQ

- 5) Which planet is known as the **Red Planet**?
 - A) Venus
 - B) Mars
 - C) Jupiter
 - D) Saturn
- 6) If **ALL RAIN** is **WATER** and **ALL WATER** is **LIQUID**, then what is true?
 - A) All rain is liquid
 - B) Some rain is not liquid
 - C) All liquid is rain
 - D) Rain is not water

Basic Aerodynamics

- 7) Which of the following forces acts **opposite to the direction of motion** of an aircraft?
 - A) Lift
 - B) Thrust

- C) Drag
 - D) Weight
- 8) According to **Bernoulli's Principle**, as the speed of airflow over a surface increases, the pressure:
- A) Increases
 - B) Decreases
 - C) Remains constant
 - D) Becomes zero

Propulsion system and IC engines

- 9) In a **jet engine**, the main function of the **compressor** is to:
- A) Burn the fuel
 - B) Increase air pressure before combustion
 - C) Convert heat energy into mechanical energy
 - D) Cool the incoming air
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Aircraft Design and Structure

- 11) The **center of gravity (CG)** of an aircraft must always lie:
- A) Ahead of the center of pressure
 - B) Behind the center of pressure
 - C) Exactly at the tail
 - D) At the midpoint of the fuselage
- 12) The **main load-carrying structure** of a wing is called the:
- A) Wing tip
 - B) Rib
 - C) Spar
 - D) Stringer

Electrical and Electronics Fundamental

- 13) According to **Ohm's Law**, the current (I) in a circuit is:
- A) Directly proportional to resistance
 - B) Inversely proportional to voltage
 - C) Directly proportional to voltage and inversely proportional to resistance
 - D) Independent of resistance
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Aircraft Mechanics and Control

15) The **ailerons** on an aircraft are primarily used to control:

- A) Pitch
- B) Roll
- C) Yaw
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Thermodynamics

17) The **First Law of Thermodynamics** is a statement of:

- A) Conservation of mass
- B) Conservation of momentum
- C) Conservation of energy
- D) Increase of entropy

18) In a **Carnot cycle**, the efficiency depends on:

- A) The type of working substance
- B) The maximum and minimum temperatures of the cycle
- C) The pressure difference in the cycle
- D) The amount of fuel used

