AME CET English & General Awareness

Sample Paper – 9

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: **ROBUST**

(A) Fragile

(B) Tiny

(C) Sturdy

(D) Faint

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

(A) Moist

(B) Dry

(C) Damp

(D) Wet

Q3. Fill in the blank with the correct preposition: "This model is superior _____ the older one in fuel efficiency."

(A) to

(B) than

(C) from

(D) over

Q4. Identify the part of the sentence that contains an error. If there is no error, mark (D).
He prefers (A) *a cup of strong tea* (B) *than coffee in the morning.* (C) *No error* (D)

(A) He prefers

(B) a cup of strong tea

(C) than coffee in the morning

(D) No error

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

(A) If I was you, I would take the safety course.

(B) If I am you, I would take the safety course.

(C) If I would be you, I would take the safety course.

(D) If I were you, I would take the safety course.

Q6. Choose the single word for the phrase: "A document listing the cargo or passengers carried by an aircraft."

(A) Receipt

(B) Manifest

(C) Invoice

(D) Brochure

Q7. What does the idiom "**on cloud nine**" mean?

(A) Extremely happy

(B) Flying very high

(C) Feeling confused

(D) Completely lost

Q8. Fill in the blank with the most appropriate word: "Using the on-board computer, the engineer was able to quickly _____ the fault in the hydraulic system."

(A) disguise

(B) dissolve

(C) diagnose

(D) dismiss

Q9. Choose the correct **active voice** form of: "The aircraft was serviced by the engineer."

(A) The engineer serviced the aircraft.

(B) The engineer services the aircraft.

(C) The engineer has serviced the aircraft.

(D) The aircraft serviced the engineer.

Q10. Choose the correct **indirect (reported) speech** form of: He said to me, "Please help me with the toolkit."

(A) He said that please help him with the toolkit.

(B) He requested me to help him with the toolkit.

(C) He requested me that I help him with the toolkit.

(D) He told me please to help him with the toolkit.

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

An unmanned aerial vehicle, commonly called a drone, is an aircraft that flies without a pilot on board. Instead, it is controlled remotely by an operator on the ground or guided by an on-board computer following a pre-programmed route. Drones were first developed for military reconnaissance, but today they are widely used for surveying land, photographing crops, inspecting tall structures, and delivering small packages. Because they share the same airspace as piloted aircraft, their flights are tightly regulated, and operators must usually register their drones and keep them within sight.

Q11. According to the passage, what is the defining feature of an unmanned aerial vehicle?

(A) It is larger than an ordinary aircraft

(B) It flies without a pilot on board

(C) It can only fly at night

(D) It carries no fuel

Q12. (Based on the passage above.) According to the passage, drone flights are tightly regulated because drones:

(A) are far too expensive to operate

(B) are used only by the military

(C) cannot take any photographs

(D) share the same airspace as piloted aircraft

Q13. Fill in the blank with the correct verb: "Both the engines _____ running smoothly during the test."

(A) is

(B) are

(C) was

(D) has been

Q14. Fill in the blank with the correct expression: "Before becoming an engineer, he _____ work as an aircraft cleaner."

(A) is used to

(B) was using to

(C) used to

(D) uses to

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

(A) Reconnaissance

(B) Reconaissance

(C) Reconnaisance

(D) Reconnaissence

Part B: General Awareness

Q16. In aviation navigation, the ground-based radio aid abbreviated **VOR** stands for:

(A) Variable Omni Receiver

(B) VHF Omnidirectional Range

(C) Visual Orientation Radar

(D) Vertical Operating Range

Q17. Air Traffic Control keeps a safe distance between aircraft in flight. This separation is maintained mainly to prevent:

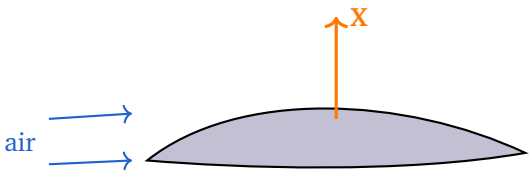
(A) excessive fuel consumption

(B) engine overheating

(C) mid-air collisions

(D) radio interference

Q18. The cross-section of a wing (an airfoil) is shown below, with air flowing across it. Its curved upper surface and flatter lower surface make the air move faster over the top, lowering the pressure there. The upward force **X** produced as a result is called:



(Airfoil cross-section)

(A) Drag

(B) Thrust

(C) Weight

(D) Lift

Q19. The first artificial satellite, launched into orbit in 1957, was named:

(A) Sputnik 1

(B) Apollo 1

(C) Explorer 1

(D) Aryabhata

Q20. The national flag carrier airline of India is:

(A) SpiceJet

(B) IndiGo

(C) Air India

(D) GoAir

Q21. The gyroscopic cockpit instrument that shows the **rate of turn** and whether the turn is properly balanced (coordinated) is the:

(A) Altimeter

(B) Airspeed indicator

(C) Fuel gauge

(D) Turn coordinator

Q22. A propeller blade is shaped like a small rotating wing. As it spins, it produces thrust by generating:

(A) friction against the air

(B) lift directed forward

(C) magnetic force

(D) static electricity

Q23. ISRO's main satellite launch centre, located at Sriharikota, lies in the Indian state of:

(A) Andhra Pradesh

(B) Kerala

(C) Tamil Nadu

(D) Odisha

Q24. The angle between the chord line of a wing and the direction of the oncoming airflow is known as the:

(A) bank angle

(B) glide angle

(C) angle of attack

(D) dihedral angle

Q25. When hydrocarbon jet fuel burns completely with oxygen in the engine, the main products formed are:

(A) nitrogen and helium

(B) carbon dioxide and water

(C) hydrogen and ozone

(D) carbon and sulphur

Q26. The internationally recognised distress signal transmitted in Morse code (dot-dot-dot, dash-dash-dash, dot-dot-dot) is:

(A) PAN

(B) TXT

(C) ETA

(D) SOS

Q27. **GPS**, the satellite-based system widely used for aircraft navigation and position-finding, stands for:

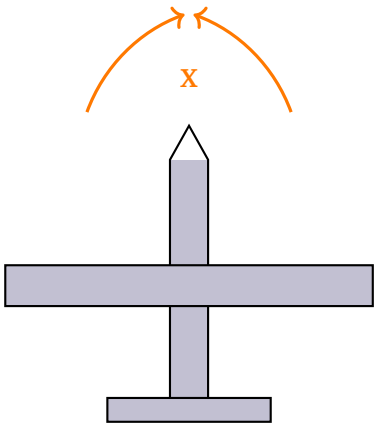
(A) Global Positioning System

(B) Ground Path Sensor

(C) General Pilot Service

(D) Geographic Plotting Setup

Q28. The figure shows an aircraft, viewed from above, whose nose swings repeatedly to the left and right. This side-to-side oscillation is a rotation (**X**) about its **vertical axis**, and is called:



(Aircraft, top view)

(A) Roll

(B) Pitch

(C) Yaw

(D) Thrust

Q29. Aircraft speed is often expressed in **knots**. One knot is equal to a speed of:

(A) one kilometre per hour

(B) one mile per minute

(C) one metre per second

(D) one nautical mile per hour

Q30. Modern airliners increasingly use carbon-fibre composite materials in place of aluminium mainly because composites are:

(A) cheaper than any metal

(B) better electrical conductors

(C) easier to melt and recycle

(D) lighter and resistant to corrosion

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: "Robust" means strong, tough, and able to withstand hard use or rough conditions.

Step 2 — Match the option: Among the choices, "Sturdy" carries exactly this sense of being strongly and solidly built.

Why other options are wrong:

- Option A (Fragile): The opposite of robust — it means easily broken.
- Option B (Tiny): Refers to small size, not strength.
- Option D (Faint): Means weak or barely perceptible; unrelated to toughness.

Final Answer: ROBUST $\approx$ Sturdy $\Rightarrow$ 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: "Humid" means containing a lot of moisture or water vapour in the air; damp.

Step 2 — Find the opposite: The opposite of moist and damp is "Dry," which means free from moisture.

Why other options are wrong:

- Option A (Moist): A synonym, not an antonym.
- Option C (Damp): A synonym, not an antonym.
- Option D (Wet): A synonym, not an antonym.

Final Answer: HUMID $\leftrightarrow$ Dry $\Rightarrow$ B

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Prepositions with comparative adjectives: A small group of Latin-derived comparatives — "superior," "inferior," "senior," "junior," "prior" — are followed by the preposition "to," never by "than."

Step 1 — Identify the adjective: The sentence uses "superior," which already carries a comparative meaning ("better than").

Step 2 — Choose the matching preposition: "Superior" is always paired with "to," giving "superior to the older one."

Why other options are wrong:

- Option B (than): A common error; "than" is used with ordinary comparatives like "better," not with "superior."
- Option C (from): Used with "different," not "superior."
- Option D (over): Does not form the fixed phrase "superior to."

Final Answer: superior to the older one $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — The verb "prefer": The verb "prefer" takes the preposition "to" when comparing two things, not "than."

Step 1 — Locate the error: Part (C) reads "than coffee," but "prefer" must be followed by "to."

Step 2 — Apply the rule: The correct form is "prefers tea to coffee," so the error lies in part (C).

Why other options are wrong:

- Option A (He prefers): A correct subject and verb.
- Option B (a cup of strong tea): A correct object phrase.
- Option D (No error): Incorrect, because part (C) does contain a clear preposition error.

Final Answer: The error is "than coffee" (should be "to coffee") $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q4

Q5.

Solution

Concept — The unreal conditional (second conditional): To talk about a present situation that is imaginary or contrary to fact, English uses "If + past subjunctive (were) ... would + base verb." With "be," the subjunctive form is "were" for all subjects.

Step 1 — Identify the structure: The sentence imagines being someone else, which is contrary to fact, so it needs the subjunctive "were."

Step 2 — Apply the rule: "If I were you, I would take the safety course" uses "were" in the if-clause and "would + take" in the main clause.

Why other options are wrong:

- Option A (If I was you): Uses "was"; standard usage requires the subjunctive "were" here.
- Option B (If I am you): Uses the present tense, which does not match the unreal "would" clause.
- Option C (If I would be you): "Would" should not appear in the if-clause of a conditional.

Final Answer: "If I were you, I would take the safety course." $\Rightarrow$ D

Answer: (D) 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 document listing the cargo or passengers carried by an aircraft" is the official record of everything on board.

Step 2 — Select the term: That document is a "Manifest" (a cargo manifest or passenger manifest).

Why other options are wrong:

- Option A (Receipt): Proof of a single payment, not a list of all cargo or passengers.
- Option C (Invoice): A bill requesting payment for goods or services.
- Option D (Brochure): An advertising or information booklet.

Final Answer: Manifest $\Rightarrow$ B

Answer: (B) 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: "On cloud nine" describes a state of great joy or delight, as if floating happily above everything.

Step 2 — Match the meaning: The closest meaning is "Extremely happy."

Why other options are wrong:

- Option B (Flying very high): A literal misreading of "cloud"; the idiom is about emotion, not altitude.
- Option C (Feeling confused): Unrelated; that sense belongs to other idioms.
- Option D (Completely lost): Describes confusion, not happiness.

Final Answer: on cloud nine = extremely happy $\Rightarrow$ A

Answer: (A) 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 find the cause of a fault in a system is to "diagnose" it, just as a doctor diagnoses an illness.

Step 2 — Select the word: "Diagnose the fault" is the natural and meaningful collocation.

Why other options are wrong:

- Option A (disguise): To hide or change appearance, not to find a cause.
- Option B (dissolve): To make something break up in a liquid.
- Option D (dismiss): To send away or reject; not to identify a fault.

Final Answer: diagnose the fault $\Rightarrow$ C

Answer: (C) Go Back to Q8

Q9.

Solution

Concept — Passive to active (simple past): To turn a passive sentence into the active voice, the "by" agent becomes the subject, the object returns after the verb, and "was + past participle" becomes the plain past-tense verb.

Step 1 — Identify the parts: In "The aircraft was serviced by the engineer," the agent is "the engineer," the verb is "was serviced," and the object is "the aircraft."

Step 2 — Build the active form: Subject first: "The engineer" + past-tense verb "serviced" + object "the aircraft."

Why other options are wrong:

- Option B (services): Present tense; the original is past tense.
- Option C (has serviced): Present perfect; changes the tense of the original.
- Option D: Reverses the meaning (the aircraft servicing the engineer).

Final Answer: "The engineer serviced the aircraft." $\Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Reporting a request: A polite command or request beginning with "please" is reported using a verb such as "requested" (or "asked") followed by an object and a "to + base verb" infinitive — not by "that."

Step 1 — Choose the reporting verb: Because the speaker says "please," the appropriate reporting verb is "requested."

Step 2 — Form the infinitive and adjust pronouns: "Help me" becomes "to help him," since "me" (the speaker) becomes "him." This gives "He requested me to help him with the toolkit."

Why other options are wrong:

- Option A: Keeps the word "please" and the imperative, which is wrong in reported speech.
- Option C: Uses "that I help," an awkward structure; requests take the "to"-infinitive.

- Option D: Retains "please" and is ungrammatical.

Final Answer: "He requested me to help him with the toolkit." $\Rightarrow$ B

Answer: (B) 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 an unmanned aerial vehicle "is an aircraft that flies without a pilot on board."

Step 2 — Match to an option: This directly supports "It flies without a pilot on board."

Why other options are wrong:

- Option A (larger than an ordinary aircraft): Not stated; many drones are in fact small.
- Option C (only fly at night): Never mentioned in the passage.
- Option D (carries no fuel): Not stated; the passage says nothing about fuel.

Final Answer: It flies without a pilot on board $\Rightarrow$ 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 says drone flights are tightly regulated "because they share the same airspace as piloted aircraft."

Step 2 — Match to an option: Option D repeats this reason exactly.

Why other options are wrong:

- Option A (too expensive): Cost is never given as the reason for regulation.
- Option B (only by the military): The passage says drones were *first* military but are now widely used elsewhere.

- Option C (cannot take photographs): Contradicts the passage, which lists photographing crops as a use.

Final Answer: they share the same airspace as piloted aircraft $\Rightarrow$ D

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Subject–verb agreement with "both": The word "both" always refers to two things and therefore takes a *plural* verb.

Step 1 — Identify the subject: "Both the engines" is a plural subject (it points to two engines).

Step 2 — Choose the verb: A plural subject takes the plural verb "are," giving "Both the engines are running smoothly."

Why other options are wrong:

- Option A (is): Singular; does not agree with the plural "both."
- Option C (was): Singular and past tense; does not agree and changes the tense.
- Option D (has been): Singular present-perfect; does not agree with "both the engines."

Final Answer: "Both the engines are running smoothly." $\Rightarrow$ B

Answer: (B) Go Back to Q13

Q14.

Solution

Concept — "Used to" for past habits: The fixed expression "used to + base verb" describes a habit or state that existed in the past but no longer continues.

Step 1 — Identify the meaning: The sentence describes what he did "before becoming an engineer" — a past habit that has stopped.

Step 2 — Apply the form: The correct form is "used to work," with the base verb "work" after "used to."

Why other options are wrong:

- Option A (is used to): Means "is accustomed to" and would need a verb ending in "-ing," not a past habit.
- Option B (was using to): Not a valid English structure.
- Option D (uses to): Incorrect; "used to" for past habit is always in the past form.

Final Answer: used to work ⇒ C

Answer: (C) Go Back to Q14

Q15.

Solution

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

Step 1 — Recall the correct form: The word meaning a survey to gather information (often military or aerial) is spelled **reconnaissance** — double "n" (*reconn-*), double "s" (*-aiss-*), ending in "-ance."

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

Why other options are wrong:

- Option B (Reconaissance): Missing one "n."
- Option C (Reconnaisance): Missing one "s."
- Option D (Reconnaissence): Wrong ending ("-ence" instead of "-ance").

Final Answer: Reconnaissance ⇒ A

Answer: (A) Go Back to Q15

Q16.

Solution

Concept — Radio navigation aids: Aircraft use ground-based radio beacons to fix their direction and position.

Step 1 — Expand the abbreviation: VOR stands for **VHF Omnidirectional Range** — a beacon that transmits on the Very High Frequency band and lets an aircraft determine its bearing to or from the station.

Step 2 — Confirm the role: "Omnidirectional" means it sends signals usable from

every direction, which is exactly how a VOR works.

Why other options are wrong:

- Option A (Variable Omni Receiver): Not the correct expansion; a VOR is a transmitting beacon, not a receiver.
- Option C (Visual Orientation Radar): VOR is a radio navigation aid, not a visual radar.
- Option D (Vertical Operating Range): Has no connection to the term VOR.

Final Answer: VHF Omnidirectional Range $\Rightarrow$ B

Answer: (B) Go Back to Q16

Q17.

Solution

Concept — Purpose of air traffic control: ATC manages the flow of aircraft so that they remain safely separated in the sky.

Step 1 — Identify the main aim: Keeping aircraft a safe distance apart in flight is designed above all to prevent **mid-air collisions** between them.

Step 2 — Confirm: Separation standards (minimum horizontal and vertical distances) exist precisely so two aircraft never occupy the same space.

Why other options are wrong:

- Option A (fuel consumption): Efficient routing may save fuel, but it is not the main reason for separation.
- Option B (engine overheating): Spacing between aircraft has nothing to do with engine temperature.
- Option D (radio interference): Radio channels are managed separately; separation is about physical safety.

Final Answer: to prevent mid-air collisions $\Rightarrow$ C

Answer: (C) Go Back to Q17

Q18.

Solution

Concept — How a wing creates lift: An airfoil is shaped so that air moves faster over its curved upper surface than along its flatter lower surface. By Bernoulli's principle, the faster flow has lower pressure, so the higher pressure beneath pushes the wing upward.

Step 1 — Read the figure: The arrow X points straight up from the airfoil, representing the net upward force produced by the pressure difference.

Step 2 — Name the force: This upward aerodynamic force is called **lift**.

Why other options are wrong:

- Option A (Drag): Acts backward, opposing motion, not upward.
- Option B (Thrust): Acts forward and is produced by the engine, not by the wing's shape.
- Option C (Weight): Acts downward due to gravity; it is what lift must overcome.

Final Answer: The upward force on the airfoil is lift $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q18

Q19.

Solution

Concept — Dawn of the space age: The launch of the first artificial satellite marked the start of human space exploration.

Step 1 — Recall the event: On 4 October 1957, the Soviet Union launched **Sputnik 1**, the first artificial satellite to orbit the Earth.

Step 2 — Confirm: Sputnik 1 was a small metal sphere that transmitted radio beeps and circled the planet, beginning the space age.

Why other options are wrong:

- Option B (Apollo 1): A 1967 US crewed mission, not the first satellite.
- Option C (Explorer 1): The first US satellite (1958), launched after Sputnik 1.
- Option D (Aryabhata): India's first satellite, launched in 1975.

Final Answer: Sputnik 1 $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q19

Q20.

Solution

Concept — National flag carrier: A flag carrier is the airline that officially represents a country in international aviation.

Step 1 — Identify the airline: Air India is the national flag carrier of India, tracing its origins to Tata Airlines of 1932.

Step 2 — Confirm: It operates major domestic and international routes under the national identity of India.

Why other options are wrong:

- Option A (SpiceJet): A private low-cost carrier, not the flag carrier.
- Option B (IndiGo): A private low-cost airline, the largest by market share but not the flag carrier.
- Option D (GoAir): A private low-cost airline (later GoFirst), not the national carrier.

Final Answer: Air India $\Rightarrow$ C

Answer: (C) Go Back to Q20

Q21.

Solution

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

Step 1 — Match instrument to function: The **turn coordinator** is a gyroscopic instrument that shows the rate at which the aircraft is turning and whether the turn is balanced (coordinated).

Step 2 — Confirm: Its miniature aircraft symbol indicates the rate of turn, while a ball shows whether the turn is properly coordinated.

Why other options are wrong:

- Option A (Altimeter): Measures altitude, not turn rate.
- Option B (Airspeed indicator): Measures speed through the air.
- Option C (Fuel gauge): Shows the quantity of fuel remaining.

Final Answer: Turn coordinator $\Rightarrow$ D

Answer: (D) Go Back to Q21

Q22.

Solution

Concept — The propeller as a rotating wing: Each propeller blade has an airfoil cross-section, just like a wing. As the blade spins through the air, the same pressure difference that lifts a wing acts on the blade.

Step 1 — Apply the airfoil idea: Because the blade is angled and spinning, the aerodynamic force it generates points in the forward direction of flight rather than straight up.

Step 2 — Name the result: This forward-directed lift is what we call the propeller's thrust.

Why other options are wrong:

- Option A (friction against the air): Friction (drag) opposes motion; it does not produce useful thrust.
- Option C (magnetic force): A propeller produces no magnetic force.
- Option D (static electricity): Static charge may build up but does not generate thrust.

Final Answer: lift directed forward $\Rightarrow$ B

Answer: (B) Go Back to Q22

Q23.

Solution

Concept — India's space launch facility: ISRO launches its satellites from a dedicated coastal spaceport.

Step 1 — Recall the location: ISRO's main launch centre (the Satish Dhawan Space Centre) is at **Sriharikota**, an island on India's east coast.

Step 2 — Identify the state: Sriharikota lies in the state of **Andhra Pradesh**.

Why other options are wrong:

- Option B (Kerala): Home to the Thumba sounding-rocket station, not the main satellite launch centre.

- Option C (Tamil Nadu): Sriharikota is just outside Tamil Nadu, but the launch centre is in Andhra Pradesh.
- Option D (Odisha): Hosts a missile test range, not ISRO's satellite launch centre.

Final Answer: Andhra Pradesh $\Rightarrow$ A

Answer: (A) Go Back to Q23

Q24.

Solution

Concept — Angle of attack: The behaviour of a wing depends on its orientation to the air flowing over it.

Step 1 — Define the angle: The **angle of attack** is the angle between the wing's chord line (the straight line from leading edge to trailing edge) and the direction of the oncoming air.

Step 2 — Note its importance: Increasing the angle of attack increases lift, up to the critical angle at which the wing stalls.

Why other options are wrong:

- Option A (bank angle): The angle of roll of the whole aircraft, not the chord-to-airflow angle.
- Option B (glide angle): The angle of the descent path relative to the ground.
- Option D (dihedral angle): The upward angle of the wings as seen from the front; a fixed design feature.

Final Answer: angle of attack $\Rightarrow$ C

Answer: (C) Go Back to Q24

Q25.

Solution

Concept — Complete combustion of a hydrocarbon: Jet fuel (kerosene) is a hydrocarbon, made of carbon and hydrogen. When it burns completely in oxygen, the carbon forms carbon dioxide and the hydrogen forms water.

Step 1 — Write the idea: Hydrocarbon + oxygen $\rightarrow$ carbon dioxide + water (with heat released).

Step 2 — Identify the products: The main products are therefore **carbon dioxide and water (vapour)**.

Why other options are wrong:

- Option A (nitrogen and helium): These are not products of burning fuel.
- Option C (hydrogen and ozone): Hydrogen is a reactant component, not a product of complete burning.
- Option D (carbon and sulphur): Free carbon (soot) appears only in *incomplete* combustion, not complete combustion.

Final Answer: carbon dioxide and water $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q25

Q26.

Solution

Concept — The international distress signal: A single universally understood code is used to call for emergency help.

Step 1 — Recall the Morse pattern: Three dots, three dashes, three dots ($\cdots$ — $\cdots$) is the recognised distress signal **SOS**.

Step 2 — Confirm: SOS was chosen because the pattern is simple and unmistakable; it is not actually an abbreviation of any words.

Why other options are wrong:

- Option A (PAN): "Pan-Pan" is a spoken urgency call, not the Morse distress signal.
- Option B (TXT): Not a distress signal at all.
- Option C (ETA): Means "estimated time of arrival," unrelated to distress.

Final Answer: SOS $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q26

Q27.

Solution

Concept — Satellite navigation: Modern aircraft fix their position using signals from a constellation of satellites.

Step 1 — Expand the abbreviation: GPS stands for **Global Positioning System**, a network of satellites that lets a receiver calculate its exact latitude, longitude, and altitude.

Step 2 — Confirm the use: Aircraft use GPS for en-route navigation and approach guidance.

Why other options are wrong:

- Option B (Ground Path Sensor): Not the meaning of GPS.
- Option C (General Pilot Service): A made-up phrase, not the correct expansion.
- Option D (Geographic Plotting Setup): Incorrect expansion of the abbreviation.

Final Answer: Global Positioning System $\Rightarrow$ 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 — Read the figure: The nose swings left and right in the horizontal plane (top view), which is rotation about the *vertical* axis, marked X.

Step 2 — Name the motion: Rotation about the vertical axis, which turns the nose side to side, is called **yaw** (controlled by the rudder).

Why other options are wrong:

- Option A (Roll): Rotation about the longitudinal (nose-to-tail) axis, controlled by the ailerons.
- Option B (Pitch): Rotation about the lateral (wingtip-to-wingtip) axis, controlled by the elevators.
- Option D (Thrust): A force, not a rotation about an axis.

Final Answer: Yaw $\Rightarrow$ C

Answer: (C) Go Back to Q28

Q29.

Solution

Concept — The knot as a unit of speed: Aviation and marine navigation measure speed in knots rather than km/h.

Step 1 — Define the knot: One **knot** is a speed of one **nautical mile per hour** (a nautical mile is about 1.852 km).

Step 2 — Confirm: Because navigation charts use nautical miles, expressing speed in knots keeps distance and speed in matching units.

Why other options are wrong:

- Option A (one kilometre per hour): A knot is faster than 1 km/h (about 1.852 km/h).
- Option B (one mile per minute): Far larger than a knot.
- Option C (one metre per second): A different unit; a knot is roughly 0.514 m/s.

Final Answer: one nautical mile per hour $\Rightarrow$ D

Answer: (D) Go Back to Q29

Q30.

Solution

Concept — Composite materials in aircraft: Carbon-fibre reinforced polymers combine very high strength with very low weight.

Step 1 — Identify the main advantage: Composites are **lighter** than aluminium for the same strength, and unlike metal they do not rust or corrode.

Step 2 — Link to benefit: Lower weight means lower fuel burn, while corrosion resistance reduces maintenance and extends service life.

Why other options are wrong:

- Option A (cheaper than any metal): Composites are generally more expensive to produce, not cheaper.

- Option B (better electrical conductors): Composites conduct electricity poorly, which actually complicates lightning protection.
- Option C (easier to melt and recycle): Composites are harder to recycle than aluminium, not easier.

Final Answer: lighter and resistant to corrosion $\Rightarrow$ $\boxed{D}$

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