

Threat & Error Management

TEM is an attempt to develop a mind-set which enhances the identification of threats, minimizes the opportunities for error, and resolves those errors when they do occur. The TEM model has three basic components:

- Threats
- Errors,
- Undesired aircraft states

If threats, errors and undesired aircraft states are not recognised and managed in time, an accident or incident may result. In the TEM model this final event is called an outcome.

Threats: originate in the environment outside the cockpit or in the cockpit and are not directly attributable to something the crew did or did not do. They include things such as poor weather, wind shear, high pilot workload in very busy airspace and interruptions or distractions during an approach to land.

Errors: originate from pilot actions or inactions that have the potential to adversely affect the safety of the flight.

Undesired aircraft states: Any flight condition or attitude which was not intended by the operating crew. Undesired aircraft states would include such things as inappropriate flap selection on takeoff or landing, flight above or below the desired altitude, airspeed too high or too low during climb or descent or unintentional stalls or spins. Note that an undesired aircraft state can result from either a threat such as turbulence or wind shear, or an error such as inappropriate use of controls.

Threats (*external and internal*).

External threats originate from the environment in which the aircraft is operating and can lead to pilot error. They include such things as:

- Distractions caused by passengers or cabin crew
- Unexpected requests or enquiries from ATC
- Weather problems
- Maintenance issues
- Heavy traffic situations and/or unfamiliar aerodromes
- Missed approach
- Pressure to meet time schedules
- In-flight diversion
- System failures

External threats can be further sub-divided into **anticipated, unexpected, or latent**.

Anticipated, or expected, external threats would include such things as weather and heavy traffic or unfamiliar aerodromes.

Unexpected external threats would include such things as distractions from passengers, in-flight diversions and missed approaches.

Latent external threats are not directly obvious to the pilot but are lurking in the background waiting for a particular set of circumstances. They include such things as a 'user unfriendly' work environment such as poor cockpit design or instrument layout, aircraft design

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characteristics and company policies that do not adequately address proper maintenance issues or pilot fatigue and optical illusions such as sloping runways or 'black hole' approaches.

Internal threats are brought to the cockpit in the persons of the pilot and crew. They cannot in themselves be called errors but they increase the likelihood of errors.

They include such things as:

- Pilot fatigue
- Team familiarity in multi-crew aircraft
- Language and cultural issues
- Health and fitness
- Pilot experience and personality
- Pilot recency and proficiency

Threats can be further classified as environmental threats and organisational threats.

Environmental threats exist because of the environment in which the aircraft is operating. They include:

- Weather such as thunderstorms, icing, cross wind/tail wind/downwind wind shear and turbulence
- Airspace communication problems such as may occur in CTA or in a CTAF area
- Ground environments at airports including signage, the presence of birds or obstructions
- Terrain about and below the aircraft
- Operational pressures such as late arrivals or unserviceabilities

Organisational threats originate from deficiencies in the infrastructure and organisation in which the aircraft is operating. They include such things as:

- Documentation errors [incorrect data entry or misinterpretation of manuals]
- Tour of duty problems

Management of threats

Threat management refers to tools or procedures that allow pilots to anticipate and/or respond to threats. A managed threat is one which is recognised and responded to before it can adversely affect the safety of the flight.

Tools and techniques used to manage threats.

- Detailed study of weather enroute and at the destination
- Ensuring compliance with operational requirements pertaining to the flight
- Checking ERSA for arrival at unfamiliar aerodromes for special procedures
- Thorough and careful pre-flight inspection
- Self-assessment of fitness, recency and experience required
- Familiarity with aircraft type and emergency procedures
- Application of standard operating procedures [SOP].

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For example:

A forecast thunderstorm would be an *anticipated, external environmental threat*.

A pilot's over-confidence and aggressive personality would be an *internal threat*. [Maybe it could also be described as a *latent internal threat*]. Also, all latent threats would be unexpected. It wouldn't be a latent threat if it was anticipated.

A poorly designed cockpit has the undercarriage and flap levers next to each other and similar in size and shape. One day the pilot operates the undercarriage lever instead of the flap lever after landing, causing the undercarriage to retract while the aircraft is on the ground. This would be an example of a *latent threat*.

Threat

1. A threat that is not immediately obvious to the pilot, such as an undercarriage lever situated adjacent to a flap lever, or manifold pressure and RPM gages widely separated, is best described as-

[a] a latent threat [b] an external threat

[c] an anticipated threat [d] an internal threat
2. A SIGMET is transmitted to a pilot in flight advising of reported mountain wave activity. Select the description which best describes the category of this threat.

[a] external, unexpected, organisational.

[b] internal, anticipated, environmental.

[c] external, anticipated, environmental.

[d] organisational, anticipated, latent.
3. A pilot is put under pressure from his employer to get back to base before his tour of duty expires. This is an example of-

[a] an external threat. [b] an anticipated threat,

[c] an environmental threat. [d] a latent threat.
4. Select the option below which best describes an organisational threat.

[a] a flight into a high density traffic area.

[b] an air traffic controller whose speech is too fast to understand easily.

[c] pilot proficiency degraded by lack of recent experience.

[d] provision of an instrument approach chart that is out of date.

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5. Which of the following would be best described as an internal threat?
- [a] adverse weather. [b] pilot fatigue.
 - [c] operating at an unfamiliar aerodrome.
 - [d] taxiing at an unfamiliar aerodrome with poor taxi way markings.
6. A type of threat which is best managed by maintaining a high skill level through practice and training is-
- [a] an anticipated threat. [b] a latent threat,
 - [c] an unexpected threat. [d] an organisational threat.
7. Optical illusions such as the 'black hole' effect and sloping runways are examples of-
- [a] an internal threat. [b] an anticipated threat,
 - [c] a latent environmental threat. [d] a latent internal threat.
8. Which of the following would be best described as an internal threat?
- [a] flight into a high traffic density area.
 - [b] an air traffic controller with a heavy foreign accent.
 - [c] a pilot with a tendency to be over confident.
 - [d] a maintenance release that is incorrectly filled in.
9. Which of the following would be an example of an unexpected environmental threat?
- [a] take-off from an aerodrome with a high density altitude.
 - [b] operating an aircraft with tires incorrectly inflated.
 - [c] operating at an unfamiliar aerodrome.
 - [d] an encounter with hoar frost on descent in clear air.
10. Which of the following is an example of a latent threat?
- [a] committing a check list to memory
 - [b] an poorly written checklists
 - [c] engine failure in flight
 - [d] an encounter with rime ice

Answers: 1 [a] 2 [c] 3 [d] 4 [d] 5 [b] 6 [c] 7 [c] 8 [c] 9 [d] 10 [b]

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Errors

In the CASA material an error is defined as flight crew actions or inactions that lead to a deviation from crew or organisational intentions; reduces safety margins; and increases the probability of adverse operational events on the ground and during flight.

Errors can be classified as *handling errors*, *procedural errors* and *communication errors*.

Handling errors are errors in the actual manipulation of the aircraft controls. Not surprisingly handling errors most often occur when the pilot has limited total aeronautical experience or limited experience on the particular aircraft type. Handling errors are much less likely as experience increases, although it must be said that too much reliance on modern automated systems can reduce a pilot's level of skill in 'hands on' flying. This often shows up in instrument rating renewals when the pilot has spent the last year flying almost every approach with the auto pilot coupled to the navigation system. Handling errors include such things as:

- Rounding out too high or too late in a landing
- Failure to maintain tracking and descent profile tolerances during an approach
- Failure to accurately maintain height when flying manually
- Over/undershooting the intercept of a desired track
- Unnecessary excess speed during taxi or unnecessary harsh braking
- Inappropriate use of power during approach
- Poor technique during cross-wind landings

Procedural errors Although inexperienced pilots are more likely to make handling errors, procedural errors may occur across the whole spectrum of pilot experience. They often occur as a consequence of an external or internal threat such as time constraints, poor communication, distraction or poor quality aerodrome markings or signage. They include such things as:

- Failure to use a written checklist for take-off or landing
- Failure to fly a right-hand circuit when required by ERSA
- Failure to stop at a holding point
- Failure to conform to the tracking and height limitations during an instrument approach
- Incorrect calculation in flight planning or weight and balance management

Communication errors are the result of ambiguous or misinterpreted communication [usually speech]. They often result from:

- Use of non-standard phraseology in the case of radio communication
- Poor quality radio reception
- Over-transmission of radio messages by a third party
- Unfamiliar foreign accents or rapid speech

Any of the above types of pilot error may occur as a result of external threats that may divert the pilot's attention or internal threats such as memory lapses or preoccupation with personal issues.

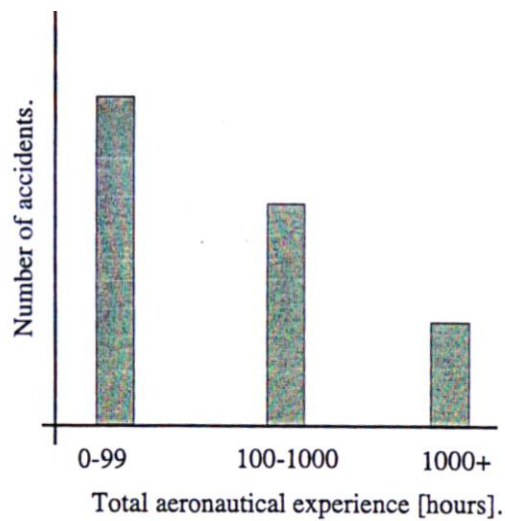
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Further methods of classifying handling errors

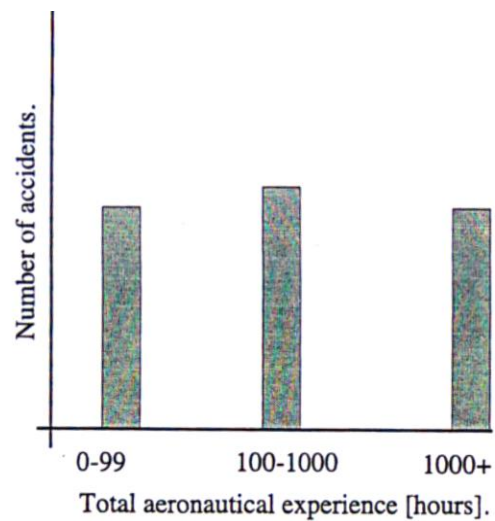
Systematic Error: with a definite pattern.

Random Error: without any specific pattern.

Sporadic Error: The most difficult error to remedy. Occasionally serious error in a element after satisfactory performance in all elements.



Handling Errors



Decision making Errors

♦ **Vigilance Decrement:** decrease markedly after about 30 minutes

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Errors

1. A pilot who has failed to apply carburettor heat during a glide has committed-

[a] handling error [b] procedural error

[c] communication error [d] execution countermeasure
2. After being distracted by difficult radio communications, you deviate from your assigned level in controlled airspace. A countermeasure which would most likely have avoided this situation would be called-

[a] a planning countermeasure requiring the carriage of a second radio.

[b] an execution countermeasure requiring that you manage the workload.

[c] a review countermeasure that would have allowed you to ignore the height and concentrate on the radio.

[d] a procedural countermeasure that would have dealt with the radio problem.
3. A pilot who is running well behind schedule for the day, forgets to turn on the anti-icing system and consequently suffers severe airframe icing. This situation demonstrates-

[a] a latent threat leading to a handling error.

[b] a latent threat leading to a communication error.

[c] an internal threat leading to a handling error

[d] an anticipated threat leading to a procedural error.
4. A pilot who resorts to assertiveness to address a problem in flight is employing-

[a] an execution countermeasure. [b] a planning countermeasure.

[c] a handling countermeasure. [d] a review countermeasure.
5. A pilot who has planned to cruise at 5,500 feet is given an initial clearance to climb to 4,500 feet in CTA. Because of poor radio reception, he reads back 5,500 feet. This is an example of a-

[a] procedural error [b] handling error

[c] communication error. [d] planning error.
6. A pilot who is running late misses the NOTAM advising that a restricted area on his route is active. His flight enters the restricted area without a clearance. The type of countermeasure that would have prevented this is-

[a] an execution countermeasure. [b] a planning countermeasure.

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[c] a review countermeasure. [d] a communication countermeasure.

7. A pilot who has done all of his flying training on a narrow runway, makes his first approach to a runway that is much wider. He rounds out much too high and makes a very heavy landing. This is an example of-

[a] an external threat. [b] an internal threat.

[c] a procedural error. [d] a latent threat.

8. The crew of a heavy jet transport aircraft over ran the runway in a heavy thunderstorm. An investigation showed that the company had directed that brakes should be used in preference to reverse thrust at the later stages of the landing roll to protect the engines.

The company directive that precipitated this incident is an example of-

[a] a latent threat. [b] an external threat,

[c] an organisational error. [d] an unexpected error.

9. Which of the following would be classified as an execution countermeasure?

[a] cross checking instruments.

[b] planning a flight.

[c] modifying the original plan due to changed conditions.

[d] pre-flight briefing.

10. Select the item which best describes an internal threat.

[a] forecast bad weather on a TAF.

[b] pilot complacency.

[c] marginal runway length.

[d] operations at a non-familiar aerodrome.

Answers: 1 [a] 2 [b] 3 [a] 4 [d] 5 [c] 6 [b] 7 [d] 8 [a] 9 [a] 10 [b]

COUNTERMEASURES

The tools and techniques used to manage these are called **countermeasures**. A countermeasure is any action or system which is directed to avoiding or reducing the impact of a threat, error or undesired aircraft state. Some countermeasures are systemic-based [built into the system]. They may be mechanical or electronic devices.

Systemic-based countermeasures may be mechanical or electronic devices such as:

- stall warning devices
- systems failure warnings such as enunciator panels
- airborne collision avoidance system [ACAS] and
- ground proximity warning systems [GPWS]

Or they may be measures aimed at ensuring appropriate pilot actions in given situations such as:

- standard operating procedures [SOPs]
- written checklists
- briefing
- training

Other less formal countermeasures reside in the individual pilots themselves. These include such characteristics as skill, experience, knowledge, attitude and airmanship of individuals and/or the crew as a team. Three categories of these types of countermeasures are:

Planning countermeasures which include:

Measures taken before departure to facilitate the safe operation of a flight such as:

- Flight planning.
- Pre-flight briefing.
- Contingency planning to cope with expected threats that may arise.

Execution countermeasures which include:

Measures taken during flight to guard against threats and errors that may arise such as:

- Monitoring engine, flight and navigation instruments.
- Cross-checking information ensure its integrity.
- Good systems and workload management to ensure situational awareness is maintained.

Review countermeasures cope with unexpected contingencies which may arise during flight including:

- Evaluating and modifying plans as the flight proceeds.
- Remaining alert and assertive in identifying and addressing issues as they arise.

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An **undesired aircraft state** [UAS] is simply any flight condition, aircraft attitude or aircraft configuration which was not intended by the pilot or appropriate to the particular phase of flight. Typically a threat which is mismanaged leads to an error which is unrecognised or unresolved which in turn leads to an undesired aircraft state. The undesired aircraft state is really the pilot's last chance to remedy the situation. Even at this late stage, if appropriate action is taken to manage the UAS the outcome may still be avoided. In the TEM model, the outcome is simply an incident or accident that results from the mismanagement of threats, errors or undesired aircraft states.

Example:

An aircraft is approaching an aerodrome at which CTAF procedures apply. The pilot is unaware that the frequency has recently been changed. Since he has landed at that aerodrome several times in the past he assumes that the frequency is the same as it was on previous occasions. He makes his call on the old frequency and hears no reply so assumes that there is no traffic. As he turns from base onto final, he has a near miss with an RPT aircraft making a straight-in approach.

Undesired aircraft states can be categorised as:

Aircraft handling states which include such things as:

- aircraft control [deviations in pitch, roll and yaw]
- altitude, track or speed deviations [deviations in flight path]
- placing the aircraft in a hazardous situation [weather or violation of CTA or CTAF procedures]
- exceeding structural load factor or speed limitations and
- poor technique in flying the approach or landing
- Anti- icing not working

Ground navigation states such as:

- attempting to use the wrong taxiway or runway
- taxiing too fast

Aircraft configuration states such as:

- inappropriate flap or speed-brake selection
- incorrect autopilot mode
- incorrect programming of GPS or other navigation aid
- incorrect fuel distribution
- incorrect distribution of weight

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Error v Undesired Aircraft State

It is often the case that students find it difficult to distinguish between an error and an undesired aircraft state

It should be remembered that an error is something the pilot, or other members of the flight crew, either did or did not do, while an undesired aircraft state is the inappropriate condition, position or configuration that resulted from the pilot's action or inaction.

For example:

A pilot fails to apply carburettor heat during a glide approach. *That's an error.*

The aircraft is now in a condition that reduces the safety margin. *That's an undesired aircraft state.*

A pilot uses insufficient rudder to correct a yaw during stall recovery. *That's an error.*

The aircraft is now in an unusual attitude that reduces the safety margin. *That's an undesired aircraft state.*

A pilot fails to adequately monitor the airspeed during a missed approach. *That's an error.*

The aircraft is now flying too slowly to achieve the optimum climb gradient. *That's an undesired aircraft state.*

A pilot misjudges the wind during the flare for a crosswind landing. *That's an error.*

The aircraft touches down heavily with drift on. *That's an undesired aircraft state.*

Even when the aircraft is in an undesired state, it is not too late for the pilot to remedy the situation by dealing with the UAS before it develops into an accident or an incident. Remember, if a UAS develops, it is vital that priority is given to dealing with the UAS. Investigating the threat or error that led to the UAS is something that can be done calmly later.

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Undesired aircraft states

1. A pilot carrying out solo forced landing practice, fails to select the carburettor heat to hot. Carburettor ice forms during the descent and the aircraft fails to climb out normally on the 'go around'. This is an example of:
 - [a] a handling error leading to a undesired handling state.
 - [b] a communication error leading to a undesired handling state.
 - [c] a handling error leading to a undesired configuration state.
 - [d] a procedural error leading to a undesired handling state.
2. A pilot fails to fully retract the flaps at the commencement of a missed approach procedure. The aircraft fails to achieve the desired climb gradient. This is an example of-
 - [a] a handling error leading to a undesired handling state.
 - [b] a communication error leading to a undesired handling state.
 - [c] a handling error leading to a undesired configuration state.
 - [d] a procedural error leading to a undesired handling state.
3. A pilot incorrectly uses the centre of gravity loading system for the aircraft resulting in the aircraft taking off with the centre of gravity beyond the aft limit. This is an example of-
 - [a] a handling error leading to a undesired handling state.
 - [b] a communication error leading to a undesired handling state.
 - [c] a handling error leading to a undesired configuration state.
 - [d] a procedural error leading to a undesired configuration state.
4. During the take-off run, the side window of a Cessna 172 popped open. The pilot immediately attempted to close and fasten it and consequently lost directional control and ran off the side of the runway into a ditch. This incident would most likely have been avoided had the pilot-
 - [a] checked the window latch earlier in the take-off run.
 - [b] given priority to dealing with the undesired aircraft state, leaving the window open
 - [c] practiced the technique of closing the window whilst on the move.
 - [d] studied the aircraft manuals for information of dealing with such an event.

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5. Which of the following examples describes an undesired aircraft configuration state?
 - [a] icing system not operating in icing conditions.
 - [b] IAS too low during an approach to land.
 - [c] taxiing too fast.
 - [d] incorrect fuel distribution.
6. The pilot of a piston engine aircraft notices that the oil temperature is very high and the oil pressure is beginning to drop. She decides to abandon the original flight plan and lands at the nearest aerodrome with maintenance facilities. In this case the external threat has been mitigated by implementing-
 - [a] an execution countermeasure followed by a review countermeasure.
 - [b] a latent threat and a review countermeasure.
 - [c] a planning countermeasure followed by an execution countermeasure.
 - [d] a review countermeasure followed by an execution countermeasure.
7. Because of poor radio reception and rapid speech on the part of the air traffic controller, a pilot who has been given a QNH of 1023, reads back 1032 and sets it on his altimeter subscale. This is an example of-
 - [a] a procedural error.
 - [b] a handling error.
 - [c] a communications error.
 - [d] a configuration error.
8. With the aircraft established on final approach, the pilot lowers full flap. Shortly afterwards, the undercarriage warning system indicates that the landing gear is not down and locked. The pilot becomes distracted by the undercarriage problem and inadvertently allows the nose to drop causing the speed to exceed V_{fe} . The first priority should have been-
 - [a] raise the flap.
 - [b] manage the undesired aircraft state by maintaining the correct nose attitude.
 - [c] recycle the undercarriage.
 - [d] repeat the pre-landing checklist.
9. Before setting out on a flight to a homestead strip the pilots considers, "What if the gate has been left open and there are cattle on the strip?" He arranges for the owner to be present for his arrival. This is an example of-

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[a] an execution countermeasure.

[b] a planning countermeasure.

[c] a review countermeasure.

[d] a communications countermeasure.

10. Regularly practicing forced landings would be an example of a-

[a] a planning countermeasure to employed to manage an unexpected threat.

[b] a review countermeasure employed to manage a procedural error.

[c] an execution countermeasure employed to manage an anticipated threat.

[d] a planning countermeasure employed to manage a handling error.

Answers: 1 [a] 2 [c] 3 [d] 4 [b] 5 [d] 6 [a] 7 [c] 8 [b] 9 [b] 10 [a]

MORE TEM QUESTIONS

1. Select the item which best describes an external threat

[a] pilot fatigue

[b] a pilot suffering from the effects of a hangover

[c] another aircraft entering the runway while you are on late final

[d] difficulty in understanding the transmission of a foreign pilot

2. Select the item which best describes an undesired aircraft state

[a] arrival over the threshold too high and too fast on a landing approach

[b] failing to notice a damaged tyre during a daily inspection

[c] failure to realise that a destination aerodrome requires an alternate

[d] aircraft overdue for its annual inspection

3. An example of an expected threat is

[a] thunderstorms forecast on the TAP

[b] engine failure in flight

[c] becoming lost in flight

[d] being diverted in flight by ATC

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4. For the flight crew, the three basic components in the TEM model are
 - [a] threats, errors and undesired aircraft states
 - [b] threats, errors and anticipated aircraft states
 - [c] threats, flight crew human resources and aircraft states
 - [d] errors, flight crew human resources and undesired aircraft states
5. Which of the following would be classified as an external threat
 - [a] pressure to meet timetables
 - [b] pilot fatigue
 - [c] health and fitness
 - [d] lack of familiarity with other crew members
6. An example of a latent threat is
 - [a] undercarriage will not retract in flight
 - [b] wind gusts exceeding the aircraft's cross wind limitations for landing
 - [c] poor aircraft equipment design
 - [d] unexpected high traffic volume in the terminal area
7. Entering the incorrect way-point data while operating in a stressful cockpit environment is an example of
 - [a] an environmental threat leading to a configuration error
 - [b] an organisational threat leading to a committed error
 - [c] an expected threat leading to an unexpected error
 - [d] an unexpected threat leading to an expected error
8. The three primary categories of error in the TEM model are
 - [a] loss of heading control, loss of attitude control and loss of airspeed control
 - [b] navigational error, radio frequency error and navigation aid error
 - [c] crew resource error, airtraffic control error and ground handling error
 - [d] aircraft handling errors, procedural errors and communication errors

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9. Undesired aircraft states are categorised by the TEM model as
 - [a] aircraft handling, ground handling and incorrect aircraft configuration
 - [b] aircraft ground handling, vertical navigation and incorrect inflight configuration
 - [c] vertical navigation, ground handling and inflight navigation
 - [d] aircraft configuration, ground handling and inflight aircraft handling
10. Track and speed deviation are examples of
 - [a] ground navigation state
 - [b] aircraft handling state
 - [c] horizontal navigation state
 - [d] aircraft configuration state
11. Unauthorised penetration of controlled airspace is an example of an undesired
 - [a] ground navigation state
 - [b] aircraft handling state
 - [c] air navigation state
 - [d] navigation configuration state
12. Being positioned at the incorrect holding point prior to take-off is an example of an undesired
 - [a] aircraft handling state
 - [b] aircraft ground configuration state
 - [c] situational awareness state
 - [d] ground navigation state
13. Incorrect navigation aid setting is an example of
 - [a] ground navigation state
 - [b] aircraft configuration state
 - [c] horizontal navigation state
 - [d] situational awareness state

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14. With regard to TEM, the use of a checklist prior to take-off is an example of
- [a] a desirable aircraft state
 - [b] a safety state
 - [c] a countermeasure
 - [d] a safety tactic
15. When considering the risk any threat imposes you should consider
- [a] the probability of encountering the threat irrespective of the consequences
 - [b] the seriousness of the consequences irrespective of the probability of encountering the threat
 - [c] the probability of encountering the threat and the seriousness of the consequences
 - [d] the probability of encountering the threat at any stage during the flight
16. When an undesired aircraft state is identified the primary task should be
- [a] identify the error which led to the undesired aircraft state
 - [b] identify and correct the error which led to the undesired aircraft state
 - [c] deal with the undesired aircraft state and return to controlled stabilised flight
 - [d] advise ATC of the undesired aircraft state
17. One measure of the effectiveness of actions taken by a crew to manage threats is
- [a] the accuracy of the crew's recall of events during de-briefing
 - [b] the speed with which the crew acted to manage the threat
 - [c] whether the threat was detected in time for the crew to respond appropriately
 - [d] whether an undesired aircraft state was avoided
18. The most proactive option in threat management is to
- [a] anticipate the recovery action required if the threat occurs
 - [b] anticipate and avoid the threat altogether
 - [c] take corrective action once the threat has occurred
 - [d] concentrate on management of any undesired aircraft state that may result

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19. Mismanaged threats usually lead to
- [a] errors which are then linked to undesired aircraft states
 - [b] undesired aircraft states which are then linked to errors
 - [c] aircraft handling errors which then lead to environmental errors
 - [d] diversion from standard operating procedures
20. With regard to TEM, a cockpit systems failure warning light is an example of
- [a] a proactive decision making process
 - [b] a systemic-based countermeasure
 - [c] an undesired aircraft state management device
 - [d] a handling error countermeasure
21. A thorough pre-take off briefing is an example of
- [a] a systemic-based countermeasure
 - [b] a planning countermeasure
 - [c] an execution countermeasure
 - [d] a review countermeasure
22. A pilot notices an alternator warning light illuminated during flight and responds by turning off all unnecessary electrical loads. This behaviour would be best described as
- [a] a systemic-based countermeasure
 - [b] a planning countermeasure
 - [c] an execution countermeasure
 - [d] a review countermeasure
23. Regular monitoring of flight, engine and navigation instruments during flight is an example of
- [a] a systemic-based countermeasure
 - [b] a planning countermeasure
 - [c] an execution countermeasure
 - [d] a review countermeasure

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24. A stall warning is activated during flight and the pilot immediately takes action to restore the IAS. This would be an example of

[a] a systemic-based countermeasure

[b] a planning countermeasure

[c] an execution countermeasure

[d] a review countermeasure

Answers to MORE TEM QUESTIONS

1 [c] 2 [a] 3 [a] 4 [a] 5 [a] 6 [c] 7 [a] 8 [d] 9 [d] 10 [b] 11 [b] 12 [d]

13 [b] 14 [c] 15 [c] 16 [c] 17 [c] 18 [b] 19 [a] 20 [b] 21 [b] 22 [d] 23 [c] 24 [d]