| STUDENT NAME: | DATE AND TIME: |
|---|---|

**01. You are flying from A (30°S 20°E) to B (30°S 20°W. What is the RL track from A to B?**

a) 250° (T)
b) 300° (T)
c) 270° (T)
d) 290° (T)

**02. In large modern aircraft, in the air conditioning system, reduction of air temperature and pressure is achieved by:**

a) An expansion turbine.
b) An evaporator.
c) A condenser.
d) A Compressor.

**03. What is the correct way for the pilot to acknowledge that ATIS Information Golf has been received:**

a) Information Golf
b) We have the ATIS Golf
c) We have the Information
d) Weather Golf received

**04. When a wing bends upwards, aileron flutter might occur if the aileron deflects:**

a) Downwards, because the location of the aileron centre of gravity lies behind the hinge line.
b) Downwards, because the location of the aileron centre of gravity lies in front of the hinge line.
c) Upwards, because the location of the aileron centre of gravity lies in front of the hinge line.
d) Upwards, Because The Location Of The Aileron Centre Of Gravity Lies Behind The Hinge Line.

**05. The Maximum Zero Fuel Mass is a structural limiting mass. It is made up of the aeroplane Dry Operational mass plus**

a) Traffic load, non-revenue load and crew standard mass.

b) Unuseable fuel and crew standard mass.

c) Traffic load

d) Traffic load and potable water.

**06. Waypoint 1 is 60°N 30°W. Waypoint 2 is 60°N 20°W. The aircraft autopilot is coupled to the INS steer. What is the latitude on passing 25°W?**

a) 60°11'N

b) 60°05'S

c) 60°05'N

d) 59°49'S

**07. The transfer of oxygen from the alveoli to the blood can be described by:**

a) The law of diffusion

b) Henry's Law

c) Dalton's Law

d) Boyle's Law

**08. The measurement of the turbine temperature or of the EGT is carried out at the:**

a) Intake of the high pressure chamber.

b) Outlet of the high pressure stage of the turbine.

c) Inlet of the combustion chamber.

d) Outlet of the combustion chamber.

**09. The first clouds are thin, wispy cirrus, followed by sheets of cirrus and cirrostratus, and altostratus. The sun is obscured as the altostratus thickens and drizzle or rain begins to fall. The cloud base is lowering as Nimbostratus arrives. These phenomena describe the approach of a**

a) Warm front

b) Sea-breeze front

c) Trade wind front

d) Cold front

**10. In the Airspace where the MNPS is applicable, the vertical separation that can be applied between FL 290 and FL410 inclusive is:**

a) 1 000 ft

b) 1 500 ft

c) 2000ft

d) 500 ft

**11. Given:Maximum allowable crosswind component is 20 kt. Runway 06, RWY QDM 063°(M).Wind direction 100°(M)Calculate the maximum allowable wind speed?**

a) 26 kt

b) 37 kt

c) 25 kt

d) 33 kt

**12. An aircraft is flying north-east at 2500 feet. TOWER requests heading and level. What is the correct response:**

a) Heading north-east at level 25

b) Heading 045 at 2500 feet

c) 045 and 2500

d) Heading 45 at 2500 feet

**13. 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**

a) 1,2 and 3 are correct, 4 is false

b) 1 and 2 are correct, 3 and 4 are false

c) Only 3 is false

d) 1 and 3 are correct, 2 and 4 are false

**14. After landing at an aerodrome (aerodrome elevation 1715 FT), the altimeter indicates an altitude of 1310 FT. The altimeter is set to the pressure value of 1013 hPa. What is the QNH at this aerodrome?**

a) 1013 hPa.

b) 1015 hPa.

c) 998 hPa.

d) 1028 hPa.

**15. You would use a CO2 fire-extinguisher for:1. a paper fire2. a plastic fire3. a hydrocarbon fire4. an electrical fireThe combination regrouping all the correct statements is:**

a) 3,4

b) 1,2,3

c) 1,2,3,4

d) 2,3

**16. When flying in accordance with IFR, which of the following best describes the term 'Visual approach' ?**

a) A visual manoeuvre executed by an IFR flight when the weather conditions at the aerodrome of destination are equal to or better than required VMC minima

b) An approach executed by an IFR flight unable to maintain VMC

c) An extension of an instrument approach procedure to bring an aircraft into position for landing on a runway which is not suitably located for straight-in-approach

d) An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain

**17. Given:Standard Empty Mass 1764 lbs Optional Equipment 35 lbs Pilot + Passenger 300 lbs Cargo 350 lbsRamp Fuel ( Block Fuel) 60 Gal Trip Fuel 35 GalTaxi Fuel 1.7 GalFinal Reserve Fuel 18 Gal Fuel density 6 lbs/GalDetermine the expected landing mass.**

a) 2589 lbs

b) 2557 lbs

c) 2472 lbs

d) 2599 lbs

**18. Under which of the following circumstances shall an aircraft squawk 7700 ?**

a) When flying within controlled airspace

b) When following a SID

c) When passing the transition level

d) In distress

**19. The outer marker of an ILS with a 3° glide slope is located 4.6 NM from the threshold. Assuming a glide slope height of 50 FT above the threshold, the approximate height of an aircraft passing the outer marker is:**

a) 1350'

b) 1400'

c) 1300'

d) 1450'

**20. Given: FL 330 long range cruiseOAT -63°Cgross mass 50 500 kg. Find: true airspeed (TAS)**

a) 433 kt

b) 420 kt

c) 418 kt

d) 431 kt[see Annex]

**21. While approaching a mountainous airfield, the captain of a transport aircraft notices a fast and high increase in the indicated airspeed without any change in the pre-selected engine and attitude parameters. The preceding crews had reported the occurrence of windshears in final phase. you must:**

a) Take a level flight attitude to reduce speed, then come back to glide path from above.

b) Reduce rapidly the selected thrust, maintain on the glide path.

c) Reduce rapidly the selected thrust in order to reach 1.2 Vs and try a precision landing.

d) Maintain the aircraft on the glide path, accept a positive speed deviation, monitor the speed evolution.

**22. Trailing edge flaps:**

a) Increase Lift At A Higher Angle Of Attack.

b) Increase lift at a lower angle of attack.

c) Reduce Lift At A Lower Angle Of Attack.

d) Reduce Lift At A Higher Angle Of Attack.

**23. Modern pressurized transport airplanes are equipped with:**

a) Only Portable Oxygen Bottles.

b) Two independent oxygen systems, one supplying the cockpit, the other the cabin.

c) Two oxygen systems both supplying the cockpit and the cabin.

d) Only One Oxygen System Supplying The Whole Aircraft.

**24. The cornea and the crystalline lens of the eye:**

a) Allow for the regulation of the amount of light admitted into the eye

b) Keep the retina clean and healthy

c) Permit the reception and conversion of visual stimuli to images interpreted by the brain

d) Cause the convergence of light rays onto the retina

**25. During radar vectoring, the controller asks the pilot of XY-ABC to turn on to heading 360°. The correct read back of this instruction is:**

a) Heading north, X-BC

b) Heading three hundred sixty, X-BC

c) Heading three six zero, X-BC

d) A read back is not necessary as XY-ABC has been identified

**26. Which of the following wing planforms gives the highest local lift coefficient at the wing root?**

a) Tapered

b) Elliptical

c) Positive angle of sweep

d) Rectangular

**27. Which of the following is NOT an international distress frequency?**

a) 121.5 MHz

b) 243 MHz

c) 243 kHz

d) 2182 kHz

**28. A category III A precision approach (CAT III A) is an approach which may be carried out with a runway visual range of at least:**

a) 100 m

b) 200 m

c) 50 m

d) 250 m

**29. Fuel loaded onto an aeroplane is 15400 kg but is erroneously entered into the load and trim sheet as 14500 kg. This error is not detected by the flight crew but they will notice that**

a) V1 will be reached sooner than expected

b) V1 will be increased.

c) Speed at un-stick will be higher than expected

d) The aeroplane will rotate much earlier than expected.

**30. For the same TAS, when pressure altitude increases below the tropopause:**

a) Mach number remains constant.

b) Mach number decreases.

c) The difference between surrounding conditions and ISA must be known to deduce the Mach number variation.

d) Mach number increases.

**31. Which one of the following inputs to an Area Navigation System (R-NAV) comes from an external, not on-board, system?**

a) Inertial Navigation System (INS) position

b) Magnetic heading

c) Pressure altitude

d) VOR/DME radial/distance

**32. The angle of attack of a wing profile is defined as the angle between:**

a) The local airflow and the mean camberline

b) The undisturbed airflow and the chordline

c) The undisturbed airflow and the mean camberline

d) The local airflow and the chordline

**33. Given:Distance 'A' to 'B' 1973 NM Groundspeed 'out' 430 kt Groundspeed 'back' 385 kt Safe endurance 7 HR 20 MINThe distance from 'A' to the Point of Safe Return (PSR) 'A' is:**

a) 030° - 33 NM

b) 220° - 40 NM

c) 014° - 33 NM

d) 048° - 40 NM

**34. Given:Dry operating mass (DOM)= 33510 kg Traffic Load= 7600 kgTrip fuel (TF)= 2040 kg Final reserve fuel= 983 kg Alternate fuel= 1100 kgContingency fuel= 5% of trip fuelWhich of the listed estimated masses is correct?**

a) Estimated take-off mass= 45233 kg.

b) Estimated landing mass at destination= 43193 kg.

c) Estimated landing mass at destination= 43295 kg.

d) Estimated take-off mass= 43295 kg.

**35. At what approximate latitude is the length of one minute of arc along a meridian equal to one NM (1852 m) correct?**

a) 90°

b) 0°

c) 30°

d) 45°

**36. According to PART-FCL, single pilot single-engine class ratings are valid for:**

a) Two years up to age 40 years then one year thereafter.

b) One year

c) Five years after licence issue.

d) Two years

**37. The following fuel consumption figures are given for a jet aeroplane:-standard taxi fuel: 600 kg.-average cruise consumption: 10 000 kg/h.-holding fuel consumption at 1500 ft above alternate airfield elevation: 8000 kg/h.-flight time from departure to destination: 6 hours-fuel for diversion to alternate: 10 200 kg. The minimum ramp fuel load is:**

a) 79 800 kg

b) 74 800 kg

c) 77 200 kg

d) 77 800 kg

## 38. Which statement regarding V1 is correct?

a) V1 must not exceed VMCG

b) V1 must not exceed VR

c) The V1 correction for up-slope is negative

d) When determining the V1, reverse thrust is only allowed to be taken into account on the remaining symmetric engines

## 39. Conversion of fuel volume to mass

a) May be done by using standard fuel density values as specified in EU - OPS 1.

b) May be done by using standard fuel density values as specified in the Operations Manual, if the actual fuel density is not known.

c) Must be done using fuel density values of 0.79 for JP 1 and 0.76 for JP 4 as specified in EU - OPS, IEM - OPS 1.605E.

d) Must be done by using actual measured fuel density values.

## 40. What is the the worst hazard, if any, that could be associated with the type of feature at 38°N 015°E ?

a) Reduced visibility

b) Severe attenuation in the HF R/T band

c) There is no hazard

d) Engine flame out and windscreen damage[see Annex]

## 41. The MNPS (Minimum Navigation Performance Specification) airspace extends from:

a) 30° North to 90° North

b) 27° North to 70° North

c) 27° North to 90° North

d) 30° North to 70° North

## 42. Which information is not included in Instrument Approach Charts (IAC) in the AIP

a) Obstacles penetrating the obstacle free area in the final approach sector

b) Any addition to minima when the aerodrome is used as alternate

c) DME-frequencies

d) OCA or OCH

**43. The thrust of a turbo-jet, at the selection of full power 1 - equals the product of the exhaust gas mass flow and the exhaust gas velocity 2 - is obtained by pressure of the exhaust gas on the ambient air3 - is equivalent to zero mechanical power since the aeroplane is not moving4 - is independent of the outside air temperature The combination which regroups all of the correct statements is:**

a) 2 - 3

b) 1 - 2

c) 4

d) 1 - 3

**44. Dry Operating Mass is the mass of the aircraft less**

a) Usable fuel and traffic load.

b) Usable fuel, potable water and lavatory chemicals.

c) Traffic load, potable water and lavatory chemicals.

d) Usable fuel.

**45. Given:TAS = 130 kt, Track (T) = 003°,W/V = 190/40kt.Calculate the HDG (°T) and GS?**

a) 002 - 173 kt

b) 001 - 170 kt

c) 357 - 168 kt

d) 359 - 166 kt

**46. What is the effect of a head wind component, compared to still air, on the maximum range speed (IAS) and the speed for maximum climb angle respectively?**

a) Maximum range speed decreases and maximum climb angle speed increases

b) Maximum range speed decreases and maximum climb angle speed decreases

c) Maximum range speed increases and maximum climb angle speed stays constant

d) Maximum range speed increases and maximum climb angle speed increases

**47. In an Electronic Flight Instrument System (EFIS) data relating primarily to navigation in the FMC is provided by:**

a) Inertial Reference Systems, Aircraft Weather Radar, Navigation radios

b) Navigation radios, GPS, Inertial Reference Systems

c) Inertial Reference Systems, Navigation radios, Terrain Collision Alerting System

d) Beam width

**48. On a polar stereographic chart where the Earth convergence between 2 points located on the parallel 60°N is 20°, the great circle maximum cross-track difference with the straight line joining the 2 points is:**

a) 9.2 NM

b) 30 NM

c) 40 NM

d) 4.0 NM

**49. The lift of an aeroplane of weight W in a constant linear climb with a climb angle (gamma) is approximately:**

a) W (1-tan.gamma)

b) W (1-sin.gamma)

c) W / cos.gamma

d) W cos.gamma

**50. The frequency used for the first transmission of a 'MAYDAY' call shall be:**

a) Any other international emergency frequency

b) The distress frequency 121.5 MHz

c) Any frequency at pilot's discretion

d) The frequency currently in use

**51. Assuming ISA conditions, climbing at a constant Mach Number up to FL 350 the TAS will:**

a) Increase

b) First increase, then decrease

c) Remain constant

d) Decrease

**52. What is the correct suffix to be used when establishing radio contact in an area control centre?**

a) Control

b) Centre

c) Control centre

d) Radio

**53. The air in a piston engine turbo-supercharger centrifugal compressor:**

a) Enters Via The Diffuser And Is Fed To The Impeller At The Optimum Angle Of Attack.

b) Enters at the periphery and leaves via the eye of the impeller.

c) Enters the eye of the impeller and leaves at a tangent to the periphery.

d) Enters At A Tangent To The Rotor And Leaves Via The Stator.

**54. During a VFR flight at a navigational checkpoint the remaining usable fuel in tanks is 60 US gallons. The reserve fuel is 12 US gallons. According to the flight plan the remaining flight time is 1h35min. Calculate the highest acceptable rate of consumption possible for the rest of the trip.**

a) 33.0 US gallons/hour

b) 30.3 US gallons/hour

c) 21.3 US gallons/hour

d) 37.9 US gallons/hour

**55. An aircraft encountering radio communication failure on an IFR flight in IMC has to land, if possible, within:**

a) 30 minutes after noticing the radio failure

b) 30 minutes after ETA or the last EAT, whichever is later

c) 15 minutes after vacating the transition layer

d) 30 minutes after waiting for the EAT

**56. A CSD of an AC generator may be disconnected in flight. The primary reason(s) for disconnection are:**

a) Low oil pressure and/or high oil temperature of the generator drive.

b) Slight variation about the normal operating frequency.

c) Illumination of the CSD disconnect warning light.

d) Excessive Variation Of Voltage And Kvar.

**57. Which combination of design features is known to be responsible for deep stall?**

a) Swept back wings and wing mounted engines

b) Straight wings and a T-tail

c) Straight wings and aft fuselage mounted engines

d) Swept back wings and a T-tail

**58. The error in altimeter readings caused by the variation of the static pressure near the source is known as:**

a) Barometric error.

b) Position pressure error

c) Hysteresis effect.

d) Instrument error.

**59. For a planned flight the calculated fuel is as follows: Flight time: 2h42minThe reserve fuel, at any time, should not be less than 30% of the remaining trip fuel. Taxi fuel: 9 kgBlock fuel: 136 kgHow much fuel should remain after 2 hours flight time?**

a) 33 kg trip fuel and 10 kg reserve fuel.

b) 25 kg trip fuel and 8 kg reserve fuel.

c) 33 kg trip fuel and no reserve fuel.

d) 23 kg trip fuel and 10 kg reserve fuel.

**60. Which of the following statements is/are correct?1. A person experiencing sleep loss is unlikely to be aware of personal performance degradation2. Performance loss may be present up to 20 minutes after awaking from a short sleep (nap)**

a) 1 is correct, 2 is false

b) 1 and 2 are both correct

c) 1 and 2 are both false

d) 1 is false, 2 is correct

**61. Consider a jet engine whose control is based on the Engine Pressure Ratio (EPR) 1. with a constant EPR, the thrust decreases when the altitude increases 2. with a constant EPR, the thrust is independent of the Mach number 3. At same environmental conditions, a given EPR setting maintains the thrust irrespective of engine wear due to ageing. 4. the EPR is determined by the impact pressure difference between the turbine outlet and the compressor inlet 5. on take-off, in the event of icing not detected by the crew, the indicated EPR is lower than the real EPR The combination regrouping all the correct statements is:**

a) 2, 3, 2004.

b) 1, 3.

c) 1, 5.

d) 3, 4, 2005.

**62. The holder of a pilot's licence should inform the Authority of any illness which they are suffering which involves incapacity to undertake those functions to which the licence relates throughout a period of a certain number of days or more. The number of days is:**

a) 21

b) 90

c) 60

d) 30

**63. When transmitting runway visual range (RVR) for runway 16 ATC should use the following phrase:**

a) RVR runway 16 touchdown ... metres, mid-point ... metres, stop end ... metres

b) RVR runway 16 ... metres diagonal ... metres diagonal ... metres

c) RVR at the beginning of runway 16 is ... metres

d) The values of the transmissometer are: ... metres and ... metres

**64. The take-off safety speed V2 for two-engine or three-engine turbo propeller powered aeroplanes may not be less than:**

a) 1.13 Vsr

b) 1.15 Vsr

c) 1.15 Vs1

d) 1.2 Vs

**65. In which of the following distances can the length of a stopway be included?**

a) In the one-engine failure case, take-off distance

b) In the accelerate stop distance available

c) In the take-off run available

d) In the all-engine take-off distance

**66. Traffic load is the difference between:**

a) The operating mass and the basic empty mass.

b) The take-off mass and the basic empty mass.

c) The take-off mass and the basic empty mass plus trip fuel.

d) The take-off mass and the operating mass.

**67. Select the correct phoenetic letter code for HB-FRO:**

a) Hotel Bravo Fox Romeo Oscar

b) Hotel Bravo Foxtrot Romeo Oscar

c) Hotel Brazil Foxtrot Romeo Oscar

d) Hotel Bravo Foxtrot Romeo Oswald

**68. An aeroplane is loaded with its centre of gravity towards the rear limit. This will result in:**

a) A reduction in power required for a given speed

b) An increased risk of stalling due to a decrease in tailplane moment

c) An increase in longitudinal stability

d) A reduced fuel consumption as a result of reduced drag

**69. What type of satellite navigation system NAVSTAR/GPS receiver is most suitable for use on board an aircraft?**

a) Multiplex

b) Sequential

c) Any hand held type

d) Multichannel

**70. Which of the following symptoms can indicate hypoxia?1. Blue lips and finger nails.2. Euphoria.3. Flatulence.4 .Unconsciousness..**

a) 1, 2 and 3 are correct.

b) 2, 3 and 4 are correct.

c) 1, 2 and 4 are correct.

d) 1, 3 and 4 are correct.

# Response Scheme

Compare your answers with the following diagram and mark your score!

| | | | |
|---|---|---|---|
| 01: C | 02: A | 03: A | 04: A |
| 05: C | 06: C | 07: A | 08: B |
| 09: A | 10: A | 11: D | 12: B |
| 13: B | 14: D | 15: C | 16: D |
| 17: A | 18: D | 19: D | 20: B |
| 21: D | 22: D | 23: B | 24: D |
| 25: C | 26: D | 27: C | 28: B |
| 29: C | 30: D | 31: D | 32: B |
| 33: D | 34: C | 35: D | 36: D |
| 37: D | 38: B | 39: B | 40: D |
| 41: C | 42: B | 43: D | 44: A |
| 45: B | 46: C | 47: B | 48: B |
| 49: D | 50: D | 51: D | 52: A |
| 53: C | 54: B | 55: B | 56: A |
| 57: D | 58: B | 59: B | 60: B |
| 61: B | 62: A | 63: A | 64: A |
| 65: B | 66: D | 67: B | 68: D |
| 69: D | 70: C | | |

## Response form

Use this form to mark your answers

| | | | |
|---|---|---|---|
| 01: | 02: | 03: | 04: |
| 05: | 06: | 07: | 08: |
| 09: | 10: | 11: | 12: |
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