AME CET English & General Awareness

Sample Paper – 6

Duration: 30 Minutes **Maximum Marks: 120**

Instructions

- This paper contains **30** Multiple Choice Questions (Single Correct Answer), modelled on the combined **English** (Q1–15) and **General Awareness** (Q16–30) sections of the **AME CET** entrance.
- Each correct answer carries **+4 marks**. Each wrong answer carries -1 **mark**. Unattempted questions carry **0 marks**.
- Only **one** option is correct per question. Choose carefully.
- The General Awareness section emphasises **aviation fundamentals, civil-aviation regulation, and basic science** relevant to an Aircraft Maintenance Engineer.
- Use of mobile phones, calculators, or any electronic gadget is strictly prohibited.

Part A: English

Q1. Choose the word that is most nearly the **SYNONYM** of the word in capitals: **VIVID**

(A) Dull

(B) Faint

(C) Bright

(D) Blurred

Q2. Choose the word that is most nearly the **ANTONYM** of the word in capitals: **TEMPORARY**

(A) Brief

(B) Permanent

(C) Passing

(D) Fleeting

Q3. Fill in the blank with the correct preposition: "After reviewing the report, the chief engineer said he could agree _____ your proposal."

(A) to

(B) with

(C) on

(D) for

Q4. Identify the part of the sentence that contains an error. If there is no error, mark (D).
The technician (A) *returned back home* (B) *very late at night.* (C) *No error* (D)

(A) The technician

(B) returned back home

(C) very late at night

(D) No error

Q5. Choose the grammatically **correct** sentence:

(A) This matter is strictly between you and I.

(B) This matter is strictly between you and myself.

(C) This matter is strictly between you and me.

(D) This matter is strictly between I and you.

Q6. Choose the single word for the phrase: "A person who cannot read or write."

(A) Illiterate

(B) Ignorant

(C) Inexperienced

(D) Incompetent

Q7. What does the idiom "**in the same boat**" mean?

(A) Travelling together on a ship

(B) In the same difficult situation

(C) Of the same age group

(D) Working in the same office

Q8. Fill in the blank with the most appropriate word: "Only a licensed engineer may _____ the aircraft as airworthy after the inspection."

(A) clarify

(B) classify

(C) notify

(D) certify

Q9. Choose the correct **passive voice** form of: "Someone has stolen my tools."

(A) My tools were being stolen.

(B) Someone is stolen by my tools.

(C) My tools have been stolen.

(D) My tools are stolen by someone.

Q10. Choose the correct **indirect (reported) speech** form of: The teacher said, "The Earth revolves around the Sun."

(A) The teacher said that the Earth revolves around the Sun.

(B) The teacher said that the Earth revolved around the Sun.

(C) The teacher said that the Earth had revolved around the Sun.

(D) The teacher said that the Earth was revolving around the Sun.

Q11. Read the passage and answer Questions 11 and 12.

Becoming a pilot is a long and structured process. A trainee first attends ground school, where the rules of the air, navigation, meteorology, and aircraft systems are studied in the classroom. Next comes practice in a flight simulator, a machine that realistically imitates a cockpit so that emergencies can be rehearsed safely on the ground. Only after this preparation does the student build up the required flight hours in a real aircraft, always under the watch of a qualified instructor. The licence is granted only when the trainee has passed the written examinations and logged the minimum number of supervised flying hours.

Q11. According to the passage, a flight simulator is mainly used to:

(A) replace real flying hours completely

(B) rehearse emergencies safely on the ground

(C) test the strength of the airframe

(D) entertain the trainees between classes

Q12. (Based on the passage above.) According to the passage, the licence is granted only when the trainee has:

(A) completed ground school alone

(B) flown without any instructor

(C) passed the written exams and logged the minimum supervised flying hours

(D) bought a personal aircraft

Q13. Fill in the blank with the correct verb: "Ten kilometres _____ a long distance to walk after a night shift."

(A) is

(B) are

(C) were

(D) have been

Q14. Fill in the blank with the correct verb form: "He _____ on the faulty engine for two hours before it finally started."

(A) works

(B) is working

(C) has been working

(D) had been working

Q15. Choose the **correctly spelled** word:

(A) Hydrolic

(B) Hydraullic

(C) Hydraulic

(D) Hidraulic

Part B: General Awareness

Q16. In Indian civil aviation, the abbreviation **AAI** stands for:

(A) Airports Authority of India

(B) Aircraft Association of India

(C) Aviation Academy of India

(D) Air Administration of India

Q17. Which ministry of the Government of India is responsible for the formulation and monitoring of national policies and programmes for the development of civil aviation?

(A) Ministry of Road Transport and Highways

(B) Ministry of Civil Aviation

(C) Ministry of Defence

(D) Ministry of Railways

Q18. In the side-view diagram of the aircraft below, the fixed upright surface at the tail marked **X** keeps the aircraft pointing steadily in its direction of travel. This vertical stabiliser (tail fin) mainly provides:

(Aircraft, side view)

(A) Lift for take-off

(B) Pitch stability

(C) Roll control

(D) Directional (yaw) stability

Q19. The first piloted aircraft to break the sound barrier in level flight, in 1947, was flown by:

(A) Orville Wright

(B) Charles Lindbergh

(C) Chuck Yeager

(D) Amelia Earhart

Q20. India's busiest airport by passenger traffic, located in the national capital, is:

(A) Indira Gandhi International Airport, Delhi

(B) Chhatrapati Shivaji Maharaj International Airport, Mumbai

(C) Kempegowda International Airport, Bengaluru

(D) Netaji Subhas Chandra Bose International Airport, Kolkata

Q21. The cockpit instrument used to measure an aircraft engine's **rotational speed** in revolutions per minute (RPM) is the:

(A) Altimeter

(B) Tachometer

(C) Barometer

(D) Voltmeter

Q22. A helicopter can hover and rise because its main rotor blades, as they spin, behave like rotating wings. Each blade generates an upward force by acting as a(n):

(A) flat paddle that simply pushes water

(B) electromagnet that repels the ground

(C) parachute that traps falling air

(D) airfoil that produces lift

Q23. The headquarters of the Airports Authority of India (AAI) is located in:

(A) Mumbai

(B) Bengaluru

(C) New Delhi

(D) Hyderabad

Q24. As the angle of attack of a wing is increased, lift rises up to a critical angle, beyond which the airflow separates and lift suddenly drops. This condition is called a:

(A) stall

(B) spin

(C) skid

(D) slip

Q25. Which strong, lightweight **aluminium alloy** (chiefly aluminium with copper) has been widely used in aircraft structures?

(A) Bronze

(B) Duralumin

(C) Cast iron

(D) Brass

Q26. Most large jet airliners cruise in the lower part of which layer of the Earth's atmosphere, where the air is thin and relatively free of weather?

(A) Mesosphere

(B) Thermosphere

(C) Exosphere

(D) Stratosphere

Q27. In the context of national defence, the abbreviation **IAF** stands for:

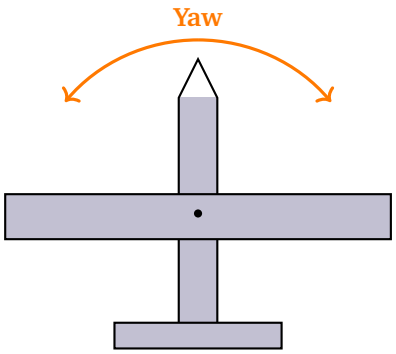
(A) Indian Air Force

(B) International Aviation Federation

(C) Indian Aviation Fleet

(D) Integrated Airframe Facility

Q28. The figure shows a top view of an aircraft swinging its nose left and right about the vertical axis through its centre of gravity. A weathercock-stable aircraft naturally points into the wind by means of this motion, which is called:



(Aircraft, top view — vertical axis through C.G.)

(A) Pitch

(B) Roll

(C) Yaw

(D) Lift

Q29. In an aircraft's electrical and avionics systems, the SI unit used to measure **electric current** is the:

(A) Volt

(B) Ampere

(C) Ohm

(D) Watt

Q30. Modern passenger-aircraft windows are made small and given rounded corners, rather than large and square. The main engineering reason is to:

(A) give passengers a smaller view of the clouds

(B) make the windows cheaper to clean

(C) let in less sunlight at high altitude

(D) reduce stress concentration caused by cabin pressurisation

Detailed Solutions

Q1.

Solution

Concept — Synonyms: A synonym is a word that has the same or nearly the same meaning as another word.

Step 1 — Meaning of the key word: "Vivid" means producing strong, clear images; bright and intense; full of life.

Step 2 — Match the option: Among the choices, "Bright" carries the same sense of being strong, clear, and intense.

Why other options are wrong:

- Option A (Dull): The opposite of vivid — it means lacking brightness or sharpness.
- Option B (Faint): Means weak or barely perceptible, the reverse of vivid.
- Option D (Blurred): Means unclear or hazy, again the opposite of vivid.

Final Answer: VIVID $\approx$ Bright $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q1

Q2.

Solution

Concept — Antonyms: An antonym is a word opposite in meaning to another word.

Step 1 — Meaning of the key word: "Temporary" means lasting for only a limited time; not permanent.

Step 2 — Find the opposite: The opposite of something that lasts only briefly is "Permanent," which means lasting or intended to last indefinitely.

Why other options are wrong:

- Option A (Brief): A synonym of temporary, meaning short-lived.
- Option C (Passing): Means fleeting or momentary — a synonym, not an antonym.
- Option D (Fleeting): Means lasting a very short time — again a synonym.

Final Answer: TEMPORARY $\leftrightarrow$ Permanent $\Rightarrow$ $\boxed{B}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Fixed preposition with "agree": The verb "agree" takes different prepositions depending on meaning. "Agree *to*" is used with a proposal, plan, or suggestion (accepting it), while "agree *with*" is used with a person or an opinion.

Step 1 — Identify what follows the blank: The word after the blank is "your proposal" — a plan or suggestion, not a person.

Step 2 — Choose the matching preposition: We accept a proposal, so the correct form is "agree to your proposal."

Why other options are wrong:

- Option B (with): "Agree with" is used for a person or an opinion, e.g. "I agree with you," not with a proposal.
- Option C (on): "Agree on" is used for a shared decision ("they agreed on a date"), not for accepting a single proposal offered to you.
- Option D (for): "Agree for" is not a standard collocation in English.

Final Answer: agree to your proposal $\Rightarrow$ A

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Redundancy (pleonasm): An error occurs when two words in a sentence repeat the same idea unnecessarily. The verb "return" already means "to come back," so adding "back" is redundant.

Step 1 — Examine each part: "returned back home" contains both "returned" and "back," which carry the same meaning of coming back.

Step 2 — Apply the rule: The correct phrase is simply "returned home." The redundancy lies in part (B), so part (B) contains the error.

Why other options are wrong:

- Option A (The technician): A correct, simple subject with no error.
- Option C (very late at night): A correct adverbial phrase of time.

- Option D (No error): Incorrect, because part (B) does contain a redundancy error.

Final Answer: The error is "returned back" (should be "returned") $\Rightarrow$ D

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Pronoun case after a preposition: After a preposition (such as "between"), a pronoun must be in the *objective* case (me, him, her, us, them), not the subjective case (I, he, she, we, they).

Step 1 — Identify the preposition: "Between" is a preposition, so the pronouns that follow it must be objective: "you and me."

Step 2 — Apply the rule: The correct sentence is "This matter is strictly between you and me."

Why other options are wrong:

- Option A (you and I): "I" is subjective and cannot follow the preposition "between."
- Option B (you and myself): "Myself" is a reflexive pronoun and is wrong here, as there is no matching subject "I" to reflect back to.
- Option D (I and you): Uses the subjective "I" and also places the speaker first, which is impolite and ungrammatical here.

Final Answer: "...between you and me." $\Rightarrow$ C

Answer: (C) Go Back to Q5

Q6.

Solution

Concept — One-word substitution: A single precise word can replace a longer descriptive phrase.

Step 1 — Read the definition: "A person who cannot read or write" describes someone who lacks basic reading and writing ability.

Step 2 — Select the term: That person is "Illiterate."

Why other options are wrong:

- Option B (Ignorant): Lacking knowledge in general, but an ignorant person may still be able to read and write.
- Option C (Inexperienced): Lacking experience or skill, unrelated to reading and writing.
- Option D (Incompetent): Not capable of doing a job well, which is not the same as being unable to read or write.

Final Answer: Illiterate $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — Idioms: An idiom is a fixed expression whose meaning cannot be guessed from the literal words.

Step 1 — Recall the idiom: "In the same boat" describes people who are sharing the same unpleasant or difficult circumstances.

Step 2 — Match the meaning: The closest meaning is "In the same difficult situation."

Why other options are wrong:

- Option A (Travelling together on a ship): A literal misreading of "boat."
- Option C (Of the same age group): Not the meaning of this idiom.
- Option D (Working in the same office): A specific situation that the idiom does not refer to.

Final Answer: in the same boat = in the same difficult situation $\Rightarrow$ $\boxed{B}$

Answer: (B) Go Back to Q7

Q8.

Solution

Concept — Vocabulary in context: The correct word must fit both the grammar and the meaning of the sentence.

Step 1 — Understand the context: To officially declare that an aircraft is fit and safe to fly is to "certify" it as airworthy.

Step 2 — Select the word: "Certify the aircraft as airworthy" is the standard

aviation collocation.

Why other options are wrong:

- Option A (clarify): Means to make something clear or easier to understand, not to declare it fit.
- Option B (classify): Means to arrange into groups or categories.
- Option C (notify): Means to inform someone, not to declare airworthiness.

Final Answer: certify the aircraft as airworthy $\Rightarrow$ D

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Active to passive (present perfect): In the passive of a present-perfect sentence, the object becomes the subject and the verb becomes "has/have been + past participle." When the doer is the vague word "someone," the "by. . . " phrase is usually dropped.

Step 1 — Identify the parts: Subject = "Someone," verb = "has stolen" (present perfect), object = "my tools."

Step 2 — Build the passive: Object first: "My tools" + "have been stolen" (plural subject, so "have"). The vague agent "someone" is dropped.

Why other options are wrong:

- Option A (were being stolen): Past continuous passive, not the present perfect of the original.
- Option B (Someone is stolen by my tools): Reverses the meaning and is nonsensical.
- Option D (are stolen by someone): Simple-present passive, not present perfect, and needlessly keeps "someone."

Final Answer: "My tools have been stolen." $\Rightarrow$ C

Answer: (C) Go Back to Q9

Q10.

Solution

Concept — Reported speech of a universal truth: When the words inside the quotation state a universal truth or a permanent fact, the tense does *not* change in reported speech, even though the reporting verb ("said") is in the past.

Step 1 — Recognise the universal truth: "The Earth revolves around the Sun" is a permanent scientific fact, always true.

Step 2 — Apply the rule: Because it is a universal truth, the present tense "revolves" is kept unchanged, joined by "that."

Why other options are wrong:

- Option B (revolved): Back-shifts the tense, which is wrong for a universal truth.
- Option C (had revolved): Uses the past perfect, wrongly suggesting the action is finished and no longer true.
- Option D (was revolving): Changes a permanent fact into a temporary past action.

Final Answer: "...that the Earth revolves around the Sun." $\Rightarrow$ A

Answer: (A) Go Back to Q10

Q11.

Solution

Concept — Reading comprehension (locating a stated fact): The answer must come directly from what the passage says, not from outside assumptions.

Step 1 — Find the relevant line: The passage describes the simulator as "a machine that realistically imitates a cockpit so that emergencies can be rehearsed safely on the ground."

Step 2 — Match to an option: This directly supports "rehearse emergencies safely on the ground."

Why other options are wrong:

- Option A (replace real flying hours completely): The passage says the student still builds up required flight hours in a real aircraft, so the simulator does not replace them.
- Option C (test the strength of the airframe): Never mentioned; the simulator

imitates a cockpit, not a structural test.
- Option D (entertain the trainees): The passage gives a serious training purpose, not entertainment.

Final Answer: rehearse emergencies safely on the ground $\Rightarrow$ B

Answer: (B) Go Back to Q11

Q12.

Solution

Concept — Reading comprehension (detail recall): Choose the option that restates the passage accurately.

Step 1 — Find the relevant line: The passage states: "The licence is granted only when the trainee has passed the written examinations and logged the minimum number of supervised flying hours."

Step 2 — Match to an option: Option C repeats both conditions exactly.

Why other options are wrong:

- Option A (completed ground school alone): Ground school is only the first step; flight hours and exams are also required.
- Option B (flown without any instructor): The passage says training is always "under the watch of a qualified instructor."
- Option D (bought a personal aircraft): Never mentioned anywhere in the passage.

Final Answer: passed the written exams and logged the minimum supervised flying hours $\Rightarrow$ C

Answer: (C) Go Back to Q12

Q13.

Solution

Concept — Subject–verb agreement with measured quantities: When a plural-looking phrase of distance, time, money, or weight expresses a *single* amount taken as a whole, it takes a *singular* verb.

Step 1 — Identify the subject: "Ten kilometres" here is treated as one single distance, not ten separate units.

Step 2 — Choose the verb: A single amount takes the singular verb "is."

Why other options are wrong:

- Option B (are): Plural; would treat the distance as separate units, which is wrong.
- Option C (were): Plural and past tense; does not agree and shifts the tense.
- Option D (have been): Plural present-perfect; does not agree with a single amount.

Final Answer: "Ten kilometres is a long distance..." ⇒ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Past perfect continuous: The past perfect continuous ("had been + verb-ing") describes an action that had been going on *for a period of time* before another past event happened.

Step 1 — Spot the time clues: "for two hours" shows a duration, and "before it finally started" fixes a later past event.

Step 2 — Apply the tense: The action of working continued for two hours up to the moment the engine started, so the correct form is "had been working."

Why other options are wrong:

- Option A (works): Simple present; cannot describe a past action.
- Option B (is working): Present continuous; wrong time frame.
- Option C (has been working): Present perfect continuous, which links to *now*, not to a past "before" event.

Final Answer: had been working ⇒ D

Answer: (D) Go Back to Q14

Q15.

Solution

Concept — Correct spelling: Recognise the standard spelling of a commonly misspelled technical word.

Step 1 — Recall the correct form: The word for systems that use pressurised fluid is spelled **hydraulic** ("hydr-" + "-aulic").

Step 2 — Eliminate the misspellings: Only option C matches the dictionary spelling.

Why other options are wrong:

- Option A (Hydrolic): Wrong vowel ("-olic" instead of "-aulic").
- Option B (Hydraullic): An extra "l" in the middle.
- Option D (Hidraulic): Wrong first vowel ("Hi-" instead of "Hy-").

Final Answer: Hydraulic $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Indian aviation organisations: A statutory body manages the country's airports and air-navigation services.

Step 1 — Expand the abbreviation: AAI stands for **Airports Authority of India** — the body that builds, owns, and operates civil airports and provides air-traffic management in India.

Step 2 — Confirm the role: It manages major airports and the airspace over Indian territory.

Why other options are wrong:

- Option B (Aircraft Association of India): Not a real statutory body of this name.
- Option C (Aviation Academy of India): Not the expansion of AAI.
- Option D (Air Administration of India): An invented title, not the official name.

Final Answer: Airports Authority of India $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q16

Q17.

Solution

Concept — Government of India ministries: Each sector of national activity is overseen by a dedicated ministry.

Step 1 — Identify the right ministry: Civil aviation policy, airports, and air services come under the **Ministry of Civil Aviation**.

Step 2 — Confirm its scope: The DGCA and the Airports Authority of India both function under this ministry.

Why other options are wrong:

- Option A (Road Transport and Highways): Handles roads and highways, not aviation.
- Option C (Defence): Oversees the armed forces, including the Air Force, but not civil aviation policy.
- Option D (Railways): Manages the railway network, unrelated to civil aviation.

Final Answer: Ministry of Civil Aviation $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q17

Q18.

Solution

Concept — Stability surfaces of an aircraft: Besides the movable control surfaces, an aircraft has fixed surfaces that keep it steady about its axes.

Step 1 — Locate the marked surface: The surface marked X is the upright fin at the tail — the *vertical stabiliser* (tail fin).

Step 2 — Identify its function: The vertical stabiliser acts like a weathervane, keeping the nose pointed into the relative airflow and so providing **directional (yaw) stability**.

Why other options are wrong:

- Option A (Lift for take-off): Lift is generated by the main wings, not the tail fin.
- Option B (Pitch stability): That is provided by the *horizontal* stabiliser (tailplane), not the vertical fin.
- Option C (Roll control): Roll is controlled by the ailerons on the wings, not

by the fixed fin.

Final Answer: The tail fin provides directional (yaw) stability $\Rightarrow$ D

Answer: (D) Go Back to Q18

Q19.

Solution

Concept — Milestones of aviation history: Breaking the "sound barrier" means flying faster than the speed of sound (supersonic flight).

Step 1 — Recall the event: On 14 October 1947, American test pilot **Chuck Yeager** flew the Bell X-1 rocket plane faster than sound in level flight.

Step 2 — Confirm the credit: This was the first piloted supersonic level flight in history.

Why other options are wrong:

- Option A (Orville Wright): A pioneer of the first powered flight (1903), not of supersonic flight.
- Option B (Charles Lindbergh): Famous for the first solo non-stop transatlantic flight (1927), at subsonic speed.
- Option D (Amelia Earhart): A pioneering aviator of the 1930s, not connected to breaking the sound barrier.

Final Answer: Chuck Yeager $\Rightarrow$ C

Answer: (C) Go Back to Q19

Q20.

Solution

Concept — Indian aviation infrastructure: India's largest airports handle the highest passenger volumes.

Step 1 — Identify the airport: Indira Gandhi International (IGI) Airport, Delhi, is India's busiest airport by passenger traffic.

Step 2 — Confirm the location: It is situated in the national capital, New Delhi.

Why other options are wrong:

- Option B (Mumbai): A very busy airport, but second to Delhi in passenger

traffic.

- Option C (Bengaluru): A major airport, but not the busiest in the country.
- Option D (Kolkata): A large eastern-region airport, well behind Delhi in traffic.

Final Answer: Indira Gandhi International Airport, Delhi $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q20

Q21.

Solution

Concept — Flight instruments: Each cockpit instrument measures a specific parameter.

Step 1 — Match instrument to quantity: The **tachometer** measures the engine's (or rotor's) rotational speed in revolutions per minute (RPM).

Step 2 — Confirm: "Tacho-" (speed) + "-meter" (measure) = an instrument that measures rotational speed.

Why other options are wrong:

- Option A (Altimeter): Measures altitude (height), not engine RPM.
- Option C (Barometer): Measures atmospheric pressure.
- Option D (Voltmeter): Measures electrical voltage.

Final Answer: Tachometer $\Rightarrow$ $\boxed{B}$

Answer: (B) Go Back to Q21

Q22.

Solution

Concept — How a helicopter generates lift: A helicopter's rotor blades are not flat paddles; each blade has the curved cross-section of a wing (an airfoil).

Step 1 — Describe the rotor blade: As the rotor spins, each blade moves through the air just like a wing moving forward, so it generates lift.

Step 2 — Identify the principle: Each blade acts as an **airfoil that produces lift**, and the combined lift of all the blades supports the helicopter and lets it hover.

Why other options are wrong:

- Option A (flat paddle pushing water): A helicopter flies in air, and rotor blades are shaped as airfoils, not flat paddles.
- Option B (electromagnet repelling the ground): No magnetic force is involved in lift.
- Option C (parachute trapping falling air): A parachute only slows a descent; it cannot generate the upward lift needed to climb or hover.

Final Answer: airfoil that produces lift $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q22

Q23.

Solution

Concept — Indian aviation bodies and their seats: National authorities are usually headquartered in or near the capital.

Step 1 — Recall the headquarters: The Airports Authority of India (AAI) is headquartered in **New Delhi**.

Step 2 — Confirm: Its corporate head office is at Rajiv Gandhi Bhawan, New Delhi.

Why other options are wrong:

- Option A (Mumbai): A major airport city, but not the AAI headquarters.
- Option B (Bengaluru): Home of HAL, not the AAI head office.
- Option D (Hyderabad): Has a large airport, but not the AAI headquarters.

Final Answer: New Delhi $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q23

Q24.

Solution

Concept — Stalling of a wing: Lift depends on the angle of attack, but only up to a critical limit.

Step 1 — Describe what happens: As the angle of attack increases, lift increases until a critical angle. Beyond it the smooth airflow over the wing separates, and lift falls sharply.

Step 2 — Name the condition: This sudden loss of lift at too high an angle of

attack is called a **stall**.

Why other options are wrong:

- Option B (spin): A spin is an autorotating descent that may follow an uncorrected stall, but it is not the loss of lift itself.
- Option C (skid): A skid is a coordination error in a turn, not a loss of lift.
- Option D (slip): A slip is another turn-coordination condition, unrelated to airflow separation.

Final Answer: stall $\Rightarrow$ A

Answer: (A) Go Back to Q24

Q25.

Solution

Concept — Aircraft structural materials: Aircraft frames need materials with a high strength-to-weight ratio.

Step 1 — Identify the alloy: Duralumin is a strong, lightweight alloy of aluminium (chiefly with copper, plus small amounts of magnesium and manganese), long used in aircraft structures.

Step 2 — Confirm: Its combination of light weight and strength made it a classic aircraft material.

Why other options are wrong:

- Option A (Bronze): A copper–tin alloy, heavy and not used as a primary aircraft structural metal.
- Option C (Cast iron): Very heavy and brittle, unsuitable for aircraft frames.
- Option D (Brass): A copper–zinc alloy, heavy and used for fittings, not airframes.

Final Answer: Duralumin $\Rightarrow$ B

Answer: (B) Go Back to Q25

Q26.

Solution

Concept — Layers of the atmosphere: The atmosphere is divided into layers; jet airliners cruise where the air is thin and weather is largely absent.

Step 1 — Recall the cruising layer: Large jet airliners cruise around 10–12 km, in the lower part of the **stratosphere** (just above the weather-filled troposphere).

Step 2 — Reason: The thin, stable air there means less drag and a smoother ride, mostly above clouds and storms.

Why other options are wrong:

- Option A (Mesosphere): Far higher (about 50–85 km), well above cruising aircraft.
- Option B (Thermosphere): Higher still, where satellites orbit, not airliners.
- Option C (Exosphere): The outermost layer, near space, not a cruising layer.

Final Answer: Stratosphere $\Rightarrow$ D

Answer: (D) Go Back to Q26

Q27.

Solution

Concept — National defence forces: Each branch of the armed forces has a standard abbreviation.

Step 1 — Expand the abbreviation: IAF stands for the **Indian Air Force**, the air-warfare branch of the Indian Armed Forces.

Step 2 — Confirm: The IAF was established in 1932 and is responsible for securing Indian airspace.

Why other options are wrong:

- Option B (International Aviation Federation): Not the meaning of IAF in this context.
- Option C (Indian Aviation Fleet): An invented title, not an official body.
- Option D (Integrated Airframe Facility): Not a recognised expansion of IAF.

Final Answer: Indian Air Force $\Rightarrow$ A

Answer: (A) Go Back to Q27

Q28.

Solution

Concept — The three axes of aircraft rotation: An aircraft rotates about three mutually perpendicular axes through its centre of gravity — longitudinal (roll), lateral (pitch), and vertical (yaw).

Step 1 — Identify the axis: The figure shows the nose swinging left and right about the *vertical* axis through the centre of gravity.

Step 2 — Name the motion: Rotation about the vertical axis, which turns the nose left or right, is called **yaw**. A weathercock-stable aircraft uses this motion to point into the wind.

Why other options are wrong:

- Option A (Pitch): Rotation about the lateral (wingtip-to-wingtip) axis, moving the nose up or down.
- Option B (Roll): Rotation about the longitudinal (nose-to-tail) axis, banking the wings.
- Option D (Lift): A force, not a rotation about an axis.

Final Answer: Yaw $\Rightarrow$ C

Answer: (C) Go Back to Q28

Q29.

Solution

Concept — SI units: Each physical quantity has a defined SI unit.

Step 1 — Recall the unit of current: The SI unit of electric current is the **ampere** (A), one of the seven SI base units.

Step 2 — Apply to avionics: Currents in an aircraft's electrical and avionics circuits are measured in amperes.

Why other options are wrong:

- Option A (Volt): The unit of electric potential difference (voltage), not current.
- Option C (Ohm): The unit of electrical resistance.
- Option D (Watt): The unit of power, not current.

Final Answer: Ampere $\Rightarrow$ B

Answer: (B) Go Back to Q29

Q30.

Solution

Concept — Stress concentration at corners: When a pressurised cabin is repeatedly inflated, sharp corners concentrate stress and can start cracks. Rounded shapes spread the stress evenly.

Step 1 — Explain the problem: A square window has sharp corners where pressure stresses pile up, making fatigue cracks more likely.

Step 2 — Explain the solution: Small, oval or round-cornered windows spread the load smoothly, so the design **reduces stress concentration caused by cabin pressurisation**. (Early square-window airliners suffered fatigue failures, which led to this change.)

Why other options are wrong:

- Option A (smaller view): A side effect, not the engineering reason for the shape.
- Option B (cheaper to clean): Not a structural or safety reason.
- Option C (less sunlight): Not the reason; sun-shades handle light, while the shape is about stress.

Final Answer: reduce stress concentration caused by cabin pressurisation $\Rightarrow$ D

Answer: (D) Go Back to Q30

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	2	B	3	A	4	D	5	C
6	A	7	B	8	D	9	C	10	A
11	B	12	C	13	A	14	D	15	C
16	A	17	B	18	D	19	C	20	A
21	B	22	D	23	C	24	A	25	B
26	D	27	A	28	C	29	B	30	D