# AME CET English & General Awareness

## Sample Paper – 10

**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: **NOVICE**

(A) Beginner

(B) Expert

(C) Veteran

(D) Instructor

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

(A) Triumph

(B) Conquest

(C) Defeat

(D) Success

**Q3.** Fill in the blank with the correct preposition: "The trainees congratulated him _____ his success in the licensing examination."

(A) for

(B) about

(C) with

(D) on

**Q4.** Identify the part of the sentence that contains an error. If there is no error, mark (D).
*The instructor gave* (A) *us many advices* (B) *before the practical test.* (C) *No error* (D)

(A) The instructor gave

(B) us many advices

(C) before the practical test

(D) No error

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

(A) Where the hangar is located?

(B) Where is located the hangar?

(C) Where is the hangar located?

(D) The hangar is where located?

**Q6.** Choose the single word for the phrase: "A place where aircraft take off, land, and are serviced."

(A) Aerodrome

(B) Harbour

(C) Terminus

(D) Depot

**Q7.** What does the idiom "**bite the bullet**" mean?

(A) To eat very quickly

(B) To make a costly mistake

(C) To remain completely silent

(D) To face a difficult situation bravely

**Q8.** Fill in the blank with the most appropriate word: "The mechanic removed the _____, the removable metal cover around the engine, to inspect the cylinders."

(A) rudder

(B) cowling

(C) aileron

(D) fuselage

**Q9.** Choose the correct **passive voice** form of: "The engineer will complete the overhaul."

(A) The overhaul completes the engineer.

(B) The overhaul is completed by the engineer.

(C) The overhaul will be completed by the engineer.

(D) The overhaul has been completed by the engineer.

**Q10.** Choose the correct **indirect (reported) speech** form of: He said to me, "Do not touch the controls."

(A) He said that do not touch the controls.

(B) He told me that I do not touch the controls.

(C) He asked me why I touched the controls.

(D) He ordered me not to touch the controls.

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

*Weather has a powerful influence on every flight. Strong winds can push an aircraft off its planned course, while thick fog reduces visibility and may delay take-off and landing. Thunderstorms are especially dangerous because they bring violent up-and-down air currents, heavy rain, and lightning. For these reasons, pilots receive a detailed weather briefing before departure, and they continue to receive updates from controllers during the flight. By studying the forecast carefully, a crew can choose a safer route or, if conditions are too severe, decide to wait until the weather improves.*

**Q11.** According to the passage, why are thunderstorms described as especially dangerous?

(A) They make the engines run faster.

(B) They bring violent air currents, heavy rain, and lightning.

(C) They always force aircraft to fly higher.

(D) They improve visibility around the runway.

**Q12.** (Based on the passage above.) According to the passage, a crew may decide to wait before flying when:

(A) the weather conditions are too severe

(B) the passengers are late

(C) the fuel is fully loaded

(D) the controllers are off duty

**Q13.** Fill in the blank with the correct verb: "Neither he nor his colleagues _____ present at the morning briefing."

(A) is

(B) was

(C) are

(D) has been

**Q14.** Fill in the blank with the correct verb form: "They _____ on the engine since early morning."

(A) work

(B) are working

(C) worked

(D) have been working

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

(A) Aerodynamics

(B) Aerodynemics

(C) Areodynamics

(D) Aerodinamics

## Part B: General Awareness

**Q16.** In aviation, the system named **RADAR**, widely used by air traffic control to locate and track aircraft, stands for:

(A) Rapid Aircraft Detection And Reporting

(B) Radio Detection And Ranging

(C) Radar Aided Direction And Routing

(D) Radio Aided Detection And Recovery

**Q17.** In India, the licences held by commercial pilots are issued and regulated by the:

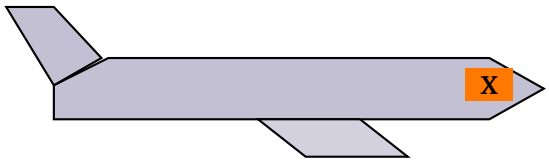
(A) DGCA (Directorate General of Civil Aviation)

(B) BCCI (Board of Control for Cricket in India)

(C) UGC (University Grants Commission)

(D) TRAI (Telecom Regulatory Authority of India)

**Q18.** In the side-view silhouette of the aircraft below, the section marked **X** at the nose is the flight deck, from which the crew operates the aircraft. This section is called the:




(Aircraft, side view)

(A) Cargo hold

(B) Galley

(C) Cockpit

(D) Empennage

**Q19.** The first human being to journey into outer space, completing one orbit of the Earth in 1961, was:

(A) Neil Armstrong

(B) Rakesh Sharma

(C) John Glenn

(D) Yuri Gagarin

**Q20.** Hindustan Aeronautics Limited (HAL), India's principal aerospace and defence manufacturer, was founded in 1940 in the city of:

(A) Bengaluru

(B) Mumbai

(C) Kolkata

(D) Hyderabad

**Q21.** The on-board device that continuously records flight parameters such as speed, altitude, and heading for later use in accident investigation is the:

(A) Transponder

(B) Flight Data Recorder

(C) Altimeter

(D) Magneto

**Q22.** When a jet engine expels exhaust gas backwards at high speed, the aircraft is pushed forward. The backward push on the gas and the forward thrust on the engine are always:

(A) in the same direction

(B) unequal in size

(C) perpendicular to each other

(D) equal in magnitude and opposite in direction

**Q23.** In the international (ICAO) phonetic alphabet used in aviation radio communication, the letter "A" is spoken as:

(A) Alpha

(B) Apple

(C) Able

(D) Adam

**Q24.** An aircraft flying straight and level at a constant speed has its four forces — lift, weight, thrust, and drag — in a state of:

(A) continuous acceleration

(B) balance (equilibrium)

(C) rapid imbalance

(D) zero lift

**Q25.** The percentage of oxygen present, by volume, in dry air at the Earth's surface is approximately:

(A) 78%

(B) 50%

(C) 21%

(D) 1%

**Q26.** In aviation radio communication, the phonetic word used for the letter "M" is:

(A) Mary

(B) Metro

(C) Mango

(D) Mike

**Q27.** **CFRP**, a strong yet lightweight material increasingly used in modern airframes, stands for:

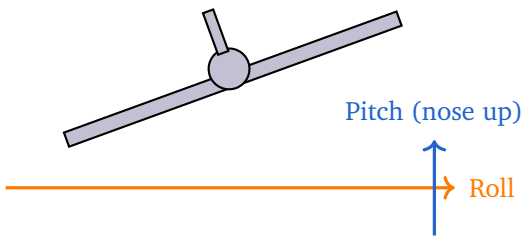
(A) Cast Ferrous Reinforced Plate

(B) Compressed Foam Rigid Panel

(C) Carbon Fibre Reinforced Polymer

(D) Coated Fibreglass Resin Plastic

**Q28.** During a climbing turn, an aircraft raises its nose and banks its wings at the same time. As shown in the figure, this combined manoeuvre involves rotation in pitch together with:




(Aircraft in a climbing bank)

(A) yaw only

(B) roll

(C) thrust reversal

(D) no further rotation

**Q29.** The thrust produced by a large aircraft engine is most commonly expressed in:

(A) kilonewtons

(B) litres

(C) degrees Celsius

(D) kilowatt-hours

**Q30.** Passenger cabins are typically pressurised to an equivalent altitude of about 8,000 ft rather than to sea level mainly because this is:

(A) the only altitude at which engines can run

(B) required to remove all oxygen from the cabin

(C) needed to make the aircraft fly faster

(D) a compromise that keeps passengers comfortable while limiting stress on the fuselage

## 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:** "Novice" means a person who is new to and inexperienced in a job or situation.

**Step 2 — Match the option:** Among the choices, "Beginner" carries exactly this sense of someone just starting out.

**Why other options are wrong:**

- Option B (Expert): The opposite — a highly skilled person.
- Option C (Veteran): Someone with long experience, the opposite of a novice.
- Option D (Instructor): A person who teaches; not a beginner.

**Final Answer:** NOVICE $\approx$ Beginner $\Rightarrow$ $\boxed{A}$

**Answer: (A)** 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:** "Victory" means success in a contest, struggle, or competition; a win.

**Step 2 — Find the opposite:** The opposite of a win is "Defeat," which means being beaten or losing.

**Why other options are wrong:**

- Option A (Triumph): A synonym of victory, not an antonym.
- Option B (Conquest): Also means a victory; a synonym.
- Option D (Success): A near-synonym, not the opposite.

**Final Answer:** VICTORY $\leftrightarrow$ Defeat $\Rightarrow$ $\boxed{C}$

**Answer: (C)** Go Back to Q2

## Q3.

**Solution**

**Concept — Fixed preposition with "congratulate":** The verb "congratulate" is followed by the preposition "on" when naming the achievement or occasion.

**Step 1 — Identify the structure:** The pattern is "congratulate (someone) on (something)."

**Step 2 — Apply it:** "Congratulated him on his success" is the standard and correct collocation.

**Why other options are wrong:**

- Option A (for): A common error; "congratulate" normally pairs with "on," not "for."
- Option B (about): Not used after "congratulate."
- Option C (with): Means accompanied by; does not fit this verb.

**Final Answer:** congratulated him on his success $\Rightarrow$ $\boxed{\text{D}}$

**Answer: (D)** Go Back to Q3

## Q4.

**Solution**

**Concept — Uncountable nouns:** Some nouns, such as "advice," are uncountable; they have no plural form and cannot take "many" with an "-s" ending.

**Step 1 — Locate the error:** The phrase "many advices" is wrong because "advice" cannot be pluralised.

**Step 2 — Apply the rule:** The correct form is "much advice" or "many pieces of advice." The error lies in part (B).

**Why other options are wrong:**

- Option A (The instructor gave): A correct subject and verb.
- Option C (before the practical test): A correct, well-formed phrase.
- Option D (No error): Incorrect, because part (B) does contain an error.

**Final Answer:** The error is "many advices" (should be "much advice") $\Rightarrow$ $\boxed{\text{B}}$

**Answer: (B)** Go Back to Q4

## Q5.

**Solution**

**Concept — Word order in "wh–" questions:** A question that begins with a question word (where, when, why…) follows the order: *question word* + *auxiliary* + *subject* + *main verb*.

**Step 1 — Identify the parts:** Question word = "Where," auxiliary = "is," subject = "the hangar," main verb = "located."

**Step 2 — Arrange them correctly:** "Where is the hangar located?" follows the required order exactly.

**Why other options are wrong:**

- Option A: Keeps the statement order ("the hangar is"); wrong for a direct question.
- Option B: Misplaces "the hangar" after the verb.
- Option D: Jumbled order that is not a valid English question.

**Final Answer:** "Where is the hangar located?" ⇒ 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 place where aircraft take off, land, and are serviced" describes a defined area or airfield for aircraft operations.

**Step 2 — Select the term:** That place is an "Aerodrome."

**Why other options are wrong:**

- Option B (Harbour): A sheltered place for ships, not aircraft.
- Option C (Terminus): The end point of a railway or bus route.
- Option D (Depot): A storehouse or station for goods and vehicles, not an airfield.

**Final Answer:** Aerodrome ⇒ 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:** "Bite the bullet" means to force oneself to do something unpleasant or to endure a hard situation with courage.

**Step 2 — Match the meaning:** The closest meaning is "To face a difficult situation bravely."

**Why other options are wrong:**

- Option A (To eat very quickly): A literal misreading of "bite."
- Option B (To make a costly mistake): Unrelated to the idiom.
- Option C (To remain completely silent): That is closer to "hold one's tongue."

**Final Answer:** bite the bullet = face difficulty bravely $\Rightarrow$ $\boxed{\text{D}}$

**Answer: (D)** 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:** The sentence itself defines the missing word as "the removable metal cover around the engine." This component is the "cowling."

**Step 2 — Select the word:** "Removed the cowling . . . to inspect the cylinders" is the accurate and meaningful choice.

**Why other options are wrong:**

- Option A (rudder): A control surface on the tail fin, not an engine cover.
- Option C (aileron): A control surface on the wing, not an engine cover.
- Option D (fuselage): The main body of the aircraft, far larger than an engine cover.

**Final Answer:** the cowling $\Rightarrow$ $\boxed{\text{B}}$

**Answer: (B)** Go Back to Q8

## Q9.

### Solution

**Concept — Active to passive (simple future):** In the passive of a simple-future sentence, the object becomes the subject, and the verb becomes "will be + past participle," with the original subject introduced by "by."

**Step 1 — Identify the parts:** Subject = "the engineer," verb = "will complete," object = "the overhaul."

**Step 2 — Build the passive:** Object first: "The overhaul" + "will be completed" + "by the engineer."

**Why other options are wrong:**

- Option A: Reverses the meaning (the overhaul completing the engineer).
- Option B (is completed): Present tense; the original sentence is future tense.
- Option D (has been completed): Present-perfect passive; the wrong tense for a future action.

**Final Answer:** "The overhaul will be completed by the engineer." ⇒ C

**Answer: (C)** Go Back to Q9

## Q10.

### Solution

**Concept — Reporting a command or prohibition:** A negative command in direct speech is reported using "ordered/told (someone) not to + base verb," and the quotation marks are removed.

**Step 1 — Identify the type of sentence:** "Do not touch the controls" is a negative command (a prohibition).

**Step 2 — Convert to reported form:** A negative command becomes "...not to ...": "He ordered me not to touch the controls."

**Why other options are wrong:**

- Option A: Keeps the direct "do not touch"; commands are not reported with "that...do not."
- Option B (that I do not touch): The wrong reporting structure for a command.
- Option C (asked why I touched): Turns it into a question and changes the meaning.

**Final Answer:** "He ordered me not to touch the controls." ⇒ D

**Answer: (D)** 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 states: "Thunderstorms are especially dangerous because they bring violent up-and-down air currents, heavy rain, and lightning."

**Step 2 — Match to an option:** This directly supports "They bring violent air currents, heavy rain, and lightning."

**Why other options are wrong:**

- Option A (engines run faster): Never mentioned in the passage.
- Option C (force aircraft to fly higher): Not stated; the passage talks about choosing a route or waiting.
- Option D (improve visibility): The opposite; storms reduce safety, and fog reduces visibility.

**Final Answer:** violent air currents, heavy rain, and lightning ⇒ 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 says a crew may "decide to wait until the weather improves" "if conditions are too severe."

**Step 2 — Match to an option:** Option A restates this exactly: they wait when the weather conditions are too severe.

**Why other options are wrong:**

- Option B (passengers are late): Not mentioned in the passage.
- Option C (fuel is fully loaded): Unrelated to the decision to wait.

- Option D (controllers off duty): The passage says controllers give in-flight updates; this is not a reason given.

**Final Answer:** the weather conditions are too severe ⇒ A

**Answer: (A)** Go Back to Q12

## Q13.

### Solution

**Concept — "Neither. . . nor" agreement:** With "neither. . . nor," the verb agrees with the subject *nearer* to it (the proximity rule).

**Step 1 — Identify the nearer subject:** The subject closer to the verb is "his colleagues," which is plural.

**Step 2 — Choose the verb:** A plural subject takes the plural verb "are."

**Why other options are wrong:**

- Option A (is): Singular; would be correct only if the nearer noun were singular.
- Option B (was): Singular and past tense; does not agree and shifts the tense.
- Option D (has been): Singular present-perfect; does not agree with "colleagues."

**Final Answer:** ". . . nor his colleagues are present." ⇒ C

**Answer: (C)** Go Back to Q13

## Q14.

### Solution

**Concept — Present perfect continuous with "since":** An action that started in the past and is still continuing is expressed with "have/has been + verb-ing," and "since" marks the starting point.

**Step 1 — Read the time marker:** "Since early morning" shows an action that began earlier and is still going on.

**Step 2 — Apply the tense:** With the plural subject "They," the correct form is "have been working."

**Why other options are wrong:**

- Option A (work): Simple present; does not show the ongoing action since morning.
- Option B (are working): Present continuous; does not connect to "since early morning."
- Option C (worked): Simple past; implies the action is finished, contradicting "since."

**Final Answer:** have been working $\Rightarrow$ 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 study of the motion of air and its effect on bodies is spelled **aerodynamics** ("aero-" + "dynamics").

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

**Why other options are wrong:**

- Option B (Aerodynemics): Wrong vowel ("-nemics" instead of "-namics").
- Option C (Areodynamics): Letters transposed ("Areo-" instead of "Aero-").
- Option D (Aerodinamics): Wrong vowel ("-dinamics" instead of "-dynamics").

**Final Answer:** Aerodynamics $\Rightarrow$ A

**Answer: (A)** Go Back to Q15

## Q16.

### Solution

**Concept — Aviation acronyms:** Many aviation systems are known by acronyms built from their working principle.

**Step 1 — Expand the abbreviation:** RADAR stands for **Radio Detection And Ranging** — it sends out radio waves and detects their reflections.

**Step 2 — Confirm the use:** Air traffic control uses radar to find the position and

range of aircraft.

**Why other options are wrong:**

- Option A: A made-up expansion that does not match the accepted term.
- Option C: Incorrect; "Direction And Routing" is not the standard expansion.
- Option D: Incorrect; "Recovery" is not part of the acronym.

**Final Answer:** Radio Detection And Ranging $\Rightarrow$ B

**Answer: (B)** Go Back to Q16

## Q17.

### Solution

**Concept — Indian civil-aviation regulator:** A national authority issues and oversees the licences of aviation personnel.

**Step 1 — Identify the body:** The **DGCA (Directorate General of Civil Aviation)** issues and regulates pilot licences in India.

**Step 2 — Confirm its scope:** The DGCA also licenses aircraft maintenance engineers and certifies aircraft.

**Why other options are wrong:**

- Option B (BCCI): The governing body for cricket, unrelated to aviation.
- Option C (UGC): Regulates higher education, not pilot licences.
- Option D (TRAI): The telecom regulator, not an aviation body.

**Final Answer:** DGCA $\Rightarrow$ A

**Answer: (A)** Go Back to Q17

## Q18.

### Solution

**Concept — Parts of the aircraft:** Each section of an aircraft has a specific name and function.

**Step 1 — Locate the marked section:** The mark X is at the *nose* of the aircraft, where the crew sits and operates the flight controls.

**Step 2 — Identify the part:** This forward flight deck is called the "cockpit."

**Why other options are wrong:**

- Option A (Cargo hold): The compartment for luggage and freight, usually below or behind the cabin.
- Option B (Galley): The on-board kitchen area for preparing food.
- Option D (Empennage): The tail assembly (fin, rudder, tailplane) at the rear, not the nose.

**Final Answer:** The nose flight deck is the cockpit $\Rightarrow$ C

**Answer: (C)** Go Back to Q18

## Q19.

### Solution

**Concept — Milestones of space flight:** The first human spaceflight is a landmark event of the twentieth century.

**Step 1 — Recall the event:** On 12 April 1961, the Soviet cosmonaut **Yuri Gagarin** orbited the Earth once aboard Vostok 1.

**Step 2 — Confirm the credit:** He was the first human being ever to travel into outer space.

**Why other options are wrong:**

- Option A (Neil Armstrong): The first person to walk on the Moon (1969), not the first in space.
- Option B (Rakesh Sharma): The first Indian in space (1984), much later.
- Option C (John Glenn): The first American to orbit the Earth (1962), after Gagarin.

**Final Answer:** Yuri Gagarin $\Rightarrow$ D

**Answer: (D)** Go Back to Q19

## Q20.

### Solution

**Concept — Indian aerospace industry:** HAL is the country's leading public-sector aircraft manufacturer.

**Step 1 — Recall the founding: Hindustan Aeronautics Limited** traces its origin to 1940, when Hindustan Aircraft was set up in **Bengaluru** (then Bangalore).

**Step 2 — Confirm the city:** HAL's headquarters and main facilities remain in Bengaluru today.

**Why other options are wrong:**

- Option B (Mumbai): A major commercial city, but not where HAL was founded.
- Option C (Kolkata): Not the founding city of HAL.
- Option D (Hyderabad): Has aerospace units, but HAL was founded in Bengaluru.

**Final Answer:** Bengaluru $\Rightarrow$ A

**Answer: (A)** Go Back to Q20

## Q21.

### Solution

**Concept — Flight recorders:** An aircraft carries recorders that capture data for accident investigation.

**Step 1 — Match device to function:** The **Flight Data Recorder (FDR)** continuously logs parameters such as speed, altitude, and heading.

**Step 2 — Confirm its purpose:** After an accident, investigators read the FDR to reconstruct the flight.

**Why other options are wrong:**

- Option A (Transponder): Replies to radar with the aircraft's identity and altitude; it does not record data.
- Option C (Altimeter): Shows altitude in the cockpit but does not store a flight history.
- Option D (Magneto): An ignition component of a piston engine, unrelated to recording.

**Final Answer:** Flight Data Recorder $\Rightarrow$ B

**Answer: (B)** Go Back to Q21

## Q22.

**Solution**

**Concept — Newton's third law:** For every action there is an equal and opposite reaction.

**Step 1 — Identify the action–reaction pair:** The engine pushes the exhaust gas backwards (action); the gas pushes the engine forwards (reaction).

**Step 2 — State the relationship:** By Newton's third law, these two forces are equal in magnitude and opposite in direction.

**Why other options are wrong:**

- Option A (same direction): Action and reaction always act in opposite directions.
- Option B (unequal in size): They are always equal in magnitude.
- Option C (perpendicular): They act along the same line, not at right angles.

**Final Answer:** equal in magnitude and opposite in direction $\Rightarrow$ $\boxed{\text{D}}$

**Answer: (D)** Go Back to Q22

## Q23.

**Solution**

**Concept — The ICAO phonetic alphabet:** To avoid confusion over the radio, each letter is spoken as a distinct code word.

**Step 1 — Recall the code word:** In the international phonetic alphabet, "A" is spoken as **Alpha**.

**Step 2 — Confirm:** The sequence begins Alpha, Bravo, Charlie, Delta, and so on.

**Why other options are wrong:**

- Option B (Apple): Not part of the ICAO alphabet.
- Option C (Able): An older military code word, replaced by "Alpha" in the ICAO system.
- Option D (Adam): Not a standard ICAO code word.

**Final Answer:** Alpha $\Rightarrow$ $\boxed{\text{A}}$

**Answer: (A)** Go Back to Q23

## Q24.

**Solution**

**Concept — Equilibrium in level flight:** When an object moves at a constant velocity, the forces on it are balanced (net force is zero).

**Step 1 — Apply to the aircraft:** In straight-and-level flight at constant speed, lift equals weight and thrust equals drag.

**Step 2 — Name the state:** With opposing forces equal, the aircraft is in a state of balance, or equilibrium.

**Why other options are wrong:**

- Option A (continuous acceleration): Would require an unbalanced net force; speed is constant here.
- Option C (rapid imbalance): Contradicts steady, level flight.
- Option D (zero lift): With zero lift the aircraft could not stay airborne; lift balances weight.

**Final Answer:** balance (equilibrium) $\Rightarrow$ B

**Answer: (B)** Go Back to Q24

## Q25.

**Solution**

**Concept — Composition of air:** Dry air is a mixture of gases in fairly fixed proportions.

**Step 1 — Recall the proportions:** Dry air is about 78% nitrogen and about **21%** oxygen, with the remaining 1% being argon and other trace gases.

**Step 2 — Select the value:** The oxygen content is approximately 21% by volume.

**Why other options are wrong:**

- Option A (78%): That is the proportion of nitrogen, not oxygen.
- Option B (50%): Far too high; air is not half oxygen.
- Option D (1%): That is roughly the share of argon and other trace gases.

**Final Answer:** 21% $\Rightarrow$ C

**Answer: (C)** Go Back to Q25

## Q26.

**Solution**

**Concept — The ICAO phonetic alphabet:** Each letter has one fixed spoken code word for clear radio communication.

**Step 1 — Recall the code word:** The standard phonetic word for the letter "M" is **Mike**.

**Step 2 — Confirm:** The sequence around it is Lima (L), Mike (M), November (N).

**Why other options are wrong:**

- Option A (Mary): An older or informal code word, not the ICAO standard.
- Option B (Metro): Not part of the ICAO alphabet.
- Option C (Mango): Not a standard ICAO code word.

**Final Answer:** Mike $\Rightarrow$ $\boxed{\text{D}}$

**Answer: (D)** Go Back to Q26

## Q27.

**Solution**

**Concept — Modern airframe materials:** Advanced composites are replacing metals in aircraft structures.

**Step 1 — Expand the abbreviation:** CFRP stands for **Carbon Fibre Reinforced Polymer** — carbon fibres set in a plastic (polymer) matrix.

**Step 2 — Confirm its use:** CFRP offers a high strength-to-weight ratio, making aircraft lighter and more fuel-efficient.

**Why other options are wrong:**

- Option A: "Cast Ferrous Reinforced Plate" is not the meaning of CFRP.
- Option B: "Compressed Foam Rigid Panel" is incorrect.
- Option D: "Coated Fibreglass Resin Plastic" is incorrect; the key word is "Carbon."

**Final Answer:** Carbon Fibre Reinforced Polymer $\Rightarrow$ $\boxed{\text{C}}$

**Answer: (C)** Go Back to Q27

## Q28.

**Solution**

**Concept — The three axes of aircraft rotation:** An aircraft can rotate in pitch (about the lateral axis), roll (about the longitudinal axis), and yaw (about the vertical axis).

**Step 1 — Break down the manoeuvre:** A climbing turn raises the nose (a pitch motion) and banks the wings at the same time.

**Step 2 — Name the banking motion:** Banking the wings is rotation about the longitudinal axis, which is called **roll**. So a climbing turn combines pitch with roll.

**Why other options are wrong:**

- Option A (yaw only): Banking the wings is roll, not yaw; yaw alone does not bank the aircraft.
- Option C (thrust reversal): Thrust reversal is a braking action on the ground, not a rotation.
- Option D (no further rotation): The wings clearly bank, so additional rotation is present.

**Final Answer:** pitch together with roll $\Rightarrow$ $\boxed{\text{B}}$

**Answer: (B)** Go Back to Q28

## Q29.

**Solution**

**Concept — Units of thrust:** Thrust is a force, so it is measured in units of force.

**Step 1 — Recall the unit of force:** The SI unit of force is the newton; large engine thrust is conveniently stated in **kilonewtons** (1 kN = 1000 N).

**Step 2 — Apply to engines:** A modern airliner engine may produce hundreds of kilonewtons of thrust.

**Why other options are wrong:**

- Option B (litres): A unit of volume, used for fuel, not force.
- Option C (degrees Celsius): A unit of temperature.
- Option D (kilowatt-hours): A unit of energy, not force.

**Final Answer:** kilonewtons $\Rightarrow$ $\boxed{\text{A}}$

**Answer: (A)** Go Back to Q29

## Q30.

**Solution**

**Concept — Cabin pressurization design:** The cabin is pressurised, but only to a moderate level rather than full sea-level pressure.

**Step 1 — Identify the trade-off:** Pressurising the cabin to sea level would force a very large pressure difference across the fuselage skin, increasing structural stress and weight.

**Step 2 — Explain the chosen value:** An equivalent altitude of about 8,000 ft is a compromise: passengers stay comfortable and can breathe normally, while the stress on the fuselage stays within safe limits.

**Why other options are wrong:**

- Option A (only altitude engines run): Engines run independently of cabin pressure.
- Option B (remove all oxygen): The opposite; the cabin must keep enough oxygen for breathing.
- Option C (fly faster): Cabin pressure does not control the aircraft's speed.

**Final Answer:** a comfort-versus-fuselage-stress compromise $\Rightarrow$ $\boxed{\text{D}}$

**Answer: (D)** Go Back to Q30

# Answer Key

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