

Examination Center DGAC

Examination Date _____

Name _____

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- 1 Working memory enables us, for example, (1.00 P.)
- [A] to ignore messages for other aircraft
 - [B] to remember our own name
 - [C] to remember a clearance long enough to write it down
 - [D] to store a large amount of visual information for about 0.5 seconds

- 2 The relationship between arousal and flying performance is (1.00 P.)
- [A] approximately the form of an inverted U
 - [B] approximately linear increasing
 - [C] approximately sinusoidal
 - [D] approximately exponential
- 3 In a complex task high levels of arousal (1.00 P.)
- [A] improve performance
 - [B] lead to better decision-making
 - [C] narrow the span of attention
 - [D] reduce failures

- 4 In the short-term-memory, information is stored for approximately (1.00 P.)
- [A] 1 hour
 - [B] 20 seconds
 - [C] a couple of days
 - [D] 5 minutes

- 5 The 'cocktail party effect' is (1.00 P.)
- [A] the ability to drink too much at social gathering
 - [B] the ability to pick up relevant information unintentionally
 - [C] the tendency to believe information that reinforces our mental model of the world
 - [D] the tendency not to perceive relevant information

- 6 Once we have constructed a mental model we tend (1.00 P.)
- [A] to give undue weight to information that contradicts the model
 - [B] to alter that model unnecessarily frequently
 - [C] to give undue weight to information that confirms the model
 - [D] to give equal weight to contradicting and confirming information

- 7 Very high ambition and need for achievement (1.00 P.)
- [A] disturb the climate of cooperation
 - [B] always promote teamwork
 - [C] improves the coping process with personal failures
 - [D] fulfil the requirements of stress resistance

- 8 Our mental model of the world is based (1.00 P.)
- [A] entirely on past experiences
 - [B] on both our past experiences and the sensory information we receive
 - [C] entirely on the sensory information we receive
 - [D] on both our past experiences and our motor programmes

- 9 Which of the following tasks are possible to do simultaneously without mutual interference? (1.00 P.)
- [A] Maintain manual straight and level flight and solve a problem.
 - [B] Read and listen attentively.
 - [C] Listen attentively and solve a problem.
 - [D] Talk and rehearse a frequency in working memory.

- 10 A copilot has passed an upgrading course to become a captain. Which psychological consequence is most likely? (1.00 P.)
- [A] His/her self -concept is going to be stabilized because of the higher status as a captain.
 - [B] An upgrading never has psychological consequences.
 - [C] His/her self-concept is going to change because of new roles and tasks which have to be incorporated.
 - [D] The increased command authority leads to a higher professionalism.

- 11 Cognitive and physical rehearsal of actions during training: (1.00 P.)
- [A] is most important for the acquisition of complex perceptual motor skills
 - [B] is most important for self-control
 - [C] is more effective than practical training
 - [D] leads to an increased error rate

- 12 How can a pilot avoid automation complacency? (1.00 P.)
- [A] Regard the automatic system as additional crew members that needs to be crosschecked as well
 - [B] Always fly the whole flight manually to remain in man-machine loop
 - [C] Always try to enhance your aviation related knowledge during low workload periods
 - [D] Nothing, because it is system-inherent

- 13 How can the process of learning be enhanced? (1.00 P.)
- [A] By punishing the learner for unsuccessful trials
 - [B] By increasing the psychological pressure on the student
 - [C] By reinforcing successful performance
 - [D] By reinforcing errors
- 14 Mental rehearsal is helpful to improve flying skills (1.00 P.)
- [A] only for student pilots
 - [B] only for instructor pilots
 - [C] at all levels of flying proficiency
 - [D] only at a certain level of flying experience

- 15 What is meant by the term 'complacency'? (1.00 P.)
- [A] An agreement between captain and co-pilot due to Crew Resources Management
 - [B] Unjustified self-confidence
 - [C] Physiological effects on pilots because of fear of flying
 - [D] To question possible solutions

- 16 'Environmental capture' is a term used to describe which of the following statements?
1. The tendency for a skill to be executed in an environment in which it is frequently exercised
 2. The tendency for a skill acquired in one aircraft type to be executed in a new aircraft type, even if it is inappropriate to do so
 3. The tendency for people to behave in different ways in different social situations
 4. The gaining of environmental skills (1.00 P.)
- [A] 1, 2 and 3 are correct
- [B] 4 is correct
- [C] 1 and 2 are correct
- [D] 2 and 3 are correct

- 17 A high degree of cockpit automation may alter the traditional tasks of the pilots in a way, that (1.00 P.)
- [A] it is guaranteed that the crew always maintains situational awareness
 - [B] the attention of the cockpit crew will become reduced as a consequence of 'being out of the loop'
 - [C] the crew can pay more attention to problem-solving in an abnormal situation without monitoring the automatic systems
 - [D] Crew Coordination can be neglected on long haul flights without compromising safety

- 18 It is desirable to standardize as many patterns of behaviour (operating procedures) as possible in commercial aviation mainly because (1.00 P.)
- [A] such behaviour reduces errors even under adverse circumstances
 - [B] it makes the flight deck easier to design
 - [C] this reduces the amount of training required
 - [D] this lowers the ability requirement in pilot selection

- 19 When a pilot is facing a problem during flight he should (1.00 P.)
- [A] take as much time as he needs and is available to make up his mind
 - [B] always make up his mind quickly to give himself as much spare time as possible
 - [C] make up his mind before consulting other crew members
 - [D] avoid making up his mind until the very last minute
- 20 The decision making in emergency situations requires firstly: (1.00 P.)
- [A] speed of reaction
 - [B] the whole crew to focus on the problem
 - [C] delegation of tasks and crew coordination
 - [D] informing ATC thoroughly about the situation
- 21 The assessment of risk in a particular situation will be based on (1.00 P.)
- [A] the emergency checklist only
 - [B] subjective perception and evaluation of situational factors
 - [C] external factors only
 - [D] situational factors only
- 22 Once a pilot has developed a certain way of thinking about a problem he will probably (1.00 P.)
- [A] find it difficult to get out of that way of thinking and difficult to try a different interpretation of the data
 - [B] find it difficult to stick to his/her interpretation of the data
 - [C] find it impossible to get out of that way of thinking, whatever happens
 - [D] find it easy to interpret the data in different ways

- 23 To maintain good situational awareness you should:
- (1) believe only in your own interpretation of the data
 - (2) gather as much data as possible from every possible source before making inferences
 - (3) question whether your hypothesis still fits the situation as events progress and try to make time to review the situation
 - (4) consider ways of testing your situational hypothesis to see whether it is correct
- (1.00 P.)
- [A] all answers are correct
 - [B] 1 and 4 are correct
 - [C] 1 and 3 are correct
 - [D] 2, 3 and 4 are correct

- 24 Doing a general briefing in the pre-flight phase the captain should emphasize (1.00 P.)
- [A] complete delegation of all duties
 - [B] particular requirements in the field of crew coordination and co-operation
 - [C] departure on schedule
 - [D] avoidance inadequate handling of flight controls

- 25 During the pre-flight phase in the cockpit the captain notices that his copilot on the one hand is rather inexperienced and insecure but on the other hand highly motivated. Which kind of leadership behaviour is most appropriate? (1.00 P.)
- [A] The captain lets the copilot fly and encourages him to ask for support
 - [B] The captain lets the copilot fly and gives him detailed instructions what to do
 - [C] The captain lets the copilot fly and observes his behaviour without any comments
 - [D] The captain flies the first leg by himself and explains each action to the copilot in order to keep him informed about his decisions
- 26 A leader who demonstrates a democratic and co-operative style will deal with conflict by: (1.00 P.)
- [A] deciding what to do and pushes his own opinion through
 - [B] keeping a neutral position and does not participate in arguing
 - [C] trying to reconcile all persons involved in the conflict and tries to re-establish a pleasant and friendly atmosphere within the team
 - [D] trying to clarify the reasons and causes of the conflict with all persons involved
- 27 Informal roles within a crew (1.00 P.)
- [A] characterize inefficient crews
 - [B] will always impair the captain's influence
 - [C] are explicitly set out by the crew
 - [D] evolve as a result of the interactions that take place among crew members

- 28 Which behaviour is most likely to promote a constructive solution of interpersonal conflicts? (1.00 P.)
- [A] Responding with counter-arguments.
 - [B] Giving up the own point of view.
 - [C] Active listening.
 - [D] Staying to the own point of view.
- 29 The team spirit of a cockpit-crew most likely depends on (1.00 P.)
- [A] both pilots flying together very often for a long period
 - [B] both pilots respecting each other and striving for the same goals
 - [C] both pilots wearing the same uniform
 - [D] both pilots having the same political and ideological attitude
- 30 During the cruising phase of a short-haul flight the captain starts to smoke a cigarette in the cockpit. The flying copilot asks him to stop smoking because he is a non-smoker. The captain tells him: 'This is your problem', and continues smoking. What should the copilot do? (1.00 P.)
- [A] He should bring a cabin crew member in to arbitrate
 - [B] He should learn to accept the captain smoking cigarettes in the cockpit
 - [C] He should repeat his worries about smoking in the cockpit and should argue with the captain about this problem until the conflict is solved
 - [D] He should not further discuss this issue but should come back to this conflict during the debriefing
- 31 How would you describe the leadership style of a captain who primarily is interested in a friendly atmosphere within his crew, who is always constructive and encouraging, who usually compromises in interpersonal conflicts, who trusts in the capabilities of his crew-members, and who leaves the crew freedom for own decisions? (1.00 P.)
- [A] High task-orientation and high relationship-orientation
 - [B] Low task-orientation and low relationship-orientation
 - [C] Low task-orientation and high relationship-orientation
 - [D] High task-orientation and low relationship-orientation

- 32 If the co-pilot continuously feels unfairly treated by the Captain, he/she should:
(1.00 P.)
- [A] speak up and point out the possible consequences if the unfair behaviour persists
 - [B] internally retire and think positive
 - [C] freeze the communication and thus avoid immediate confrontation
 - [D] point out the problem, concentrate on his/her duties and clarify the matter at a more appropriate time

- 33 Which statement is correct? (1.00 P.)
- [A] Problems in the personal relationships between crew members are likely to hamper the communication process.
 - [B] There is no relation between inadequate communication and incidents or accidents.
 - [C] Personal conflict that takes place prior to take-off should wait to be addressed until the end of the flight.
 - [D] Inconsistent communication improves flight safety.
- 34 Metacommunication is defined as (1.00 P.)
- [A] balancing the own ideas and interests with those of the receiver
 - [B] those tools, other than the actual words, which compliment those words in order to communicate
 - [C] active listening
 - [D] having an assessment conversation

35 Mark the two most important attributes for a positive leadership style:

1. dominant behaviour
2. excellent role-behaviour
3. mastery of communication skills
4. "Laissez-faire" behaviour (1.00 P.)

[A] 2 and 4

[B] 2 and 3

[C] 1 and 4

[D] 1 and 3

- 36 Nonverbal communication (1.00 P.)
- [A] should be avoided by all means in the cockpit
 - [B] is always used intentionally
 - [C] supports verbal communication
 - [D] is of no meaning in the cockpit
- 37 How do you understand the statement 'one cannot not communicate'? (1.00 P.)
- [A] Communication is always possible.
 - [B] No meaningful communication can occur unless it is by verbal means.
 - [C] Being silent as well as inactive are nonverbal behaviour patterns which express a meaning.
 - [D] You cannot influence your own communication.
- 38 Discussing private matters in the cockpit (1.00 P.)
- [A] is appropriate in any phase of flight
 - [B] decreases the captains role of leadership
 - [C] can improve team spirit
 - [D] should be avoided by all means in the cockpit

- 39 Noise induced hearing loss is influenced by (1.00 P.)
- [A] the duration of a noise but not its intensity
 - [B] the duration and intensity of a noise
 - [C] the intensity of the noise but not its duration
 - [D] the suddenness of onset of a noise
- 40 In order to reduce the risk of coronary artery disease, exercise should: (1.00 P.)
- [A] be avoided since raising the heart rate shortens the life of the heart
 - [B] double the resting heart rate for at least an hour, five times a week
 - [C] double the resting heart rate for at least 20 minutes, three times a week
 - [D] triple the resting heart rate for 20 minutes, once a week
- 41 Which of the following is most true? (1.00 P.)
- [A] Regular exercise is beneficial to general health, but the most efficient way to lose weight is by reducing calorie consumption
 - [B] Regular exercise is beneficial to general health, and is the only effective way to lose weight
 - [C] Regular exercise and reduction in calorie consumption are both essential in order to lose weight
 - [D] Regular exercise is an impediment to losing weight since it increases the metabolic rate

- 42 The physiological rhythms of a pilot in a new time zone will resynchronise to this new time zone at a rate of about (1.00 P.)
- [A] 1 - 1.5 hours a day
 - [B] 4 - 4.5 hours a day
 - [C] 2 - 2.5 hours a day
 - [D] 3 - 3.5 hours a day
- 43 The duration of a period of sleep is governed primarily by (1.00 P.)
- [A] the amount of time you have been awake
 - [B] the point within your circadian rhythm at which you try to sleep
 - [C] the number of points you have in your 'credit/deficit' system
 - [D] the duration of your previous sleep

- 44 A selective attentional mechanism is required (1.00 P.)
- [A] because of the limitations of the sense organs
 - [B] because of limitations in our store of motor programmes
 - [C] because the capacity of the long term memory is limited
 - [D] because of the limited capacity of the central decision maker and working memory

- 45 Working memory: (1.00 P.)
- [A] is unlimited in size
 - [B] is sensitive to interruptions which may erase all or some of its contents
 - [C] is unlimited in duration
 - [D] varies considerably in size between an expert pilot and a novice pilot

- 46 Motivation is an important attribute which contributes to flight safety. Which of the following statements is correct with regards to motivation? (1.00 P.)
- [A] Excessive motivation leads to stress which adversely affects performance
 - [B] A high degree of motivation lowers the level of vigilance
 - [C] A high degree of motivation makes it possible to make up for insufficient knowledge in complete safety
 - [D] Motivation reduces the intensity of sensory illusions

- 47 Which of the following statements is correct regarding decision making? (1.00 P.)
- [A] Deciding means imposing one's point of view.
 - [B] Deciding means being able to come up with original solutions.
 - [C] Deciding means applying an automatic procedure.
 - [D] Deciding means choosing between alternatives.

- 48 Human errors are frequent and may take several forms: (1.00 P.)
- [A] a violation is an error which is always involuntary
 - [B] an error can be described as the mismatch between the pilots intention and the result of his/her actions
 - [C] representational errors in which the pilot has properly identified the situation and is familiar with the procedure
 - [D] all errors are avoidable through continuous and thorough training

- 49 The quality of learning: (1.00 P.)
- [A] is promoted by feedback on the value of one's own performance
 - [B] depends on long-term memory capacity
 - [C] is dependent on age and professional role
 - [D] is independent of the level of motivation

- 50 As a cause of accidents, the human factor (1.00 P.)
- [A] is cited in approximately 70 - 80 % of aviation accidents
 - [B] plays a negligible role in commercial aviation accidents. It is much more important in general aviation
 - [C] has increased considerably since 1980 - the percentage of accident in which this factor has been involved has more than tripled since this date
 - [D] which is cited in current statistics, applies to the flight crew and ATC only

- 51 Less experienced pilots differ from experienced pilots in the following way: (1.00 P.)
- [A] task for task, an expert's workload is greater than a novice's one
 - [B] inexperienced pilots refer to information more than experts when carrying out the same task
 - [C] flight planning performance decreases with age, and experience is unable to mask this deficiency
 - [D] experienced pilots are less routine-minded than young pilots because they know that routine causes mistakes

- 52 Analysis of accidents involving the human factor in aviation shows that: (1.00 P.)
- [A] only front-line operators are involved
 - [B] there is hardly ever a single cause responsible
 - [C] failure of the human factor is always connected with technical breakdowns
 - [D] only pilot training will make it possible to improve the situation

- 53 Thinking on human reliability is changing. (1.00 P.)
- [A] The individual view of safety has gradually replaced the systemic view of safety
 - [B] Human errors are now considered as being inevitable
 - [C] It is thought that it will be possible to eliminate errors in the near future
 - [D] Human errors can be avoided. All it takes is to be vigilant and to extend one's knowledge

- 54 Which of the following statements concerning communication is valid? (1.00 P.)
- [A] Professional communication means to exchange information as little as possible.
 - [B] Professional communication means: using a restricted and specific language, tailored to minimize misunderstandings.
 - [C] Communication must take priority over any other flight activity under all circumstances
 - [D] Word order is of little importance to its success. Only the words uttered are important.

- 55 Which of the following statements is true? (1.00 P.)
- [A] Stressors are independent from each other.
 - [B] Stress should always be avoided under any circumstances.
 - [C] Stressors accumulate thus increasing the likelihood of exhaustion.
 - [D] People are capable of living without stress.

- 56 In case of in-flight stress, one should: (1.00 P.)
- [A] demonstrate aggressiveness to stimulate the crew
 - [B] only trust in oneself; being sure to know the own limits
 - [C] use all available resources of the crew
 - [D] always carry out a breathing exercise

- 57 The behavioural effects of stress may include:
- 1: manifestation of aggressiveness.
 - 2: a willingness to improve communication.
 - 3: a willingness for group cohesion.
 - 4: a tendency to withdrawal.

The combination of correct statements is: (1.00 P.)

- [A] 3 and 4 are correct
- [B] 1,2 and 3 are correct
- [C] 1 and 4 are correct
- [D] 2,3 and 4 are correct

58 The cognitive effects of stress may include:

- 1: excessive haste.
- 2: an improvement in memory.
- 3: a complete block: action is impossible.
- 4: a risk of focusing on a particular aspect.
- 5: ease of decision-making.
- 6: an increase in the rate of mistakes.

The combination which brings together all correct statements is: (1.00 P.)

- [A] 1,2,5
- [B] 3,4,5
- [C] 2,3,5,6
- [D] 1,3,4,6

59 What is the effect of stress on performance ?

- 1: It always reduces performance.
- 2: Optimum performance is obtained with optimum arousal.
- 3: Excessive stress weakens performance.
- 4: Insufficient stress weakens performance.

The combination of correct statements is: (1.00 P.)

- [A] 1,2,4
- [B] 1,2,3
- [C] 2,3,4
- [D] 1,3,4

60 What are the characteristics of the alarm phase of the stress reactions?

- 1: increased arousal level as a result of adrenaline secretion.
- 2: an increase in heart rate, respiration and release of glucose.
- 3: a decrease in stress resistance.
- 4: activation of the digestive system.
- 5: secretion of cortisol to mobilize attention.

The combination of correct statements is: (1.00 P.)

- [A] 1,2,3
- [B] 1,2
- [C] 2,4,5
- [D] 1,3,5

61 What are the three phases of General Adaptation Syndrome ? (1.00 P.)

- [A] Alert, resistance, performance.
- [B] alarm, resistance, performance,
- [C] alert, resistance, exhaustion
- [D] Alarm, resistance, exhaustion.

62 Stress occurs:

- 1: only in a situation of imminent danger.
- 2: only when faced with real, existing and actual situation.
- 3: sometimes via imagination, the anticipation of a situation or its outcome.
- 4: because of the similarity with a formerly experienced stressful situation

The correct statement(s) is (are): (1.00 P.)

- [A] 3,4
- [B] 1,2
- [C] 1,2,4
- [D] 2, 3

63 Cognitive evaluation which leads to stress is based on: (1.00 P.)

- [A] the capabilities of the individual and the solutions provided by the environment
- [B] the evaluation of the situation and the evaluation of capabilities to cope with it
- [C] the evaluation of the capabilities of the individual and the time available
- [D] the evaluation of the situation and the state of fatigue of the individual

64 Which of the following physical stimuli may cause stress reactions?

- 1: noise.
- 2: conflict.
- 3: temperature.
- 4: an administrative problem.
- 5: hunger.

The combination of correct statements is: (1.00 P.)

- [A] 3,4,5
- [B] 1,3,5
- [C] 1,3,4
- [D] 2,3,5

65 Acute stress quickly leads to (1.00 P.)

- [A] a decrease in the amount of resources mobilized to face the situation
- [B] a state of overactivation beyond the control of willpower
- [C] a permanent state of incapacitation
- [D] the mobilization of resources required to cope with the stressor

66 Stress may be defined as: (1.00 P.)

- [A] a poorly controlled emotion which leads to a reduction in capabilities
- [B] a psychological phenomenon which only affects fragile personalities
- [C] a normal phenomenon which enables an individual to adapt to encountered situations
- [D] a human reaction which one must manage to eliminate

67 What is a stressor? (1.00 P.)

- [A] All external stimuli are stressors since they modify the internal equilibrium
- [B] The adaptation response of the individual to his environment
- [C] An external or internal stimulus which is interpreted by an individual as being stressful
- [D] A psychological problem developed in a situation of danger

- 68 What may trigger stress in humans? (1.00 P.)
- [A] The subjective interpretation an individual gives to a situation experienced
 - [B] Always the reaction to upsetting emotions caused either by physiological or psychological conditions
 - [C] Only objective stimulation from environmental factors
 - [D] Only strong stimulation of the sensory organs: a flash of light, noise and the smell of smoke

- 69 With regard to the average influence of age on pilot performance, it may be said that age: (1.00 P.)
- [A] has little impact since normally the pilot is able to compensate for it by his/her flight experience
 - [B] increases in impact as speed of thought and memory deteriorate
 - [C] has a major impact owing to the impairment of memory
 - [D] sharply reduces performance without, however, affecting cognitive capabilities

- 70 Of the following statements, which apply to coordinated cooperation?
- 1: It allows for synergy in the actions between the captain and the co-pilot.
 - 2: It represents the simultaneous execution of a single action by the various members of the crew.
 - 3: Communication here results in synchronised actions and the natural and easy distribution of responsibilities.
 - 4: Communication is centred around the outside world.

Which of the following lists all the correct statements? (1.00 P.)

- [A] 1 and 4
 - [B] 2 and 3
 - [C] 1,2 and 4
 - [D] 1 and 3
- 71 Coaction is a mode of coordination which recommends: (1.00 P.)
- [A] working parallel to achieve individual objectives
 - [B] the application of procedural knowledge in the conduct of specific actions
 - [C] working in parallel to achieve one common objective
 - [D] sustained cooperation on actions and the formulation of commitments concerning flight situations

- 72 In order to make communication effective, it is necessary to:
- 1: avoid the synchronization of verbal and non-verbal channels.
 - 2: send information in line with the receiver's decoding abilities.
 - 3: always concentrate on the informational aspects of the message only.
 - 4: avoid increasing the number of communication channels, in order to simplify communication.

The correct statement(s) is (are): (1.00 P.)

- [A] 1,2 and 3 are correct
- [B] 3 and 4 are correct
- [C] 2 and 4 are correct
- [D] only 2 is correct

- 73 Which of the following statements regarding interpersonal interactions are correct?
- 1 If the sender perceives that the receiver is incompetent, he/she will increase the length of the message
 - 2 If the receiver is of non-native tongue, the sender will reinforce what he is saying by using more complicated words so as to optimize understanding
 - 3 If the sender considers the receiver incompetent, he/she tends to simplify the content of the sentences
 - 4 It is much safer to fly with a crew who know each other well because communication will always be excellent.

The correct statement(s) is (are): (1.00 P.)

- [A] 1 and 2 are correct
- [B] 3 only is correct
- [C] 3 and 4 are correct
- [D] 2 and 3 are correct

- 74 Professional languages have certain characteristics, for example:
-1: They use a limited vocabulary .
-2: They are rich and adapted to the context, which sometimes lead to ambiguities.
-3: Their grammar is rather complicated and complex.
-4: Context provides meaning and therefore reduces the risk of ambiguities.
The correct statement(s) is (are): (1.00 P.)
- [A] 1 and 4 are correct
[B] only 4 is correct
[C] 1 and 3 are correct
[D] 2 and 3 are correct
- 75 With regard to communication in a cockpit, we can say that: (1.00 P.)
- [A] communication is always sufficiently automated to enable an activity with a high workload element to be carried out at the same time
[B] all the characteristics of communication, namely output, duration, precision, clarity, etc. are stable and are not much affected by changes in workload
[C] communication uses up resources, thus limiting the resources allocated to work in progress
[D] communication is only effective if messages are kept short and sufficiently precise to limit their number
- 76 What are the communication qualities of a good briefing?
A good briefing must:
-1: contain as much information and be as comprehensive as possible.
-2: be of a standard type so that it can be reused for another flight of the same type.
-3: be short and precise.
-4: be understandable to the other crew member(s).
- The correct statement(s) is (are): (1.00 P.)
- [A] 1 and 4 are correct
[B] 1 and 2 are correct
[C] 1, 2 and 4 are correct
[D] 2,3 and 4 are correct

- 77 Which of the following statements concerning check list is correct? (1.00 P.)
- [A] The most important items should be placed at the beginning of a check list since attention is usually focused here
 - [B] The most important items must be placed at the end of check list, allowing them to be kept near at hand so that they are quickly available for any supplementary check
 - [C] The most important items must be placed in the middle of check list so that they come to be examined once attention is focused but before concentration starts to wane
 - [D] All the items of a check list are equally important; their sequence is of no importance
- 78 Which of the following statements are correct with regard to the design of a check list?
- 1: The longer a check list, the more it must be subdivided into logical parts.
 - 2: The trickiest points must be placed in the middle of the check list.
 - 3: Check lists must be designed in such a way that they can be lumped together with other tasks.
 - 4: Whenever possible, a panel scan sequence should be applied.
 - 5: Use should be made of upper case/"bold"/italics/colour with care to emphasize critical items or points.
- The combination of correct statements is: (1.00 P.)
- [A] 1, 2 and 5 are correct
 - [B] 1, 3 and 5 are correct
 - [C] 1, 2 and 3 are correct
 - [D] 1, 4 and 5 are correct
- 79 The use of check lists should be carried out in such a way that: (1.00 P.)
- [A] their execution should be combined with other important tasks
 - [B] their execution may be done simultaneously with other actions
 - [C] they should only be carried out when time is available
 - [D] their execution should not be done simultaneously with other actions

- 80 According to Rasmussen's model, errors in rule-based control mode are of the following type(s): (1.00 P.)
- [A] handling errors
 - [B] routine errors
 - [C] creative errors
 - [D] errors of technical knowledge
- 81 According to Rasmussen's model, errors are of the following type(s) in skill-based behaviour: (1.00 P.)
- [A] routine errors
 - [B] creative errors
 - [C] knowledge errors
 - [D] handling errors

- 82 In order to overcome an overload of work during the flight, it is necessary to:
- 1: know how to use one's own reserve of resources in order to ease the burden on the crew.
 - 2: divide up tasks among the crew.
 - 3: ensure that the long-term memory is used as much as possible as short term memory will add to the stress.
 - 4: drop certain tasks and stick to high-level priorities.

The correct statement(s) is (are): (1.00 P.)

- [A] 1 and 3 are correct
- [B] 1, 2 and 4 are correct
- [C] 3 and 4 are correct
- [D] 1, 2 and 3 are correct

- 83 The available cognitive resources of the human brain: (1.00 P.)
- [A] are limited but make it possible to easily perform several tasks at the same time
 - [B] allow for twin-tasks operation without any loss of effectiveness
 - [C] are virtually unlimited
 - [D] are limited and make it impossible to perform two attentional tasks at the same time
- 84 The acquisition of a skill comprises three stages (Anderson model): (1.00 P.)
- [A] associative, autonomous and expert
 - [B] automatic, cognitive and knowledge
 - [C] cognitive, associative and knowledge
 - [D] cognitive, associative and automatic
- 85 A pilot can be described as being proficient, when he/she: (1.00 P.)
- [A] is capable of maintaining a high level of arousal during a great bulk of the flight
 - [B] has automated a large part of the necessary flight deck routine operations in order to free his/her cognitive resources
 - [C] knows how to off-load all his/her resources to the automation of tasks
 - [D] is able to reduce his/her arousal to a low level during the entire flight

- 86 With regard to the practice of English, which of the following statements is correct? (1.00 P.)
- [A] Be familiar with normal procedures in English since only this allows for effective management of any flight's communication.
 - [B] The composition of every crew should be geared to a command of the official aeronautical language of the destination country.
 - [C] It is necessary and sufficient to have a command of any of the official languages of the ICAO.
 - [D] All pilots should master it because the aeronautical world needs one common language.

- 87 Which of the following statements best fits the definition of an active error?
Active error is: (1.00 P.)
- [A] produced by the operator and can be rapidly detected
 - [B] rare in front-line actions and difficult to detect owing to the fact that it usually occurs in a complex system of uncontrolled and involuntary deviations
 - [C] essentially results from the application of a bad rule or the poor application of a good rule by aeroplane designers
 - [D] produced either by a front-line operator or by a remote operator and results in a hidden or latent consequence at a specific moment of the action
- 88 What are the main consequences of latent errors? They:
- 1: remain undetected in the system for a certain length of time.
 - 2: may only manifest themselves under certain conditions.
 - 3: are quickly detectable by the front-line operator whose mental schemas on the instantaneous situation filter out formal errors.
 - 4: lull pilots into a false sense of security
- The correct statement(s) is (are): (1.00 P.)
- [A] 2, 3 and 4
 - [B] 1,2 and 4
 - [C] 1 and 2
 - [D] 1 and 3
- 89 Which of the following statements fits best the concept of latent error?
Latent errors: (1.00 P.)
- [A] rapidly may be detected via their immediate consequences on the action in progress
 - [B] have been present in the system for a certain length of time and are difficult to identify as a result of the time lag between the generation and the occurrence of the error
 - [C] are mainly associated with the behaviour of front-line operators and are only detected after advanced problem-solving
 - [D] are rarely made by front-line operators, and are consequently readily identified and detected by the monitoring, detection and warning links

- 90 To avoid wrong decisions by the pilot, an aircraft system should at the minimum to (1.00 P.)
- [A] tolerate the deviation
 - [B] correct the deviation
 - [C] report the deviation
 - [D] report its malfunction

- 91 When can a system be said to be tolerant to error?
When: (1.00 P.)
- [A] the consequences of an error will not seriously jeopardise safety
 - [B] its safety system has taken account of all statistically probable errors
 - [C] latent errors do not entail serious consequences for safety
 - [D] its safety system is too permeable to error

- 92 Why must flight safety considerations consider the human error mechanism?
- 1: It is analysis of an incident or accident which will make it possible to identify what error has been committed and by whom. It is the process whereby the perpetrator is made responsible which may lead to elimination of the error.
 - 2: If we have a better understanding of the cognitive error mechanism, it will be possible to adapt procedures, aircraft interfaces, etc.
 - 3: It is error management procedure which enables us to continuously adjust our actions. The better we understand the underlying mechanism of an error, the better will be our means for detecting and reducing future errors.
 - 4: Since error is essentially human, once it has been identified by the use of procedures, a person will be able to anticipate and deal with it automatically in the future.

The correct statement(s) is (are): (1.00 P.)

- [A] 2 and 4
- [B] 3 and 4
- [C] 1 and 4
- [D] 2 and 3

- 93 What strategies can be used to combat human error?
- 1: Reducing error-prone mechanisms.
 - 2: Improving the way in which error is taken into account in training.
 - 3: Sanctions against the initiators of error.
 - 4: Improving recovery from errors and its consequences.

The combination of correct statements is: (1.00 P.)

- [A] 2, 3 and 4
- [B] 1, 2 and 4
- [C] 3 and 4
- [D] 1 and 2

- 94 Concerning the relationship between performance and stress, which of the following statements is correct? (1.00 P.)
- [A] A well trained pilot is able to eliminate any kind of stress completely when he is scheduled to fly.
 - [B] A moderate level of stress may improve performance.
 - [C] A student will learn faster and better under severe stress.
 - [D] Domestic stress will not affect the pilot's performance because he is able to leave this type of stress on the ground.

- 95 Stress is a frequent aspect of the pilot's job. Under which of the following circumstances does it occur?
1. Stress occurs whenever the pilot must revise his plan of action and does not immediately have a solution
 2. Stress occurs with inexperienced pilots when the situational demands exceed their individual capabilities
 3. Stress occurs if a pilot is convinced that he will not be able to find a solution for the problem he/she faces. (1.00 P.)
- [A] 1 is correct, 2 and 3 are false
- [B] 1 and 2 are correct, 3 is false
- [C] Only 1 is false
- [D] 1, 2 and 3 are correct
-
- 96 Divided attention is the ability:
1. to execute several mental activities at almost the same time (i.e. when switching attention from outside the aircraft to the airspeed indicator on the instrument panel)
 2. to monitor the progress of a motor programme (i.e. flying or taxiing the airplane) on a relatively subconscious level, while making a radio call at the same time (requiring a rather conscious level)
 3. to select information and check if it is relevant to the task in hand. At the same time no other operation can be performed.
 4. to delegate tasks to the copilot while concentrating on the procedures (1.00 P.)
- [A] 1 and 3 are correct, 2 and 4 are false
- [B] Only 3 is false
- [C] 1,2 and 3 are correct, 4 is false
- [D] 1 and 2 are correct, 3 and 4 are false

- 97 Hypoxia is: (1.00 P.)
- [A] often produced during steep turns when pilots turn their heads in a direction opposite to the direction in which the aircraft is turning
 - [B] a condition of lacking oxygen in the brain causing the circulatory system to compensate by decreasing the heart rate.
 - [C] a physical condition caused by a lack of oxygen saturation in the blood while hyperventilating.
 - [D] a physical condition caused by a lack of oxygen to meet the needs of the body tissues, leading to mental and muscular disturbances, causing impaired thinking, poor judgement and slow reactions
- 98 Hyperventilation is due to an excessive rate of breathing and can produce the following symptoms: (1.00 P.)
- [A] blue finger-nails and lips
 - [B] reduced heart rate and increase in visual acuity
 - [C] a state of overconfidence and reduced heart rate
 - [D] dizziness, tingling sensation in the fingers and toes, nausea and blurred vision
- 99 In order to get rid of excess nitrogen following scuba diving, subsequent flights should be delayed (1.00 P.)
- [A] 24 hours
 - [B] 36 hours after any scuba diving
 - [C] 3 hours after non decompression diving
 - [D] 48 hours after a continuous ascent in the water has been made

- 100 During flight in IMC, the most reliable sense which should be used to overcome illusions is the: (1.00 P.)
- [A] "Seat-of-the-pants-Sense"
 - [B] visual sense, interpreting the attitude indicator
 - [C] visual sense by looking outside
 - [D] vestibular sense
-
- 101 Spatial disorientation will be most likely to occur during flight: (1.00 P.)
- [A] when flying in light rain below the ceiling
 - [B] when flying in and out of clouds and the pilot maintains good instrument cross check
 - [C] when flying in bright sunlight above a cloud layer
 - [D] if the brain receives conflicting information and the pilot does not believe the instruments

102 The chemical substance responsible for addiction to tobacco is (1.00 P.)

- [A] carbon monoxide
- [B] the combination of nicotine, tar and carbon monoxide
- [C] nicotine
- [D] tar

- 103 It is inadvisable to fly when suffering from a cold. The reason for this is: (1.00 P.)
- [A] although the change in air pressure during a climb at lower altitudes is very small, it increases rapidly at high altitudes. If the tissue in the Eustachian tube of the ear is swollen, gentle descents at high altitude would result in damage to the ear drum
 - [B] the tissue around the nasal end of the Eustachian tube is likely to be swollen thus causing difficulty in equalising the pressure within the middle ear and the nasal/throat area. Pain and damage to the eardrum can result, particularly during fast descents
 - [C] because it will seriously affect peripheral vision
 - [D] swollen tissue in the inner ear will increase the rate of metabolic production resulting in hyperventilation

- 104 A large number of medical preparations can be bought without a doctor's prescription. In relation to using these preparations, which of the following is correct: (1.00 P.)
- [A] The side effects of these types of preparations are sufficiently negligible as to be ignored by pilots
 - [B] They will cause a condition of over-arousal
 - [C] A pilot using any of these preparations should get professional advice from an aviation medical specialist if he intends to fly and self-medicate at the same time
 - [D] They have no side effects which would give problems to a pilot during flight

- 105 The total pressure of a mixture of gases is equal to the sum of the partial pressures of the gases in the mixture. This is: (1.00 P.)
- [A] Dalton's law
 - [B] Graham's law
 - [C] Boyle Mariotte's law
 - [D] Henry's law

- 106 The cabin pressure in airline operation is (1.00 P.)
- [A] normally between 2 000 to 3 000 feet
 - [B] normally between 6 000 to 8 000 feet
 - [C] always equivalent to sea level
 - [D] normally between 4 000 to 5 000 feet

107 Human behaviour is determined by: (1.00 P.)

- [A] biological characteristics, social environment and cultural influences
- [B] biological characteristics only
- [C] the social environment only
- [D] cultural influences only

- 108 Pilots are more easily inclined to take greater risks when: (1.00 P.)
- [A] they are not constrained by time
 - [B] they are part of a group of pilots and they feel that they are being observed and admired (e.g. air shows)
 - [C] making decisions independently of others
 - [D] making a flight over unfamiliar territory

109 Judgement is based upon: (1.00 P.)

- [A] a decision-making process involving the 5 physical senses and their use to manually operate the aircraft controls
- [B] a process involving a pilot's attitude to take and to evaluate risks by assessing the situation and making decisions based upon knowledge, skill and experience
- [C] the development of skills through constant practice of flight manoeuvres
- [D] the ability to interpret the flight instruments

- 110 The relevance of check procedures during flight becomes even more important when: (1.00 P.)
- [A] flying an unfamiliar type of aircraft and experiencing mental pressure
 - [B] flying an aircraft which you have flown many times before
 - [C] flying an aircraft which you have flown recently
 - [D] conducting a longer flight than you would normally perform
- 111 Which of the following responses is an example of "habit reversion" (negative habit transfer): (1.00 P.)
- [A] A pilot who has flown many hours in an aircraft in which the fuel lever points forward for the ON position, may unintentionally turn the fuel lever into the false position, when flying a different aircraft, where the fuel lever has to point aft to be in the ON position
 - [B] Turning the aircraft to the left when intending to turn it to the right
 - [C] habitually missing an item on the checklist or missing the second item when two items are on the same line
 - [D] Incorrect anticipation of an air traffic controller's instructions
- 112 Although the anticipation of possible events is a good attitude for pilots to acquire, it can sometimes lead to hazardous situations. With this statement in mind, select the response below which could lead to such a hazard: (1.00 P.)
- [A] mishearing the contents of a reply from an air traffic controller when a non-standard procedure was given but a standard procedure was anticipated
 - [B] anticipating that the weather may deteriorate
 - [C] anticipating the sequence of items on a check list.
 - [D] anticipating that the flight will take longer time than planned

- 113 With regards to stress, as it affects human beings, which of the following statements is correct? (1.00 P.)
- [A] Self imposed obligations will not create stress.
 - [B] 'Stress' is a term used to describe how a person reacts to demands placed upon him/her.
 - [C] Stressors relate purely to a pilot's physical condition.
 - [D] All forms of stress should be avoided.

- 114 If during flight a pilot is in a mental condition of "optimum arousal" he/she will be: (1.00 P.)
- [A] prepared best to cope with a difficult task
 - [B] approaching a condition of complacency or fatigue
 - [C] in a confused mental state
 - [D] unprepared to handle a difficult situation

- 115 Carbon monoxide is always present in the exhaust gases of engines. If a pilot is exposed to carbon monoxide, which of the following responses is correct? (1.00 P.)
- [A] Carbon monoxide is easily recognised by odour and taste.
 - [B] A short exposure to relatively high concentrations of carbon monoxide can seriously affect a pilot's ability to operate an aircraft.
 - [C] When exposed to carbon monoxide for a long period of time, the body will adapt to it and no adverse physical effects are experienced
 - [D] Carbon monoxide can only affect pilots if they are exposed to it for a long period of time.

- 116 The trend in aeroplane hull-loss rate over the last three decades seems to be related to: (1.00 P.)
- [A] the crew
 - [B] the year of manufacture
 - [C] the number of engines
 - [D] the manufacturer

117 Pilot stress reactions: (1.00 P.)

- [A] differ from pilot to pilot, depending on how a person manages the particular stressors
- [B] seem to be the same for most pilots
- [C] are related to an internationally recognized list of stressors where the top-ten items should be avoided by every means
- [D] do not change with the environment or different situations but mainly with the characters themselves

- 118 What aircraft equipment marked a substantial decrease in hull loss rates in the eighties? (1.00 P.)
- [A] GPWS
 - [B] SSR
 - [C] DME
 - [D] TCAS

119 Incapacitation is most dangerous when it is: (1.00 P.)

- [A] obvious
- [B] insidious
- [C] intense
- [D] sudden

- 120 One negative aspect of the highly automated cockpit results in: (1.00 P.)
- [A] less experienced crews because of more transparent system details
 - [B] pilots disregarding the automatic equipment
 - [C] complacency among the crewmembers
 - [D] constantly high crew overload with regard to the monitoring tasks

- 121 Which of the following human error rates can be described as pretty good, realistic and pretty good, after methodical training (1.00 P.)
- [A] 1 in 1000 times
 - [B] 1 in 100 times
 - [C] 1 in 100000 times
 - [D] 1 in 10000 times

- 122 Between which components, with reference to the SHELL Concept, covers pilot misinterpretation of the old three-point altimeter? (1.00 P.)
- [A] Liveware - Hardware
 - [B] Liveware - Liveware
 - [C] Liveware - Environment
 - [D] Liveware - Software
- 123 The errors resulting from an illogical indexing system in an operations manual are related to an interface mismatch between (1.00 P.)
- [A] Liveware - Hardware
 - [B] Liveware - Environment
 - [C] Liveware - Liveware
 - [D] Liveware - Software

124 Which of the following provides the basis of all perceptions? (1.00 P.)

- [A] The intensity of the stimuli.
- [B] The separation of figure and background.
- [C] The aural or visual significance attributed in short term memory.
- [D] The aural or visual significance attributed in long term memory.

125 The effect of experience and repetition on performance: (1.00 P.)

- [A] is always beneficial
- [B] is never negative
- [C] is always negative
- [D] can both be beneficial and negative

126 Situations particularly vulnerable to "reversion to an earlier behaviour pattern" are:

1. when concentration on a particular task is relaxed
2. when situations are characterised by medium workload
3. when situations are characterised by stress (1.00 P.)

[A] 1. and 3.

[B] 1. and 2.

[C] 2. and 3.

[D] 3.

- 127 The most dangerous characteristic of perception is, that it (1.00 P.)
- [A] will only occur under conditions of stress
 - [B] can easily be changed
 - [C] is frequently extremely resistant to correction
 - [D] will mainly occur under conditions of relaxation

128 Fixation or tunnel vision is primarily to be expected when: (1.00 P.)

- [A] stress and motivation are medium
- [B] stress is high
- [C] stress is medium
- [D] stress and motivation are low

- 129 Which of the following concepts relating to human reliability is true ? (1.00 P.)
- [A] Expectation has no influence on perception.
 - [B] If equipment is designed in such a way that it can be operated wrongly, then sooner or later, it will be.
 - [C] Performance is totally independent of motivation.
 - [D] Response to a particular stressful influence does not vary from one person to another.

130 Which of the following operations are performed more effectively by people than by automatic systems ?

1. Qualitative decision-making
2. Waiting for an infrequent phenomenon
3. Monitoring to ensure that certain values are not exceeded
4. Detection of unusual conditions (smell, noise, etc.) (1.00 P.)

[A] 1,2

[B] 1,4

[C] 3,4

[D] 2,3,4

131 Which of the following operations are performed more effectively by automatic systems than by people ?

1. Waiting for an infrequent phenomenon
2. Long term controlling of a set value (e.g holding of trajectory)
3. Monitoring to ensure that certain values are not exceeded (e.g. holding of flight path)
4. Qualitative decision-making (1.00 P.)

[A] 2,3,4

[B] 3,4

[C] 2,4

[D] 1,2,3

132 As a result of automation in cockpits, (1.00 P.)

- [A] communication and coordination call for an even greater effort on the part of the crew members
- [B] the need for communication between crew members has been decreased
- [C] it is easier for the captain to monitor the work of the first officer and vice versa
- [D] communication and coordination have clearly improved in man-man and man-machine relations

- 133 Which of the following drawbacks are associated with automation ?
1. Reduced competence in manually controlling the aircraft
 2. Increased likelihood of slips while programming automatic systems
 3. Difficulties in adapting to the use of a sidestick
 4. General decrease in technical reliability (1.00 P.)
- [A] 1,3
- [B] 2,3,4
- [C] 1,2
- [D] 1,4

134 Which of the following are the most favourable solutions to manage phases of reduced or low vigilance (hypovigilance)?

1. Keep active open communication between man and machine
2. Use of amphetamines
3. Reducing the intensity of the light
4. Organising periods of rest during the flight (1.00 P.)

[A] 1,3

[B] 1,4

[C] 3,4

[D] 1,2

135 What are main signs indicating the loss of vigilance ?

1. Decrease in sensory perception
2. Increase in selective attention
3. Sensation of muscular heaviness
4. Decrease in complacency

Which of the following lists all the correct statements ? (1.00 P.)

[A] 1 and 4

[B] 2 and 4

[C] 1 and 3

[D] 2 and 3

136 What is "divided attention"? (1.00 P.)

[A] Difficulty of concentrating on a particular objective

[B] The adverse effect of motivation which leads to one's attention being dispersed

[C] The management of several matters of interest dealt with individually one after the other

[D] Ease of concentrating on a particular objective

- 137 Which of the following statements concerning hypovigilance is correct ?
Hypovigilance: (1.00 P.)
- [A] only affects certain personality types
 - [B] tends to occur at the end of the mission as a result of a relaxation in the crew's' attention
 - [C] may occur at any time in the flight
 - [D] usually occurs a number of minutes after a stressful take-off
- 138 What are the main factors which bring about reduced or low vigilance (hypovigilance) ?
1. The monotony of the task
 2. Tiredness and the need for sleep
 3. A lack of stimulation
 4. Excessive stress (1.00 P.)
- [A] 2,4
 - [B] 1,3
 - [C] 3,4
 - [D] 1,2,3

- 139 Which of the following statements with regard to motivation is correct? (1.00 P.)
- [A] Too much motivation may result in hypovigilance and thus in a decrease in attention
 - [B] Excessive motivation in combination with high levels of stress will limit attention management capabilities
 - [C] Low motivation will guarantee adequate attention management capabilities
 - [D] Motivation will reduce risk

- 140 Which of the following statements summarises the impact that motivation may have on attention? (1.00 P.)
- [A] It only facilitates attention in extreme cases (risk of death)
 - [B] It increases alertness and attention
 - [C] Motivation has only a small effect on attention, but it facilitates alertness
 - [D] It stimulates attention but may lead to phases of low arousal

- 141 What are the effects of excessive stress? (1.00 P.)
- [A] It increases vigilance for a longer period than stress itself, but may focus attention inappropriately
 - [B] It activates resources stored in memory
 - [C] It has very little immediate effect on vigilance and attention
 - [D] It reduces vigilance and focuses attention

- 142 The level of automation helps to conserve resources. On the other hand, it may result in: (1.00 P.)
- [A] mistakes
 - [B] errors in selecting an appropriate plan of action
 - [C] routine errors (slips)
 - [D] decision-making errors

- 143 What is the main adverse effect of expectation with regards to perception? (1.00 P.)
- [A] Expectation is a tool that allows capture of all relevant information
 - [B] Expectation often guides the focus of attention towards a particular aspect, while possible alternates are neglected
 - [C] The attention area is enlarged by expectation, however it will therefore lead to uncertainties when a pilot is looking for a decision
 - [D] Expectations always lead to routine errors

- 144 The acquisition of a motor programme (skill) will mean that: (1.00 P.)
- [A] the less behaviour is automated, the less it requires attention and the more it frees resources
 - [B] the more behaviour is automated, the less it requires conscious attention and thus the more it frees mental resources
 - [C] the more behaviour is automated, the more it requires attention and the less it frees resources
 - [D] the more behaviour is automated, the more it requires attention and the more it frees resources

- 145 Concerning circadian rhythm disruption (jet lag), adjustment to destination time:
1. Takes longer when travelling west rather than travelling east
 2. Takes longer when travelling east rather than travelling west
 3. Varies little between individuals
 4. Varies substantially among individuals

Which of the following lists all the correct statements ? (1.00 P.)

- [A] 2 and 3
- [B] 1 and 3
- [C] 2 and 4
- [D] 1 and 4

- 146 What seems to be the main role of Orthodox sleep? (1.00 P.)

- [A] It essentially allows for physical recovery
- [B] It includes physical and mental recuperation associate with fatigue
- [C] Its main role is associated with activities of memory activities and restoration of attention capabilities
- [D] Via physical recovery, it is characterised by an alternation of dream phases and paradoxical phases

- 147 What are the main effects of a lack of sleep on performance? (1.00 P.)

- [A] It reduces concentration and fatigue only with sleep loss greater than 48 hours
- [B] It increases fatigue, reduces concentration and increases the risk of sensory illusions
- [C] It increases fatigue and concentration difficulties, but facilitates stress management by muscular relaxation
- [D] It causes muscular spasms

- 148 What is the effect of tiredness on attention ? (1.00 P.)
- [A] It increases the ability to manage multiple matters
 - [B] It reduces the ability to manage multiple matters
 - [C] It leads to one's attention being shared between different centres of interest
 - [D] It has no specific effects on attention
- 149 Which of the following statements concerning tiredness is correct ? (1.00 P.)
- [A] Tiredness is a subjective sensation which may result in hypovigilance
 - [B] Tiredness always effect people of the same age in a similar way
 - [C] Tiredness is always the result of an intellectual overload
 - [D] Tiredness is the consequence of poor performance

- 150 Which of the following are strategies for resolving conflict?
1. Seeking arbitration
 2. Actively listening to other people
 3. Abandoning facts so as to move the conversation to a more emotional level
 4. Becoming aware of cultural influences (1.00 P.)
- [A] 1,2,3
- [B] 2,3,4
- [C] 2,4
- [D] 1,2,4

- 151 What elements establish synergy within the crew ? (1.00 P.)
- [A] It is only the captain's status which allows the establishment of synergy within the crew
 - [B] Synergy must be built up from the start of the mission (briefing) and be maintained until it comes to an end (debriefing)
 - [C] Synergy is independent of the natural individual characteristics of the group members (communication, mutual confidence, sharing of tasks, etc.)
 - [D] Synergy establishes itself automatically within the crew, right through from briefing to debriefing
- 152 Which of the following statements best characterise a synergetic cockpit?
- 1. Decisions are taken by the captain, but prepared by the crew
 - 2. There is little delegating of tasks
 - 3. Communications are few in number but precise and geared purely to the flight
 - 4. Fluid, consensual boundaries exist with regard to leadership-style (1.00 P.)
- [A] 1,4
 - [B] 2,3
 - [C] 1,3,4
 - [D] 2,4
- 153 Which of the following statements best characterise a self-centered cockpit ? (1.00 P.)
- [A] Without taking note of what the other members are doing, each one does his own thing while at the same time assuming that everyone is aware of what is being done or what is going on
 - [B] The egoistic and self-centered personality of the captain often leads to a synergetic cockpit
 - [C] The communication between crew members always increases when the captain takes charge of a situation
 - [D] While decreasing communication, the independence of each member bolsters the crew's synergy

- 154 What may become the main risk of a "laissez-faire" cockpit ? (1.00 P.)
- [A] Increased captain's authority
 - [B] Appearance of aggressiveness
 - [C] Inversion of authority
 - [D] Disengagement of the co-pilot
- 155 What is characterized by a "laissez-faire" cockpit ? (1.00 P.)
- [A] A passive approach by the captain allows decisions, choices and actions by other crew members
 - [B] Each member carries out actions and makes choices informing the other members about them
 - [C] The captain's authority rules all the actions or decisions associated with the situation
 - [D] The high level of independence granted to each member by the captain quickly leads to tension between the various crew members
- 156 What are the most frequent results of an self-centred captain on the flight deck ? (1.00 P.)
- [A] A major risk of authority inversion if the co-pilot is unassertive
 - [B] High group performance despite the strained relations
 - [C] In a two-pilot flight deck, the co-pilot is ignored and may react by disengaging, showing delayed responses or aggression
 - [D] Performance is very poor as self-centred behaviour leads to an increase of cooperation and efficiency

- 157 Which of the following describes an autocratic cockpit? (1.00 P.)
- [A] The atmosphere is relaxed thanks to a captain who leaves complete freedom to the various members of the crew
 - [B] The captain's excessive authority considerably reduces communications and consequently the synergy and cohesion of the crew
 - [C] Each of the members chooses what job to do without telling the others and in the belief that everyone is aware of what he is doing
 - [D] Despite the overly strong authority of the captain, everything functions correctly owing to his natural leadership
- 158 What optimises crew co-operation ?
1. Sharing and common task
 2. Confidence in each others capability
 3. Precise definition of functions associated with each crew members role (1.00 P.)
- [A] 2,3
 - [B] 1,2
 - [C] 1
 - [D] 1,2,3
- 159 What distinguishes status from role ? (1.00 P.)
- [A] Unlike status, role is fixed and is modified either by the situation in flight or by the interactions of a new crew
 - [B] While role defines- via behaviour- the functions that must be performed by individuals, status defines the hierarchical position and its recognition by the group
 - [C] Unlike status, role is fixed and is not modified either by the situation in flight or by the interactions of a new crew
 - [D] While role defines the enjoyment of a hierarchical position and its recognition by the group, status defines - via behaviour- the functions that must be performed by individuals

- 160 Contrary to a person's personality, attitudes: (1.00 P.)
- [A] are essentially driving forces behind changes in personality
 - [B] form part of personality and, as a result, cannot be changed in an adult
 - [C] are non-evolutive adaptation procedures regardless of the result of the actions associated with them
 - [D] Are the product of personal disposition and past experience with reference to an object or a situation
-
- 161 Which of the following elements make up the personality of an individual ?
- 1. Heredity
 - 2. Childhood environment
 - 3. Upbringing
 - 4. Past experience (1.00 P.)
- [A] 2,3,4
 - [B] 2,3
 - [C] 1,2,3,4
 - [D] 1,2,4

162 What is synergy in a crew ? (1.00 P.)

- [A] A behavioural expedient associated with the desynchronisation of the coordinated actions
- [B] The coordinated action of all members towards a common objective, in which collective performance is proving to be more than the sum of the individual performances
- [C] The coordinated action of unrelated individual performances in achieving a non-standard task
- [D] The uncoordinated action of the crewmembers towards a common objective

- 163 Which of the following statements concerning conflicts is correct ? (1.00 P.)
- [A] Conflict management involves the participation of all involved parties in finding an acceptable collective solution
 - [B] The emergence of a conflict always results from calling into question the general abilities of one of the involved parties
 - [C] Conflicts are negative in themselves and can only lead to a general detachment of involved parties
 - [D] Whatever the cause of the conflict, its resolution must necessarily involve an additional party if it is to be effective

- 164 Which of the following is most likely to be overlooked should a pilot make a rushed decision ? (1.00 P.)
- [A] the skills of air traffic controllers
 - [B] the captain's superior knowledge, justified by his/her status
 - [C] the need to take account of every possible result or outcome
 - [D] analysis of the current actual situation and instead applying a decision prepared beforehand
- 165 In terms of decision-making, the intention to become integrated into the team, to be recognised as the leader or to avoid conflicts may lead to: (1.00 P.)
- [A] an authoritarian approach thus demonstrating ones own ability to lead
 - [B] a fast and decisive option
 - [C] the attempt to agree on decisions made by other crew members
 - [D] the improvement of internal risk assessment capabilities
- 166 What strategy should be put in place when faced with an anticipated period of stress? (1.00 P.)
- [A] A strategy of no commitment
 - [B] A strategy of preparing decisions
 - [C] A Laissez-faire strategy
 - [D] A non-sequenced strategy

- 167 Which biases relate to human decision making?
1. Personal experience tends to alter the perception of the risk of an event occurring
 2. There is a natural tendency to want to confirm our decision even in the face of facts which contradict it
 3. The group to which an individual belongs tends to influence the particular decision
 4. There is natural tendency to select only objective facts for decision-making purposes (1.00 P.)
- [A] 1,2,3
- [B] 1,2
- [C] 1,2,4
- [D] 3,4
- 168 Habits and routine can influence decision-making in a way that: (1.00 P.)
- [A] habit is the product of experience and should be used as a primary consideration in all decisions
- [B] shows a tendency to select the most familiar solution first and foremost, sometimes to the detriment of achieving the best possible result
- [C] one always selects a choice in accordance with the company's usual practices
- [D] professional pilots will never question established procedures
- 169 Decision-making can be influenced by the following factors:
1. people tend to conform to opinions expressed by a majority within the group they belong to
 2. people always keep the future decisions in line with those their superiors have made in the past
 3. people more easily tend to select data which meet their expectations
 4. people rarely base decisions on their personal preferences but rather on rational information
- Which of the following lists all the correct answers ? (1.00 P.)
- [A] 1 and 3
- [B] 2 and 3
- [C] 1 and 4
- [D] 2 and 4

- 170 Decision-making is a concept which represents: (1.00 P.)
- [A] an automated or automation-like act of applying defined procedures
 - [B] a voluntary and conscious process of selection, from among possible solutions, for a given problem
 - [C] an automatic process of selection from among the various solutions to a given problem
 - [D] a spontaneous act of seeking the most effective solution in a given situation when faced with a defined problem
- 171 In decision-making, the selection of a solution depends:
1. on objective and subjective criteria
 2. on the objective to be achieved
 3. on the risks associated with each solution
 4. on the personality of the decision-maker (1.00 P.)
- [A] 1,3
 - [B] 1,2,3,4
 - [C] 1,2,4
 - [D] 4
- 172 Decision-making results in: (1.00 P.)
- [A] a choice between different options to achieve a goal
 - [B] a choice always based on the experience of the PIC
 - [C] a totally objective choice between options to achieve a goal proposed by the Pilot in Command
 - [D] a subjective choice between options to achieve a goal

- 173 In problem-solving, what determines the transition from rule-based activities to a knowledge-based activity? (1.00 P.)
- [A] The unsuitability of the automated actions
 - [B] Knowledge of rules which apply to the problem posed
 - [C] The unsuitability of the known rules for the problem posed
 - [D] Attentional capture

174 What are the main characteristics of active errors ?

They:

1. are detectable only with difficulty by first-line operators
2. have rapid and direct consequences on the action in progress
3. occur at the human/machine interface
4. lie dormant and are undetected at first (1.00 P.)

[A] 1,2

[B] 1,4

[C] 3,4

[D] 2,3

175 The maintenance of man's internal equilibrium is called: (1.00 P.)

- [A] Homeostasis
- [B] Homeothermy
- [C] Poikilothermy
- [D] Heterostasis

- 176 The main limitation of the long-term memory is: (1.00 P.)
- [A] the quantity of data which may be stored
 - [B] the data storage time
 - [C] if enough information is entered at the same time, saturation may take place
 - [D] unless information is accessed from time to time, retrieval of information can be difficult
- 177 What are the main limits of short-term memory ?
It is:
- 1: very sensitive to interruptions and interference
 - 2: difficult to access
 - 3: limited in size
 - 4: information is lost within approximately 20 seconds unless it is actively or deliberately placed into the long term memory. (1.00 P.)
- [A] 1,2 ,3
 - [B] 2 ,3
 - [C] 2,4
 - [D] 1,3 ,4

178 Action plans (SOP's) in a cockpit must: (1.00 P.)

- [A] only follow the manufacturers proposals and not reflect individual operators cockpit philosophies
- [B] be shared by the members of the crew and updated at each modification in order to maintain maximum synergy
- [C] only be tailored to the type of aircraft, regardless of current MCC procedures
- [D] be tailored to the individual pilot's needs in order to facilitate the normal operation of the aircraft

179 Workload essentially depends on: (1.00 P.)

- [A] the pilot's knowledge
- [B] the pilot's experience and the ergonomics of the system
- [C] the current situation, the pilot's expertise and the ergonomics of the system
- [D] the task and the day's parameters (weather report, aircraft load, type of flight, etc)

- 180 A pilot becomes skilled when he/she:
- 1: trains or practises regularly
 - 2: knows how to manage himself/herself
 - 3: possesses all the knowledge associated with his aircraft
 - 4: knows how to keep resources in reserve for coping with the unexpected (1.00 P.)
- [A] 1,2,3,4
- [B] 2, 3,4
- [C] 1,2,4
- [D] 1,2

181 Man possesses a system for maintaining his internal equilibrium in the face of variations brought about by external stimulations.

This internal equilibrium is called: (1.00 P.)

- [A] Homeostasis
- [B] Heterostasis
- [C] Metastasis
- [D] Isothermy

- 182 Stress is: (1.00 P.)
- [A] a psychosomatic disease that one can learn to control
 - [B] a mechanism by which an individual can respond to situations which he/she may have to face
 - [C] a phenomenon which is specific to modern man
 - [D] a response by man to his problems, which automatically leads to a reduction in his performance
- 183 The individual's perception of stress depends on: (1.00 P.)
- [A] the subjective evaluation of the situation and one's abilities to cope with it
 - [B] the pilot's increasing level of arousal
 - [C] the conditions of the current situation only
 - [D] the objective evaluation of the situation and one's abilities to cope with it
- 184 Physiological stressors include: (1.00 P.)
- [A] Temperature, hunger, thirst, divorce
 - [B] Noise, temperature (low or high), humidity, sleep deprivation
 - [C] Heat, humidity, fatigue, administrative problems
 - [D] Noise, hunger, conflicts, a death
- 185 General Adaptation Syndrome is characterised by the following phases:
- 1: alarm
 - 2: alert phase
 - 3: resistance phase
 - 4: exhaustion phase
 - 5: vigilance phase (1.00 P.)
- [A] 1,2,4,5
 - [B] 2,3,4
 - [C] 1,3,4
 - [D] 2,3,4,5

- 186 The following course of action should be taken if gastrointestinal complaints in flight crew occur before to take-off:
- 1: take the standard medicines and advise the doctor on returning from the flight
 - 2: assess your own ability to fly, if necessary with the help of a doctor
 - 3: if in doubt about fitness to fly - do not fly!
 - 4: reduce the cabin temperature, and drink before you are thirsty so as to avoid dehydration (1.00 P.)
- [A] 1,2,4
- [B] 1,4
- [C] 2,3
- [D] 1,3

187 Which of the following systems are involved in motion sickness ?

- 1: Hearing
- 2: The vestibular system
- 3: Vision
- 4 The proprioceptive senses "Seat-of-the-Pants-Sense")
- 5: The gastrointestinal system (1.00 P.)

[A] 2,3,4,5

[B] 2,3,4

[C] 1,2,5

[D] 1,2,3

- 188 In the absence of external reference points, the sensation that the vehicle in which you sitting is moving when it is in fact the vehicle directly alongside which is moving is called: (1.00 P.)
- [A] somato-gravic illusion
 - [B] cognitive illusion
 - [C] illusion of relative movement
 - [D] autokinetic illusion

189 Which of the following illusions are brought about by conflicts between the visual system and the vestibular system ?

- 1: Illusions concerning the attitude of the aircraft
- 2: Autokinetic illusion (fixed point viewed as moving)
- 3: Illusions when estimating the size and distance of objects
- 4: Illusions of rotation (1.00 P.)

[A] 2,3,4

[B] 3,4

[C] 1,4

[D] 2

- 190 The vestibular system is composed of
- 1: two ventricles
 - 2: a saccule
 - 3: a utricle
 - 4: three semicircular channels (1.00 P.)
- [A] 1,4
- [B] 2,3
- [C] 2,3,4
- [D] 1,3,4

- 191 Which of the following statement(s) is/are correct ?
- 1: The retina has rods in its peripheral zone and cones in its central zone
 - 2: The retina has cones and the crystalline lens has rods
 - 3: The rods allow for night-vision
 - 4: The cones are located on the peripheral zone of the retina (1.00 P.)
- [A] 4
- [B] 1
- [C] 1,3
- [D] 2,3
-
- 192 In order to perceive colour vision, it is necessary:
- 1: for there to be considerable amount of light (ambient luminosity)
 - 2: at night to look at the point to be observed at an angle of 15°
 - 3: to allow the eye a period of time to get used to the light
 - 4: to avoid white light (1.00 P.)
- [A] 1
- [B] 3
- [C] 1,2,3
- [D] 2,4
-
- 193 The retina allows for colour perception as a result of the: (1.00 P.)
- [A] rods located in its peripheral zone
 - [B] cones located in its central part
 - [C] crystalline lens
 - [D] rods located in its central part

- 194 Accommodation, which enables a clear image to be obtained, is accomplished by which of the following? (1.00 P.)
- [A] The crystalline lens
 - [B] The retina
 - [C] The rods
 - [D] The cones

- 195 In civil air transport, linear accelerations (Gx):
- 1: do not exist
 - 2: have slight physiological consequences
 - 3: may, in the case of pull-out, lead to loss of consciousness
 - 4: may cause sensory illusions on the pitch axis (1.00 P.)
- [A] 1
- [B] 3,4
- [C] 2,4
- [D] 3

196 With regard to the humidity of air in current in a pressurized cabin, we know that it:

-1: varies between 40 and 60%

-2: varies between 5 and 15%

-3: may cause dehydration effecting the performance of the crew

-4: has no special effects on crew members (1.00 P.)

[A] 2,3,4

[B] 1,3

[C] 1,4

[D] 2,3

- 197 The following occurs in man if the internal body temperature increases to 39°C:
(1.00 P.)
- [A] apathy
 - [B] considerable dehydration
 - [C] impairment of physical and mental performance
 - [D] nothing significant happens at this temperature. The first clinical signs only start to appear at 39°C

- 198 Which of the following mechanisms regulate body temperature when exposed to extreme high environmental temperatures?
- 1: Shivering
 - 2: Vaso-constriction of peripheral blood vessels
 - 3: Sweating
 - 4: Vaso-dilation of peripheral blood vessels (1.00 P.)
- [A] 1,3,4
- [B] 2,3
- [C] 3,4
- [D] 1
-
- 199 The following can be observed when the internal body temperature falls below 35°C: (1.00 P.)
- [A] shivering, will tend to cease, and be followed by the onset of apathy
 - [B] profuse sweating
 - [C] the appearance of intense shivering
 - [D] mental disorders, and even coma
-
- 200 We can observe the following in relation to a state of hypothermia: (1.00 P.)
- [A] a substantial increase in internal body temperature whereas peripheral temperature at the skin is stable
 - [B] reasoning problems as soon as body temperature falls below 37°C
 - [C] widespread pain in the joints
 - [D] greater capacity for adaptation than in a hot atmosphere

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13.	A	B	C	D	14.	A	B	C	D	15.	A	B	C	D
16.	A	B	C	D	17.	A	B	C	D	18.	A	B	C	D
19.	A	B	C	D	20.	A	B	C	D	21.	A	B	C	D
22.	A	B	C	D	23.	A	B	C	D	24.	A	B	C	D
25.	A	B	C	D	26.	A	B	C	D	27.	A	B	C	D
28.	A	B	C	D	29.	A	B	C	D	30.	A	B	C	D
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37.	A	B	C	D	38.	A	B	C	D	39.	A	B	C	D
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43.	A	B	C	D	44.	A	B	C	D	45.	A	B	C	D
46.	A	B	C	D	47.	A	B	C	D	48.	A	B	C	D
49.	A	B	C	D	50.	A	B	C	D	51.	A	B	C	D
52.	A	B	C	D	53.	A	B	C	D	54.	A	B	C	D
55.	A	B	C	D	56.	A	B	C	D	57.	A	B	C	D
58.	A	B	C	D	59.	A	B	C	D	60.	A	B	C	D
61.	A	B	C	D	62.	A	B	C	D	63.	A	B	C	D
64.	A	B	C	D	65.	A	B	C	D	66.	A	B	C	D

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76.	A	B	C	D
79.	A	B	C	D
82.	A	B	C	D
85.	A	B	C	D
88.	A	B	C	D
91.	A	B	C	D
94.	A	B	C	D
97.	A	B	C	D
100.	A	B	C	D
103.	A	B	C	D
106.	A	B	C	D
109.	A	B	C	D
112.	A	B	C	D
115.	A	B	C	D
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127.	A	B	C	D
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71.	A	B	C	D
74.	A	B	C	D
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89.	A	B	C	D
92.	A	B	C	D
95.	A	B	C	D
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104.	A	B	C	D
107.	A	B	C	D
110.	A	B	C	D
113.	A	B	C	D
116.	A	B	C	D
119.	A	B	C	D
122.	A	B	C	D
125.	A	B	C	D
128.	A	B	C	D
131.	A	B	C	D
69.	A	B	C	D
72.	A	B	C	D
75.	A	B	C	D
78.	A	B	C	D
81.	A	B	C	D
84.	A	B	C	D
87.	A	B	C	D
90.	A	B	C	D
93.	A	B	C	D
96.	A	B	C	D
99.	A	B	C	D
102.	A	B	C	D
105.	A	B	C	D
108.	A	B	C	D
111.	A	B	C	D
114.	A	B	C	D
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120.	A	B	C	D
123.	A	B	C	D
126.	A	B	C	D
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115.		B		
118.	A			
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124.	A			
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77.	A			
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113.		B		
116.	A			
119.		B		
122.	A			
125.				D
128.		B		
131.				D
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72.				D
75.			C	
78.				D
81.	A			
84.				D
87.	A			
90.				D
93.		B		
96.				D
99.	A			
102.			C	
105.	A			
108.		B		
111.	A			
114.	A			
117.	A			
120.			C	
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129.		B		
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157	.		B		
160	.				D
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166	.		B		
169	.	A			
172	.	A			
175	.	A			
178	.		B		
181	.	A			
184	.		B		
187	.	A			
190	.			C	
193	.		B		
196	.				D
134	.		B		
137	.			C	
140	.		B		
143	.		B		
146	.	A			
149	.	A			
152	.	A			
155	.	A			
158	.				D
161	.			C	
164	.				D
167	.	A			
170	.		B		
173	.			C	
176	.				D
179	.			C	
182	.		B		
185	.			C	
188	.			C	
191	.			C	
194	.	A			
197	.			C	
135	.			C	
138	.				D
141	.	A			
144	.		B		
147	.		B		
150	.				D
153	.	A			
156	.			C	
159	.		B		
162	.		B		
165	.			C	
168	.		B		
171	.		B		
174	.				D
177	.				D
180	.			C	
183	.	A			
186	.			C	
189	.			C	
192	.	A			
195	.			C	
198	.			C	

