AME CET English & General Awareness

Sample Paper – 5

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: **RAPID**

(A) Slow

(B) Steady

(C) Gentle

(D) Swift

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

(A) Real

(B) Authentic

(C) Fake

(D) Sincere

Q3. Fill in the blank with the correct preposition: "The success of the test flight depends _____ the weather."

(A) at

(B) on

(C) of

(D) in

Q4. Identify the part of the sentence that contains an error. If there is no error, mark (D).
The news (A) *about the delayed flight* (B) *are very disturbing today.* (C) *No error* (D)

(A) The news

(B) about the delayed flight

(C) are very disturbing today

(D) No error

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

(A) The new jet is taller than the old one.

(B) The new jet is more taller than the old one.

(C) The new jet is most taller than the old one.

(D) The new jet is taller more than the old one.

Q6. Choose the single word for the phrase: "A person trained to travel in a spacecraft."

(A) Navigator

(B) Astronaut

(C) Engineer

(D) Surveyor

Q7. What does the idiom "**under the weather**" mean?

(A) Caught in a storm

(B) Extremely busy

(C) Very fortunate

(D) Feeling unwell

Q8. Fill in the blank with the most appropriate word: "A frayed cable in the cockpit is a serious safety _____ that must be reported at once."

(A) hazard

(B) hazel

(C) harbour

(D) harvest

Q9. Choose the correct **passive voice** form of: "The technician repaired the wing."

(A) The wing is repaired by the technician.

(B) The wing repairs the technician.

(C) The wing was repaired by the technician.

(D) The wing has repaired by the technician.

Q10. Choose the correct **indirect (reported) speech** form of: She said, "I am reading a book."

(A) She said that I was reading a book.

(B) She said that she was reading a book.

(C) She said that she is reading a book.

(D) She says that she was reading a book.

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

The story of human flight is one of steady progress. It began in 1783 with hot-air balloons, which could rise into the sky but drifted wherever the wind carried them. During the nineteenth century, pioneers built gliders that could be steered, but these had no engine of their own. The real breakthrough came in 1903, when the Wright Flyer became the first powered aircraft to make a sustained and controlled flight. From that single short hop, aviation advanced rapidly, and within a few decades engineers had developed the jet engine, which made today's fast, long-distance airliners possible.

Q11. Which of the following best states the main idea of the passage?

(A) Balloons are the safest way to travel.

(B) Gliders are better than powered aircraft.

(C) Human flight developed gradually from balloons to modern jets.

(D) The jet engine was invented before the Wright Flyer.

Q12. (Based on the passage above.) According to the passage, the first powered aircraft to make a sustained and controlled flight was the:

(A) Wright Flyer

(B) hot-air balloon

(C) nineteenth-century glider

(D) modern jet airliner

Q13. Fill in the blank with the correct verb: "Either the pilot or the co-pilot _____ to be present in the cockpit at all times."

(A) have

(B) were

(C) are

(D) has

Q14. Fill in the blank with the correct verb form for a scheduled future event: "The flight _____ at 6 p.m. tomorrow, so please reach the airport early."

(A) left

(B) is leaving

(C) has left

(D) will have left

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

(A) Aeronotics

(B) Aeranautics

(C) Aeronautics

(D) Aeronautices

Part B: General Awareness

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

(A) International Air Transport Association

(B) Indian Air Travel Authority

(C) International Aircraft Testing Agency

(D) Internal Aviation Traffic Administration

Q17. In India, the bureau primarily responsible for **civil aviation security** (such as airport screening standards) is the:

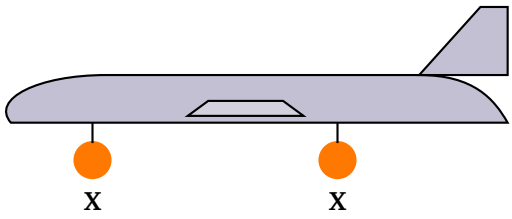
(A) DGCA (Directorate General of Civil Aviation)

(B) BCAS (Bureau of Civil Aviation Security)

(C) AAI (Airports Authority of India)

(D) ISRO (Indian Space Research Organisation)

Q18. In the side-view diagram of the aircraft below, the wheeled assembly marked **X** beneath the fuselage and wings is the landing gear (undercarriage). Its main function is to:



(Aircraft, side view)

(A) generate lift during cruise

(B) control the direction of the aircraft in the air

(C) store the aircraft's fuel

(D) support the aircraft on the ground and absorb the shock of landing

Q19. The first woman to fly solo across the Atlantic Ocean, in 1932, was:

(A) Indira Gandhi

(B) Valentina Tereshkova

(C) Amelia Earhart

(D) Kalpana Chawla

Q20. The **Indian Air Force** was officially established in which year?

(A) 1912

(B) 1932

(C) 1947

(D) 1965

Q21. The simple magnetic cockpit instrument that shows the aircraft's heading (direction) relative to magnetic north is the:

(A) Magnetic compass

(B) Altimeter

(C) Tachometer

(D) Fuel gauge

Q22. A rocket rises because it expels hot gases downward and the gases push it upward with an equal and opposite force. The scientist whose third law of motion explains this is:

(A) Archimedes

(B) Blaise Pascal

(C) Daniel Bernoulli

(D) Isaac Newton

Q23. The Wright brothers made the first powered aeroplane flight in 1903 in which country?

(A) United Kingdom

(B) France

(C) United States

(D) Germany

Q24. Among the four forces of flight, the downward force acting on an aircraft due to gravity is called:

(A) Lift

(B) Weight

(C) Thrust

(D) Drag

Q25. Which lighter-than-air, non-flammable gas is commonly used to fill weather balloons so that they rise into the atmosphere?

(A) Helium

(B) Oxygen

(C) Carbon dioxide

(D) Chlorine

Q26. The international radio call used by aircraft to signal an **urgency** situation that is serious but not an immediate, life-threatening emergency (less severe than "Mayday") is:

(A) Mayday

(B) Roger

(C) Pan-Pan

(D) Wilco

Q27. **DRDO**, the premier Indian agency that develops defence technology and systems, stands for:

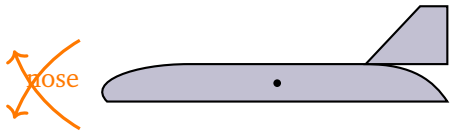
(A) Defence Reserve and Deployment Organisation

(B) Directorate of Research and Defence Operations

(C) Defence Resources Development Office

(D) Defence Research and Development Organisation

Q28. The figure shows an aircraft whose nose is moving up and down. This nose-up / nose-down motion, controlled by the elevators, is a rotation about the **lateral axis** and is called:



Pitch about the lateral axis

(A) Roll

(B) Pitch

(C) Yaw

(D) Thrust

Q29. The SI unit of **frequency**, used for example to express the frequency of radio communication signals, is the:

(A) Hertz

(B) Newton

(C) Pascal

(D) Watt

Q30. Pilots flying unpressurised aircraft above a certain altitude must breathe supplemental oxygen mainly because at high altitude the air is:

(A) too rich in oxygen for the lungs

(B) too warm to breathe comfortably

(C) too humid and heavy

(D) too thin, with a low partial pressure of oxygen

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: "Rapid" means happening or moving very quickly; fast.

Step 2 — Match the option: Among the choices, "Swift" carries exactly this sense of great speed.

Why other options are wrong:

- Option A (Slow): The direct opposite of rapid.
- Option B (Steady): Means constant or unchanging, not fast.
- Option C (Gentle): Means mild or soft, unrelated to speed.

Final Answer: RAPID $\approx$ Swift $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) 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: "Genuine" means real, true, and authentic — not false.

Step 2 — Find the opposite: The opposite of real and true is "Fake," which means false or counterfeit.

Why other options are wrong:

- Option A (Real): A synonym, not an antonym.
- Option B (Authentic): A synonym, not an antonym.
- Option D (Sincere): A synonym in the sense of honest, not an antonym.

Final Answer: GENUINE $\leftrightarrow$ Fake $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q2

Q3.

Solution

Concept — Fixed prepositions (verb + preposition): Certain verbs are always followed by a particular preposition. The verb "depend" is always followed by "on" (or "upon").

Step 1 — Identify the verb: The key verb in the sentence is "depends."

Step 2 — Apply the rule: "Depend" collocates with "on"; one thing depends *on* another. So the correct phrase is "depends on the weather."

Why other options are wrong:

- Option A (at): Not used with "depend."
- Option C (of): Incorrect; "depend of" is not standard English.
- Option D (in): Incorrect; "depend in" is not used.

Final Answer: depends on the weather $\Rightarrow$ $\boxed{B}$

Answer: (B) Go Back to Q3

Q4.

Solution

Concept — "News" is an uncountable singular noun: Although it ends in "-s," the word "news" is uncountable and always takes a *singular* verb.

Step 1 — Locate the verb: The verb is "are," which is plural.

Step 2 — Apply the rule: Since "news" is singular, the verb must be "is," not "are." The error lies in part (C).

Why other options are wrong:

- Option A (The news): A correct singular subject.
- Option B (about the delayed flight): A correct prepositional phrase.
- Option D (No error): Incorrect, because part (C) does contain a clear agreement error.

Final Answer: "are" should be "is" $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q4

Q5.

Solution

Concept — Forming the comparative degree: A short adjective forms its comparative by adding "-er" (taller). It is wrong to also add "more," because that creates a double comparative.

Step 1 — Identify the adjective: The adjective "tall" becomes "taller" in the comparative degree.

Step 2 — Build a correct comparison: "The new jet is taller than the old one" uses "taller" + "than," which is correct.

Why other options are wrong:

- Option B (more taller): A double comparative; "more" and "-er" cannot be used together.
- Option C (most taller): Mixes the superlative "most" with the comparative "-er."
- Option D (taller more than): Wrong word order; "more" does not belong here.

Final Answer: "The new jet is taller than the old one." $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) 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 trained to travel in a spacecraft" describes someone who journeys into outer space.

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

Why other options are wrong:

- Option A (Navigator): Plots the route of a ship or aircraft, not a space traveller.
- Option C (Engineer): Designs or maintains machines; too general here.
- Option D (Surveyor): Measures and maps land, unrelated to spaceflight.

Final Answer: Astronaut $\Rightarrow$ $\boxed{\text{B}}$

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: "Under the weather" is used to describe someone who is slightly ill or not feeling well.

Step 2 — Match the meaning: The closest meaning is "Feeling unwell."

Why other options are wrong:

- Option A (Caught in a storm): A literal misreading of "weather."
- Option B (Extremely busy): That is a different idea, not this idiom.
- Option C (Very fortunate): Unrelated to the idiom's meaning.

Final Answer: under the weather = feeling unwell $\Rightarrow$ 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: A frayed cable is a possible source of danger. The word for a possible source of danger is a "hazard."

Step 2 — Select the word: "A serious safety hazard" is the natural and meaningful collocation.

Why other options are wrong:

- Option B (hazel): A type of tree or a light-brown colour; unrelated.
- Option C (harbour): A sheltered place for ships; not a danger.
- Option D (harvest): The gathering of crops; unrelated.

Final Answer: a safety hazard $\Rightarrow$ A

Answer: (A) Go Back to Q8

Q9.

Solution

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

Step 1 — Identify the parts: Subject = "the technician," verb = "repaired" (past), object = "the wing."

Step 2 — Build the passive: Object first: "The wing" + "was repaired" (past tense) + "by the technician."

Why other options are wrong:

- Option A (is repaired): Present tense; the original sentence is past tense.
- Option B: Reverses the meaning (the wing repairing the technician).
- Option D (has repaired): An active present-perfect form, not a passive.

Final Answer: "The wing was repaired by the technician." $\Rightarrow$ C

Answer: (C) Go Back to Q9

Q10.

Solution

Concept — Direct to indirect speech: When the reporting verb is in the past ("said"), the present tense inside the quotation shifts one step back into the past, and first-person pronouns change to agree with the speaker.

Step 1 — Shift the tense: "I am reading" (present continuous) becomes "she was reading" (past continuous).

Step 2 — Adjust the pronoun: "I" refers to the speaker "She," so it becomes "she."

Why other options are wrong:

- Option A (I was reading): Wrongly keeps the first-person pronoun "I."
- Option C (is reading): Fails to back-shift the present tense.
- Option D (says): Changes the reporting verb to present, which is not required.

Final Answer: "She said that she was reading a book." $\Rightarrow$ B

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Reading comprehension (main idea): The main idea is the central point that runs through the whole passage, not just one small detail.

Step 1 — Survey the passage: The passage traces flight from balloons (1783), to gliders, to the Wright Flyer (1903), and on to modern jets.

Step 2 — Match to an option: This overall sweep is captured by "Human flight developed gradually from balloons to modern jets."

Why other options are wrong:

- Option A (balloons safest): Never claimed in the passage.
- Option B (gliders better): The passage notes gliders had no engine; it does not rank them above powered aircraft.
- Option D (jet before Wright Flyer): Contradicts the passage, which places the jet engine after 1903.

Final Answer: flight developed gradually from balloons to modern jets $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

Concept — Reading comprehension (detail recall): Choose the option that restates a fact stated in the passage.

Step 1 — Find the relevant line: The passage states: "...in 1903, when the Wright Flyer became the first powered aircraft to make a sustained and controlled flight."

Step 2 — Match to an option: Option A names the Wright Flyer, exactly as the passage does.

Why other options are wrong:

- Option B (hot-air balloon): The passage says balloons drifted with the wind and were not powered.
- Option C (glider): The passage says gliders "had no engine of their own."
- Option D (modern jet airliner): These came later, after the jet engine was developed.

Final Answer: the Wright Flyer $\Rightarrow$ A

Answer: (A) Go Back to Q12

Q13.

Solution

Concept — "Either. . . or" agreement: With "either. . . or," 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 "the co-pilot," which is singular.

Step 2 — Choose the verb: A singular subject takes the singular verb "has."

Why other options are wrong:

- Option A (have): Plural; would be correct only if the nearer noun were plural.
- Option B (were): Plural and past tense; does not agree and changes the tense.
- Option C (are): Plural; does not agree with the singular "co-pilot."

Final Answer: ". . . or the co-pilot has to be present." $\Rightarrow$ D

Answer: (D) Go Back to Q13

Q14.

Solution

Concept — Present continuous for a fixed future arrangement: A scheduled or planned future event, especially one with a fixed time, is often expressed using the present continuous ("is/are + -ing").

Step 1 — Note the time signal: The phrase "at 6 p.m. tomorrow" marks a fixed, planned future event (a timetable).

Step 2 — Apply the tense: For such an arrangement, "The flight is leaving at 6 p.m. tomorrow" is correct and natural.

Why other options are wrong:

- Option A (left): Simple past; cannot describe a future event.
- Option C (has left): Present perfect; refers to a completed past action.
- Option D (will have left): Future perfect; means the action is completed before a future point, which does not fit here.

Final Answer: is leaving $\Rightarrow$ B

Answer: (B) 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 science of flight and aircraft is spelled **aeronautics** — "aero" + "nautics."

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

Why other options are wrong:

- Option A (Aeronotics): Wrong vowel ("noti" instead of "nauti").
- Option B (Aeranautics): Wrong vowel after "Aer" ("a" instead of "o").
- Option D (Aeronautices): An extra "i" before the final "s."

Final Answer: Aeronautics $\Rightarrow$ C

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Aviation abbreviations: Several international bodies coordinate the airline industry.

Step 1 — Expand the abbreviation: IATA stands for **International Air Transport Association** — the trade body that represents the world's airlines.

Step 2 — Confirm the role: IATA sets common standards for fares, ticketing, and safety practices among member airlines.

Why other options are wrong:

- Option B (Indian Air Travel Authority): Not a real body; IATA is international, not Indian.
- Option C (International Aircraft Testing Agency): A made-up expansion.
- Option D (Internal Aviation Traffic Administration): Not the correct expansion of IATA.

Final Answer: International Air Transport Association ⇒ A

Answer: (A) Go Back to Q16

Q17.

Solution

Concept — Civil aviation security in India: Different national bodies handle different aspects of aviation.

Step 1 — Identify the body: The **BCAS (Bureau of Civil Aviation Security)** lays down standards for airport and aircraft security, such as passenger and baggage screening.

Step 2 — Confirm its scope: BCAS is the regulatory authority for civil aviation security in India.

Why other options are wrong:

- Option A (DGCA): Regulates safety, licensing, and airworthiness, not security screening.
- Option C (AAI): Manages airports and air navigation services, not security policy.
- Option D (ISRO): The space research organisation, unrelated to aviation security.

Final Answer: BCAS ⇒ B

Answer: (B) Go Back to Q17

Q18.

Solution

Concept — The landing gear (undercarriage): The wheeled assembly under an aircraft has a specific structural role.

Step 1 — Locate the marked part: The marks X are on the *wheels beneath the fuselage and wings* — the landing gear.

Step 2 — Identify its function: The landing gear supports the aircraft's weight on the ground (during taxiing, take-off, and parking) and absorbs the shock when the aircraft touches down.

Why other options are wrong:

- Option A (generate lift): Lift is produced by the wings, not the landing gear.
- Option B (control direction in the air): That is the job of the control surfaces (ailerons, elevators, rudder).
- Option C (store fuel): Fuel is stored mainly in the wings, not the landing gear.

Final Answer: supports the aircraft on the ground and absorbs landing shock $\Rightarrow$ D

Answer: (D) Go Back to Q18

Q19.

Solution

Concept — Aviation history: Several pioneers achieved famous "firsts" in flight.

Step 1 — Recall the achievement: In 1932, **Amelia Earhart** became the first woman to fly solo across the Atlantic Ocean.

Step 2 — Confirm the credit: Her solo transatlantic flight made her one of the most celebrated aviators in history.

Why other options are wrong:

- Option A (Indira Gandhi): A political leader of India, not an aviator.
- Option B (Valentina Tereshkova): The first woman in space (1963), not a transatlantic pilot.
- Option D (Kalpana Chawla): An Indian-American astronaut, not the first woman across the Atlantic.

Final Answer: Amelia Earhart $\Rightarrow$ C

Answer: (C) Go Back to Q19

Q20.

Solution

Concept — Indian aviation history: The Indian Air Force has a fixed founding year.

Step 1 — Recall the year: The **Indian Air Force** was officially established on 8 October **1932**.

Step 2 — Confirm: It began as an auxiliary air force under British rule and grew

into India's air arm.

Why other options are wrong:

- Option A (1912): Too early; no Indian Air Force existed then.
- Option C (1947): The year of independence, not the IAF's founding.
- Option D (1965): The year of a major Indo-Pak war, not the IAF's founding.

Final Answer: 1932 $\Rightarrow$ B

Answer: (B) Go Back to Q20

Q21.

Solution

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

Step 1 — Match instrument to quantity: The **magnetic compass** uses the Earth's magnetic field to show the aircraft's heading relative to magnetic north.

Step 2 — Confirm: It is the simplest, self-powered direction-finding instrument in the cockpit.

Why other options are wrong:

- Option B (Altimeter): Measures altitude (height), not direction.
- Option C (Tachometer): Measures engine speed in RPM.
- Option D (Fuel gauge): Shows the quantity of fuel remaining.

Final Answer: Magnetic compass $\Rightarrow$ A

Answer: (A) Go Back to Q21

Q22.

Solution

Concept — Newton's third law of motion: For every action there is an equal and opposite reaction. This law is the work of **Sir Isaac Newton**.

Step 1 — Identify action and reaction: The rocket pushes hot gases downward (action); the gases push the rocket upward (reaction).

Step 2 — Name the scientist: This action–reaction pair is described by Newton's third law of motion, so the scientist is Isaac Newton.

Why other options are wrong:

- Option A (Archimedes): Gave the principle of buoyancy, not rocket reaction.
- Option B (Blaise Pascal): Gave the law of pressure transmission in fluids.
- Option C (Daniel Bernoulli): Gave the principle relating fluid speed and pressure (wing lift), not the action–reaction law.

Final Answer: Isaac Newton (third law of motion) $\Rightarrow$ D

Answer: (D) Go Back to Q22

Q23.

Solution

Concept — History of powered flight: The first powered flight took place at a specific location.

Step 1 — Recall the event: On 17 December 1903, the Wright brothers flew their "Flyer" at Kitty Hawk, North Carolina, in the **United States**.

Step 2 — Confirm the country: Kitty Hawk is on the Atlantic coast of the United States.

Why other options are wrong:

- Option A (United Kingdom): Not where the first flight occurred.
- Option B (France): Home to later European aviation pioneers, but not the 1903 flight.
- Option D (Germany): Not the location of the Wright brothers' flight.

Final Answer: United States $\Rightarrow$ C

Answer: (C) Go Back to Q23

Q24.

Solution

Concept — The four forces of flight: An aircraft in flight is acted on by lift, weight, thrust, and drag.

Step 1 — Match the description: The downward force caused by gravity acting on the aircraft's mass is its **weight**.

Step 2 — Confirm the balance: In steady level flight, lift acts upward to balance

this downward weight.

Why other options are wrong:

- Option A (Lift): Acts upward, opposing weight, not the gravitational force itself.
- Option C (Thrust): Acts forward (from the engine), opposing drag.
- Option D (Drag): Acts backward, opposing thrust.

Final Answer: Weight $\Rightarrow$ B

Answer: (B) Go Back to Q24

Q25.

Solution

Concept — Lighter-than-air gases: A balloon rises when filled with a gas less dense than the surrounding air.

Step 1 — Identify the gas: Helium is much lighter than air and, unlike hydrogen, is non-flammable, so it is commonly used to fill weather balloons.

Step 2 — Apply to the balloon: Because helium is lighter than air, the balloon experiences a net upward (buoyant) force and rises.

Why other options are wrong:

- Option B (Oxygen): Heavier and reactive; does not make a balloon rise and supports burning.
- Option C (Carbon dioxide): Denser than air, so a balloon filled with it would sink.
- Option D (Chlorine): A toxic, dense gas, completely unsuitable for balloons.

Final Answer: Helium $\Rightarrow$ A

Answer: (A) Go Back to Q25

Q26.

Solution

Concept — Aviation radio calls: Standard spoken signals tell controllers the level of trouble an aircraft is in.

Step 1 — Recall the urgency call: "**Pan-Pan**" (spoken three times) signals an

urgency condition — a serious problem that is not yet an immediate threat to life.

Step 2 — Compare with Mayday: "Mayday" is reserved for grave and imminent danger; "Pan-Pan" is the next level down.

Why other options are wrong:

- Option A (Mayday): A full distress call for life-threatening emergencies, more severe than asked.
- Option B (Roger): Simply means "message received," not an urgency call.
- Option D (Wilco): Means "will comply," not an urgency call.

Final Answer: Pan-Pan $\Rightarrow$ C

Answer: (C) Go Back to Q26

Q27.

Solution

Concept — Indian defence research: A premier agency develops technology for the armed forces.

Step 1 — Expand the abbreviation: DRDO stands for **Defence Research and Development Organisation**.

Step 2 — Confirm its work: DRDO designs and develops missiles, radars, aircraft systems, and other defence technologies for India.

Why other options are wrong:

- Option A (Defence Reserve and Deployment Organisation): An incorrect expansion.
- Option B (Directorate of Research and Defence Operations): Not the correct name.
- Option C (Defence Resources Development Office): A made-up expansion.

Final Answer: Defence Research and Development Organisation $\Rightarrow$ D

Answer: (D) 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 motion shown: The figure shows the *nose moving up and down*, which is rotation about the lateral (wingtip-to-wingtip) axis.

Step 2 — Name the motion: Rotation about the lateral axis, produced by the elevators, is called **pitch**.

Why other options are wrong:

- Option A (Roll): Rotation about the longitudinal (nose-to-tail) axis, controlled by the ailerons.
- Option C (Yaw): Rotation about the vertical axis, controlled by the rudder.
- Option D (Thrust): A force, not a rotation about an axis.

Final Answer: Pitch $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q28

Q29.

Solution

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

Step 1 — Recall the unit of frequency: The SI unit of frequency is the **hertz** (Hz), where 1 Hz $= 1$ cycle per second.

Step 2 — Apply to radio signals: Radio communication frequencies are expressed in hertz (and its multiples, kilohertz and megahertz).

Why other options are wrong:

- Option B (Newton): The SI unit of force.
- Option C (Pascal): The SI unit of pressure.
- Option D (Watt): The SI unit of power.

Final Answer: Hertz $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q29

Q30.

Solution

Concept — Oxygen at high altitude: As altitude increases, the air becomes thinner and the pressure of oxygen drops.

Step 1 — Describe the high-altitude air: At high altitude the atmosphere is **thin**, so the partial pressure of oxygen is low; the lungs cannot take in enough oxygen from each breath.

Step 2 — Reason for supplemental oxygen: Breathing supplemental oxygen restores a safe oxygen supply and prevents hypoxia (oxygen starvation).

Why other options are wrong:

- Option A (too rich in oxygen): False — there is too *little* oxygen at altitude, not too much.
- Option B (too warm): The air at high altitude is very cold, not warm.
- Option C (too humid and heavy): High-altitude air is thin and dry, not heavy or humid.

Final Answer: too thin, with a low partial pressure of oxygen $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q30

Answer Key

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