33. FLIGHT PLANNING AND FLIGHT MONIT. - A/C

33.01. FLIGHT PLANS CROSS-COUNTRY FLIGHTS

33.01.01. Navigation plan

33.01.01.01. Selection of routes, speeds, heights

0
id 57

An aircraft is flying at MACH 0.84 at FL 330. The static air temperature is -48°C and the headwind component 52 Kt. At 1338 UTC the controller requests the pilot to cross the meridian of 030W at 1500 UTC. Given the distance to go is 570 NM, the reduced MACH No. should be:

a 0.72

b 0.78

c 0.76

d **0.80**

1
id 1395

According to the chart the minimum obstruction clearance altitude (MOCA) is 8500 ft. The meteorological data gives an outside air temperature of -20°C at FL 85. The QNH, given by a met. station at an elevation of 4000ft, is 1003 hPa. What is the minimum pressure altitude which should be flown according to the given MOCA?

a 8500 ft.

b **8800 ft.**

c 12800 ft.

d 8200 ft.

2
id 1853

VFR flights shall not be flown over the congested areas of cities at a height less than

a the heighest obstacle.

b 2000 ft above the heighest obstacle within a radius of 600 ft from the aircraft.

c 500 ft above the heighest obstacle.

d **1000 ft above the heighest obstacle within a radius of 600 m from the aircraft.**

3
id 1854

How many feet you have to climb to reach FL 75? Given: FL 75; departure aerodrome elevation 1500 ft; QNH = 1023 hPa; temperature = ISA; 1 hPa = 30 ft

a **6300 ft.**

b 6000 ft.

c 6600 ft.

d 7800 ft.

4
id 4393

An aeroplane is flying VFR and approaching position TANGO VORTAC (48°37'N, 009°16'E) at FL 055 and magnetic course 090°, distance from VORTAC TANGO 20 NM. Name the frequency of the TANGO VORTAC.

a 422 kHz

b 118.60 MHz

c **112.50 MHz**

d 118.80 MHz

5 id 4578	Flying VFR from VILLINGEN (48°03.5'N, 008°27.0'E) to FREUDENSTADT (48°28.0'N, 008°24.0'E).Determine the minimum altitude within a corridor 5NM left and 5 NM right of the courseline in order to stay 1000 ft clear of obstacles.

a 2900 ft

b **3900 ft**

c 4200 ft

d 1500 ft

6 id 4581	Flying VFR from PEITING (47°48.0'N, 010°55.5'E) to IMMENSTADT (47°33.5'N, 010°13.0'E).Determine the minimum altitude within a corridor 5NM left and 5 NM right of the courseline in order to stay 1000 ft clear of obstacles.

a **6900 ft**

b 5500 ft

c 6600 ft

d 5300 ft

33.01.01.02. Measurement of tracks and distances

7 id 4576	Flying VFR from VILLINGEN (48°03.5'N, 008°27.0'E) to FREUDENSTADT (48°28.0'N, 008°24.0'E) determine the magnetic course.

a 176°

b **356°**

c 004°

d 185°

8 id 4577	Flying VFR from VILLINGEN (48°03.5'N, 008°27.0'E) to FREUDENSTADT (48°28.0'N, 008°24.0'E) determine the distance.

a **24 NM**

b 46 NM

c 28 NM

d 24 km

9 id 4579	Flying VFR from PEITING (47°48.0'N, 010°55.5'E) to IMMENSTADT (47°33.5'N, 010°13.0'E) determine the magnetic course.

a 063°

b **243°**

c 257°

d 077°

10 id 4580	Flying VFR from PEITING (47°48.0'N, 010°55.5'E) to IMMENSTADT (47°33.5'N, 010°13.0'E) determine the distance.

a **32 NM**

b 46 NM

c 58 NM

d 36 NM

11 id 5737	The average magnetic course from C (62°N020°W) to B (58°N004°E) is

a 109°

b **119°**

c 099°

d 118°

12 id 5738 The average true course from C (62°N020°W) to B (58°N004°E) is

a 120°
b 119°
c 099°
d **109°**

13 id 5739 The initial magnetic course from C (62°N020°W) to B (58°N004°E) is

a **116°**
b 080°
c 098°
d 113°

14 id 5740 The initial true course from C (62°N020°W) to B (58°N004°E) is

a **098°**
b 116°
c 080°
d 278°

15 id 5741 The distance (NM) from A (64°N006°E) to C (62°N020°W) is

a **720**
b 690
c 1590
d 1440

16 id 5742 The average magnetic course from A (64°N006°E) to C (62°N020°W) is

a **271°**
b 259°
c 247°
d 279°

17 id 5743 The average true course from A (64°N006°E) to C (62°N020°W) is

a 271°
b 247°
c **259°**
d 079°

18 id 5744 The initial magnetic course from A (64°N006°E) to C (62°N020°W) is

a 262°
b 267°
c 271°
d **275°**

19 The initial true course from A (64°N006°E) to C (62°N020°W) is
id 5745

a **271°**

b 275°

c 267°

d 246°

20 The distance (NM) from C (62°N020°W) to B (58°N004°E) is
id 5746

a 775

b 725

c 700

d **760**

33.01.01.04. Comp. of headings, ground speeds

21 On a given path, it is possible to chose between four flight levels (FL), each associated with a mandatory flight Mach Number (M). The flight conditions, static air temperature (SAT) and headwind component (HWC) are given below: FL 370 - M = 0.80 Ts = -60°C HWC = -15 kt FL 330 - M = 0.78 Ts = -60°C HWC= - 5 kt FL 290 - M = 0.80 Ts = -55°C HWC
id 58

a **FL270**

b FL290

c FL330

d FL370

22 A twin-jet aeroplane carries out the WASHINGTON-PARIS flight. When it reaches point K (35°N - 048°W) a non-mechanical event makes the Captain consider rerouting to one of the three following fields. The flight conditions are: - from K to BERMUDAS (distance 847NM, headwind component=18 kt) - from K to SANTA MARIA (distance 1112 NM, tailwind component=120 kt) - from K to GANDER
id 59

a **BERMUDAS or GANDER, or SANTA MARIA**

b SANTA MARIA

c BERMUDAS

d Either GANDER or BERMUDAS

23 An aeroplane flies at an airspeed of 380 kt. It flies from A to B and back to A. Distance AB = 480 NM. When going from A to B, it experiences a headwind component = 60 kt. The wind remains constant. The duration of the flight will be:
id 70

a 3h 00min

b **2h 35min**

c 2h 10min

d 2h 32min

24 Given : true track 017; W/V 340/30; TAS 420 kt Find : wind correction angle (WCA) and ground speed (GS)
id 2049

a **WCA -2° ; GS 396 kt**

b WCA +2° ; GS 396 kt

c WCA -2° ; GS 426 kt

d WCA +2° ; GS 416 kt

25 id 2175 Flight planning chart for an aeroplane states, that the time to reach the cruising level at a given gross mass is 36 minutes and the distance travelled is 157 NM (zero-wind). What will be the distance travelled with an average tailwind component of 60kt ?

- a **193 NM**
- b 128 NM
- c 157 NM
- d 228 NM

26 id 2181 You are flying a constant compass heading of 252°. Variation is 22°E, deviation is 3°W and your INS is showing a drift of 9° right. True track is ?

- a 242°
- b 224°
- c **280°**
- d 262°

27 id 4385 Given: True course (TC) 017°, W/V 340°/30 kt, True air speed (TAS) 420 kt Find: Wind correction angle (WCA) and ground speed (GS)

- a WCA -2°, GS 426 kt
- b WCA +2°, GS 396 kt
- c **WCA -2°, GS 396 kt**
- d WCA +2°, GS 416 kt

33.01.01.05. Completion of pre-flight portion

28 id 5540 An executive pilot is to carry out a flight to a French aerodrome, spend the night there and return the next day. Where will he find the information concerning parking and landing fees ?

- a **in the FAL section of the French Aeronautical Information Publication (AIP)**
- b in the AGA chapter of the French Aeronautical Information Publication (AIP)
- c in the GEN chapter of the French Aeronautical Information Publication (AIP)
- d by telephoning the aerodrome's local chamber of commerce, this type of information not being published

33.01.02. Fuel plan

33.01.02.01. Computation of planned fuel usage

29 id 2040 (For this question use Flight Planning Manual MEP1 Figure 3.1) A flight is to be made from one airport (elevation 3000 ft) to another in a multi engine piston aireroplane (MEP1). The cruising level will be FL 110. The temperature at FL 110 is ISA - 10° C. The temperature at the departure aerodrome is -1° C. Calculate the fuel to climb with mixture rich.

- a 9 US gallon
- b **6 US gallon**
- c 12 US gallon
- d 3 US gallon

30 id 2041 (For this question use Flight Planning Manual MEP1 Figure 3.6) A flight is to be made to an airport, pressure altitude 3000 ft, in a multi engine piston aireroplane (MEP1). The forecast OAT for the airport is -1° C. The cruising level will be FL 110, where OAT is -10° C. Calculate the still air descent distance for: 145 KIAS Rate of descent 1000 ft/min Gears and flaps up

a 25 NM

b 29 NM

c 36 NM

d **20 NM**

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31 id 2565 (For this Question use Flight Planning & Monitoring SEP1 Fig. 2.2) Given: FL 75 OAT +10°C Lean mixture 2300 RPM Find: Fuel flow in gallons per hour (GPH) and TAS.

a 71.1 GPH TAS: 143 kt

b 11.6 GPH TAS: 143 kt

c **11.6 GPH TAS: 160 kt**

d 68.5 GPH TAS: 160 kt

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32 id 2566 (For this Question use Flight Planning & Monitoring SEP1 Fig. 2.1)Given: FL 75 OAT: +5°C During climb: average head wind component 20 kt Take-off from MSL with the initial mass of 3 650 lbs. Find: Time and fuel to climb.

a 7 min. 2,6 USG

b 10 min. 3,6 USG

c **9 min. 3,3 USG**

d 9 min. 2,7 USG

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33 id 2567 (For this Question use Flight Planning & Monitoring SEP1 Fig. 2.1) Given: FL 75 OAT: +5°C During climb: average head wind component 20 kt Take-off from MSL with the initial mass of 3 650 lbs. Find: Still air distance (NAM) and ground distance (NM) using the graph "time, fuel, distance to climb".

a **18 NAM. 15 NM.**

b 16 NAM. 18 NM.

c 18 NAM. 13 NM.

d 14 NAM. 18 NM.

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34 id 4391 (For this Question use Flight Planning & Monitoring SEP 1, Fig. 2.1) Given: Take-off mass 3500 lbs, departure aerodrome pressure altitude 2500 ft, OAT +10°C, First cruising level: FL 140, OAT -5°C Find the time, fuel and still air distance to climb.

a **22 min, 6.7 GAL, 45 NAM**

b 24 min, 7.7 GAL, 47 NAM

c 16.5 min, 4.9 GAL, 34.5 NAM

d 23 min, 7.7 GAL, 50 NAM

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35 id 4392 (For this Question use Flight Planning & Monitoring SEP1, Fig. 2.4) Given: Aeroplane mass at start-up 3663 lbs, Aviation gasoline (density 6 lbs/gal)-fuel load 74 gal, Take-off altitude sea level, Headwind 40 kt, Cruising altitude 8000 ft, Power setting full throttle 2300 RPM 20°C lean of peak EGT Calculate the range.

a 547.5 NM

b 844 NM

c 730 NM

d **633 NM**

36 id 5517 The fuel burn off is 200 kg/h with a relative fuel density of 0,8. If the relative density is 0,75, the fuel burn will be:

a 213 kg/h

b **200 kg/h**

c 188 kg/h

d 267 kg/h

---

37 id 5533 In the cruise at FL 155 at 260 kt TAS, the pilot plans for a 500 feet/min descent in order to fly overhead MAN VOR at 2 000 feet (QNH 1030). TAS will remain constant during descent, wind is negligible, temperature is standard. The pilot must start the descent at a distance from MAN of:

a 140 NM

b **120 NM**

c 110 NM

d 130 NM

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38 id 5539 An aircraft is in cruising flight at FL 095, IAS 155kt. The pilot intends to descend at 500 ft/min to arrive overhead the MAN VOR at 2 000 FT (QNH 1 030hPa). The TAS remains constant in the descent, wind is negligeable, temperature standard. At which distance from MAN should the pilot commence the descent?

a **48 NM**

b 42 NM

c 40 NM

d 45 NM

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39 id 5674 (For this Question use Fuel Planning MRJT1) Given : Distance C - D : 3200 NM Long Range Cruise at FL 340 Temperature Deviation from ISA : +12°C Tailwind component : 50 kt Gross mass at C : 55 000 kg The fuel required from C - D is :

a 17 500 kg

b 14 200 kg

c 17 800 kg

d **14 500 kg**

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40 id 5675 (For this Question use Fuel Planning MRJT1) Given : Distance C - D : 680NM Long Range Cruise at FL340 Temperature Deviation from ISA : 0° C Headwind component : 60 kt Gross mass at C : 44 700 kg The fuel required from C - D is :

a 3400 kg

b **3700 kg**

c 3100 kg

d 4000 kg

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41 id 5676 (For this Question use Fuel Planning MRJT1) Given : Brake release mass : 58 000 kg Temperature : ISA + 15 The fuel required to climb from an aerodrome at elevation 4000 ft to FL300 is :

a 1350 kg

b 1400 kg

c 1450 kg

d **1250 kg**

42 id 5677 (For this Question use Fuel Planning MRJT1) Given : Brake release mass : 62 000 kg Temperature : ISA + 15°C The fuel required for a climb from Sea Level to FL330 is :

a 1800 kg

b 1650 kg

c 1750 kg

d **1700 kg**

43 id 5679 (For this Question use Fuel Planning MRJT1) Given : Distance B - C : 1200 NM Cruise Mach 0.78 at FL300 Temperature Deviation from ISA : -14°C Tailwind component : 40 kt Gross mass at B : 50 200 kg The fuel required from B - C is :

a 5850 kg

b **6150 kg**

c 7300 kg

d 7050 kg

44 id 5680 (For this Question use Fuel Planning MRJT1) Given : Distance C - D : 540 NM Cruise 300 KIAS at FL 210 Temperature Deviation from ISA : +20°C Headwind component : 50 kt Gross mass at C : 60 000 kg The fuel required from C to D is :

a 3680 kg

b 4620 kg

c 3350 kg

d **4242 kg**

45 id 5681 (For this Question use Fuel Planning MRJT1) Given : Distance B - C : 350 NM Cruise 300 KIAS at FL 210 Temperature : - 40°C Tailwind component : 70 kt Gross mass at B : 53 200 kg The fuel required from B - C is :

a **1940 kg**

b 1810 kg

c 2800 kg

d 2670 kg

46 id 5711 (For this Question use Fuel Planning MRJT1) For a flight of 2800 ground nautical miles the following apply : Head wind component: 15 kt Temperature: ISA + 15°C Cruise altitude: 35000 ft Landing mass: 50000 kg The (a) trip fuel and (b) trip time respectively are :

a (a) 20000 kg (b) 7hr 00 min

b (a) 16200 kg (b) 6 hr 20 min

c (a) 17000 kg (b) 6 hr 10 min

d **(a) 17600 kg (b) 6 hr 50 min**

47 id 5712 (For this Question use Fuel Planning MRJT1) For a flight of 2800 ground nautical miles the following apply : Head wind component: 20 kt Temperature: ISA + 15°C Brake release mass: 64700 kg The (a) trip fuel, and (b) trip time respectively are :

a (a) 16200 kg (b) 6hr 20 min

b (a) 15800 kg (b) 6hr 15 min

c **(a) 17000 kg (b) 6hr 45 min**

d (a) 18400 kg (b) 7hr 00 min

48 id 5713 (For this Question use Fuel Planning MRJT1) For a flight of 1900 ground nautical miles the following apply : Head wind component 10 kt Temperature ISA -5°C Trip fuel available 15000 kg Landing mass 50000kg What is the minimum cruise level (pressure altitude) which may be planned ?

a **17000 ft**

b 22000 ft

c 14000 ft

d 10000 ft

49 id 5714 (For this Question use Fuel Planning MRJT1) Given the following : Head wind component 50 kt Temperature ISA + 10°C Brake release mass 65000kg Trip fuel available 18000kg What is the maximum possible trip distance ?

a 3480 NM

b 3100 NM

c **2740 NM**

d 2540 NM

50 id 5718 (For this Question use Fuel Planning MRJT1) For a flight of 2800 ground nautical miles the following apply : Tail wind component 45kt Temperature ISA - 10°C Cruise altitude 29000ft Landing mass 55000kg The (a) trip fuel (b) trip time respectively are :

a (a) 20000kg (b) 6hr 40 min

b (a) 18000kg (b)5hr 50 min

c **(a) 17100kg (b) 6hr 07 min**

d (a) 16000kg (b) 6hr 25 min

51 id 5720 (For this Question use Fuel Planning MRJT1) The following apply: Temperature ISA +15°C Brake release mass 62000kg Trip time 5hr 20 min What is the trip fuel ?

a 13800kg

b 13000kg

c 13200kg

d **13500kg**

52 id 5721 (For this Question use Fuel Planning MRJT1) For a flight of 2400 ground nautical miles the following apply : Temperature ISA -10°C Cruise altitude 29000ft Landing mass 45000kg Trip fuel available 16000kg What is the maximum headwind component which may be accepted ?

a 0

b 15kt

c 70kt

d **35 kt**

53 id 5722 (For this Question use Fuel Planning MRJT1) The following apply : Tail wind component 10kt Temperature ISA +10°C Brake release mass 63000kg Trip fuel available 20000kg What is the maximum possible trip distance ?

a 3500 NM

b 3640 NM

c **3740 NM**

d 3250 NM

54 id 5724 (For this Question use Fuel Planning MRJT1) For a flight of 2400 ground nautical miles the following apply : Tail wind component 25 kt Temperature ISA -10°C Cruise altitude 31000ft Landing mass 52000kg The (a) trip fuel and (b) trip time respectively are :

a (a) 14200kg (b) 5 hr 30 min

b (a) 16200kg (b) 5 hr 45 min

c (a) 13600kg (b) 6 hr 30 min

d (a) 12000kg (b) 5 hr 15 min

33.01.02.02. Fuel for holding or diversion

55 id 1856 Given: Dry operating mass (DOM)= 33510 kg Load= 7600 kg Final reserve fuel= 983 kg Alternate fuel= 1100 kg Contingency fuel 102 kg The estimated landing mass at alternate should be :

a 42312 kg.

b 42093 kg.

c 42210 kg.

d 42195 kg.

56 id 1857 Given: Dry operating mass (DOM)= 33000 kg Load= 8110 kg Final reserve fuel= 983 kg Alternate fuel= 1100 kg Contingency fuel 102 kg The estimated landing mass at alternate should be :

a 42312 kg.

b 41110 kg.

c 42210 kg.

d 42195 kg.

57 id 1858 Given: Dry operating mass (DOM)= 33510 kg Load= 7600 kg Trip fuel (TF)= 2040 kg Final reserve fuel= 983 kg Alternate fuel= 1100 kg Contingency fuel= 5% of trip fuel Which of the listed estimated masses is correct?

a Estimated take-off mass= 45233 kg.

b Estimated landing mass at destination= 43295 kg.

c Estimated landing mass at destination= 43193 kg.

d Estimated take-off mass= 43295 kg.

58 id 5682 (For this Question use Fuel Planning MRJT1) HOLDING PLANNING The fuel required for 30 minutes holding, in a racetrack pattern, at PA 1500 ft, mean gross mass 45 000 kg, is :

a 1010 kg

b 1090 kg

c 1310 kg

d 2180 kg

59 id 5683 (For this Question use Fuel Planning MRJT1) HOLDING PLANNING The fuel required for 45 minutes holding, in a racetrack pattern, at PA 5000 ft, mean gross mass 47 000 kg, is :

a 1635 kg

b 1090 kg

c 1690 kg

d 1125 kg

60 id 5684 (For this Question use Fuel Planning MRJT1) Given: Distance to Alternate 450 NM Landing mass at Alternate : 45 000 kg Tailwind component : 50 kt The Alternate fuel required is :

- **a** 2900 kg
- **b** 2750 kg
- **c** 3050 kg
- **d** **2500 kg**

61 id 5685 (For this Question use Fuel Planning MRJT1) Given : Distance to Alternate : 400 NM Landing mass at Alternate : 50 000kg Headwind component : 25 kt The alternate fuel required is :

- **a** 2650 kg
- **b** 2550 kg
- **c** 2900 kg
- **d** **2800 kg**

33.01.02.03. Reserves

62 id 60 A public transport aeroplane with reciprocating engines,is flying from PARIS to LYON. The final reserve corresponds to:

- **a** **45 minutes at holding speed**
- **b** 2 hours at cruise consumption
- **c** 1 hour at holding speed
- **d** 30 minutes at holding speed

63 id 61 In a flight plan when the destination aerodrome is A and the alternate aerodrome is B, the final reserve fuel for a turbojet engine aeroplane corresponds to:

- **a** 15 minutes holding 2,000 feet above aerodrome A
- **b** 30 minutes holding 2,000 feet above aerodrome B
- **c** **30 minutes holding 1,500 feet above aerodrome B**
- **d** 30 minutes holding 1,500 feel above aerodrome A

64 id 1199 Following in-flight depressurisation, a turbine powered aeroplane is forced to divert to an en-route alternate airfield. If actual flight conditions are as forecast, the minimum quantity of fuel remaining on arrival at the airfield will be:

- **a** at least equivalent to 45 minutes flying time
- **b** at least equivalent to the quantity required to fly to another aerodrome in the event that weather conditions so require
- **c** laid down by the operator, with the quantity being specified in the operating manual
- **d** **at least equivalent to 30 minutes flying time**

33.01.02.04. Total fuel requirements for flight

65 id 62 The Trip Fuel for a jet aeroplane to fly from the departure aerodrome to the destination aerodrome is 5 350 kg. Fuel consumption in holding mode is 6 000 kg/h. The quantity of fuel which is needed to carry out one go-around and land on the alternate airfield is 4 380 kg. The destination aerodrome has a single runway. What is the minimum quantity of fuel which should be on board

- **a** 13 000 kg
- **b** **13 230 kg**
- **c** 12 700 kg
- **d** 10 000 kg

66 id 63 For turbojet engine driven aeroplane, given: Taxi fuel 600 kg Fuel flow for cruise 10 000 kg/h Fuel flow for holding 8 000 kg/h Alternate fuel 10 200 kg Planned flight time to destination 6 h Forecast visibility at destination 2000 m The m

a **77 800 kg**

b 76 100 kg

c 80 500 kg

d 79 200 kg

67 id 2539 (For this Question use Flight Planning & Monitoring MEP1) A flight has to be made with a multi engine piston aeroplane. For the fuel calculations take 5 US gallons for the taxi, and an additional 13 minutes at cruise condition to account for climb and descent. Calculated time from overhead to overhead is 1h47min. Powersetting is 45%, 2600 RPM. Calculated reserve fuel is 30% of the tri

a 37 US gallons.

b **47 US gallons.**

c 60 US gallons.

d 470 US gallons.

68 id 2540 (For this Question use Flight Planning & Monitoring MEP1) A flight has to be made with a multi engine piston aeroplane. For the fuel calculations take 5 US gallons for the taxi, and an additional 13 minutes at cruise condition to account for climb and descent. Calculated time overhead to overhead is 2h37min. Powersetting is 65%, 2500 RPM. Calculated reserve fuel is 30% of the trip fue

a **91 US gallons.**

b 86 US gallons.

c 76 US gallons.

d 118 US gallons.

69 id 5541 You are to determine the maximum fuel load which can be carried in the following conditions : - dry operating mass : 2800 kg - trip fuel : 300 kg - payload : 400 kg - maximum take-off mass : 4200 kg - maximum landing mass : 3700 kg

a 1000 kg

b **800 kg**

c 700 kg

d 500 kg

33.01.02.05. Completion of pre-flight portion of fuel log

70 id 2043 Given:maximum allowable take-off mass 64 400 kg maximum landing mass 56 200 kg maximum zero fuel mass 53 000 kg dry operating mass 35 500 kg estimated load 14 500 kg estimated trip fuel 4 900kg minimum take-off fuel 7 400 kg Find the maximum allowable take-off fuel:

a 8 600 kg

b 11 400 kg

c 14 400 kg

d **11 100 kg**

33.01.03. Flight monitoring and in-flight replanning

33.01.03.01. In-flight fuel computations

71 id 1396 During an IFR flight in a Beech Bonanza the fuel indicators show that the remaining amount of fuel is 100 lbs after 38 minutes. The total amount of fuel at departure was 160 lbs. For the alternate fuel, 30 lbs is necessary. The planned fuel for taxi is 13 lbs. Final reserve fuel is estimated at 50 lbs. If the fuel flow remains the same, how many minutes can be flown to the destination wi

a 12 minutes.

b 63 minutes.

c 44 minutes.

d 4 minutes.

72 id 2536 For a planned flight the calculated fuel is as follows: Flight time: 3h06min The reserve fuel, at any time, should not be less than 30% of the remaining trip fuel. Taxi fuel: 8 kg Block fuel: 118 kg How much fuel should remain after 2 hours flight time?

a 27 kg trip fuel and 12 kg reserve fuel.

b 39 kg trip fuel and 12 kg reserve fuel.

c 30 kg trip fuel and 9 kg reserve fuel.

d 39 kg trip fuel and no reserve fuel.

73 id 2537 For a planned flight the calculated fuel is as follows: Flight time: 2h42min The reserve fuel, at any time, should not be less than 30% of the remaining trip fuel. Taxi fuel: 9 kg Block fuel: 136 kg How much fuel should remain after 2 hours flight time?

a 33 kg trip fuel and no reserve fuel.

b 33 kg trip fuel and 10 kg reserve fuel.

c 23 kg trip fuel and 10 kg reserve fuel.

d 25 kg trip fuel and 8 kg reserve fuel.

33.01.03.02. Calculation of actual consumption rate

74 id 2042 A VFR flight planned for a Piper Seneca III. At a navigational checkpoint the remaining usable fuel in tanks is 60 US gallons. The alternate fuel is 12 US gallons. According to the flight plan the remaining flight time is 1h35min. Calculate the highest rate of consumption possible for the rest of the trip.

a 37.9 US gallons/hour

b 33.0 US gallons/hour

c 30.3 US gallons/hour

d 21.3 US gallons/hour

75 id 2064 A multi engine piston aeroplane is on an IFR flight. The fuel plan gives a trip fuel of 65 US gallons. The alternate fuel, final reserve included, is 17 US gallons. Contingency fuel is 5% of the trip fuel. The usable fuel at departure is 93 US gallons. At a certain moment the fuel consumed according to the fuel gauges is 40 US gallons and the distance flown is half of the total distance.

a At the destination there will still be 30 US gallons in the tanks

b The remaining fuel is not sufficient to reach the destination with reserves intact

c At departure the reserve fuel was 28 US gallons

d At destination the required reserves remain intact.

76 id 5527 — The fuel burn of an aircraft turbine engine is 220 l/h with a fuel density of 0,80. If the density is 0,75, the fuel burn will be:

- **a** **235 l/h**
- **b** 206 l/h
- **c** 220 l/h
- **d** 176 l/h

33.01.03.04. In-flight replanning in case of problems

77 id 2538 — Minimum planned take-off fuel is 160 kg (30% total reserve fuel is included). Assume the groundspeed on this trip is constant. When the aeroplane has done half the distance the remaining fuel is 70 kg. Is diversion to a nearby alternate necessary?

- **a** Diversion to a nearby alternate is not necessary, because it is allowed to calculate without reserve fuel.
- **b** Diversion to a nearby alternate is not necessary, because the reserve fuel has not been used completely.
- **c** **Diversion to a nearby alternate is necessary, because the remaining fuel is not sufficient.**
- **d** Diversion to a nearby alternate is necessary, unless the captain decides to continue on his own responsability.

78 id 5542 — After flying for 16 min at 100 kt TAS with a 20 kt tail wind component, you have to return to the airfield of departure. You will arrive after:

- **a** 20 min
- **b** **24 min**
- **c** 10 min 40 sec
- **d** 16 min

33.01.04. Radio communication and navigation aids

33.01.04.01. Communication frequencies

79 id 1393 — During a flight at night a position has to be reported to ATC. The aeroplane is at a distance of 750 NM from the groundstation and at flight level 350. The frequency to be used is:

- **a** **5649 kHz.**
- **b** 11336 kHz.
- **c** 17286 kHz.
- **d** 123.9 MHz.

80 id 4394 — Give the name and frequency of the Flight Information Service for an aeroplane in position (47°59'N, 010°14'E).

- **a** MÜNCHEN INFORMATION 120.65 MHz
- **b** **MÜNCHEN INFORMATION 126.95 MHz**
- **c** FRANKFURT INFORMATION 128.95 MHz
- **d** MEMMINGEN INFORMATION 122.1 MHz

81 id 4398 — Give the frequency of STUTTGART ATIS.

- **a** 135.775 MHz
- **b** **126.125 MHz**
- **c** 112.250 MHZ
- **d** 126.125 kHz

82 id 4570 | Give the frequency of ZÜRICH VOLMET.

a 128.525 MHz

b 127.20 kHz

c **127.20 MHz**

d 118.10 MHz

33.01.04.02. Radio navigation and approach aids

83 id 4571 | Refer to the appropriate chart in the Student Pilot Route Manual: Which navigation aid is located in position 48°55'N, 009°20'E ?

a VOR

b NDB

c TACAN

d **VOR/DME**

84 id 4572 | Refer to the appropriate chart in the Student Pilot Route Manual: Which navigation aid is located in position 48°23'N, 008°39'E?

a **VOR**

b NDB

c VOR/DME

d VORTAC

85 id 4573 | Refer to the appropriate chart in the Student Pilot Route Manual: Which navigation aid is located in position 48°30'N, 007°34'E?

a **VOR/DME**

b NDB

c VOR

d TACAN

33.02. ICAO ATC FLIGHT PLAN

33.02.01. Types of flight plan

33.02.01.01. ICAO flight plan

86
id 68

A repetitive flight plan (RPL) is filed for a scheduled flight: Paris-Orly to Angouleme, Paris Orly as alternate. Following heavy snow falls, Angouleme airport will be closed at the expected time of arrival. The airline decides before departure to plan a re-routing of that flight to Limoges.

a The pilot-in-command must advise ATC of his intention to divert to Limoges at least 15 minutes before the planned time of arrival.

b The airline's "Operations " Department has to tansmit a change in the RPL at the ATC office, at least half an hour before the planned time of departure.

c It is not possible to plan another destination and the flight has to be simply cancelled that day (scheduled flight and not chartered).

d **The RPL must be cancelled for that day and a specific flight plan has to be filed.**

87
id 957

Which of the following statements regarding filing a flight plan is correct?

a A flying college can file repetitive flight plan for VFR flights.

b Any flight plan should be filed at least 10 minutes before departure.

c A flight plan should be filed when a national FIR boundary will be crossed.

d **In case of flow control the flight plan should be filed at least three hours in advance of the time of departure.**

88
id 1399

A "current flight plan" is a :

a flight plan in the course of which radio communication should be practised between aeroplane and ATC.

b filed flight plan.

c flight plan with the correct time of departure.

d **filed flight plan with amendments and clearance included.**

89
id 5650

An aircraft has a maximum certificated take-off mass of 137000 kg but is operating at take-off mass 135000 kg. In Item 9 of the ATS flight plan its wake turbulence category is :

a medium plus "M+"

b heavy/medium "H/M"

c medium "M"

d **heavy "H"**

90
id 5651

For the purposes of Item 9 (Wake turbulence category) of the ATS flight plan, an aircraft with a maximum certificated take-off mass of 62000 kg is :

a unclassified "U"

b heavy "H"

c light "L"

d **medium "M"**

91 id 5654 When completing an ATS flight plan, an elapsed time (Item 16) of 1 hour 55 minutes should be entered as :

a 0115

b 1H55

c 115M

d **0155**

92 id 5655 When completing an ATS flight plan for a European destination, clock times are to be expressed in :

a Central European Time

b Local mean time

c local standard time

d **UTC**

93 id 5656 In the ATS flight plan, for a non-scheduled flight which of the following letters schould be entered in Item 8 (Type of Flight) :

a **N**

b N/S

c G

d X

94 id 5658 In the ATS flight plan item 15, it is necessary to enter any point at which a change of cruising speed takes place. For this purpose a "change of speed" is defined as :

a 20 km per hour or 0.1 Mach or more

b 10 % TAS or 0.05 Mach or more

c **5% TAS or 0.01 Mach or more**

d 20 knots or 0.05 Mach or more

95 id 5659 In the ATS flight plan item 15, when entering a route for which standard departure (SID) and standard arrival (STAR) procedures exist :

a **both should be entered in the ATS plan where appropriate**

b SIDs should be entered but not STARs

c STARS should be entered but not SIDs

d neither SID nor STAR should be entered

96 id 5662 When completing an ATS flight plan for a flight commencing under IFR but possibly changing to VFR, the letters entered in Item 8 (FLIGHT RULES) would be :

a X

b N/S

c G

d **Y**

97 id 5663 In the ATS flight plan Item 19, if the number of passengers to be carried is not known when the plan is ready for filing :

a the plan should be filed with the relevant box blank

b **"TBN" (to be notified) may be entered in the relevant box**

c an estimate may be entered but that number may not subsequently be exceeded

d the plan may not be filed until the information is available

98 id 5664 — In an ATS flight plan Item 15, in order to define a position as a bearing and distance from a VOR, the group of figures should consist of :

- **a** VOR ident, magnetic bearing and distance in kilometres
- **b** VOR ident, true bearing and distance in kilometres
- **c** **VOR ident, magnetic bearing and distance in nautical miles**
- **d** full name of VOR, true bearing and distance in kilometres

99 id 5665 — An aircraft plans to depart London at 1000 UTC and arrive at Munich (EDDM) at 1215 UTC. In the ATS flight plan Item 16 (destination/EET) should be entered with :

- **a** EDDM 1215
- **b** EDDM 1415
- **c** **EDDM 0215**
- **d** EDDM 2H15

100 id 5666 — In an ATS flight plan Item 15 (route), in terms of latitude and longitude, a significant point at 41°35' north 4°15' east should be entered as :

- **a** N04135E0415
- **b** 41°35' N 04° 15'E
- **c** **4135N00415E**
- **d** N4135 E00415

101 id 5667 — In an ATS flight plan, Item 15 (route), a cruising pressure altitude of 32000 feet would be entered as :

- **a** FL320
- **b** **F320**
- **c** S3200
- **d** 32000

102 id 5668 — When an ATS flight plan is submitted for a flight outside designated ATS routes, points included in Item 15 (route) should not normally be at intervals of more than :

- **a** 20 minutes flying time or 150 km
- **b** **30 minutes flying time or 370 km**
- **c** 15 minutes flying time or 100 km
- **d** 1 hour flying time or 500 km

103 id 5669 — In the ATS flight plan Item 15, a cruising speed of 470 knots will be entered as :

- **a** N470
- **b** KN470
- **c** 0470K
- **d** **N0470**

104 id 5670 — In the ATS flight plan Item 13, in a flight plan submitted before departure, the departure time entered is the :

- **a** **estimated off-block time**
- **b** estimated time over the first point en route
- **c** estimated take-off time
- **d** allocated slot time

105 id 5671 — In the ATS flight plan Item 15 (Cruising speed), when not expressed as a Mach number, cruising speed is expressed as :

- **a** IAS
- **b** **TAS**
- **c** CAS
- **d** Groundspeed

106 id 5672 — For a repetitive flight plan (RPL) to be used, flights must take place on a regular basis on at least :

- **a** 20 occasions
- **b** **10 occasions**
- **c** 30 occasions
- **d** 50 occasions

107 id 5673 — In the ATS flight plan Item 10 (equipment), the letter to indicate the carriage of a serviceable transponder - mode A (4 digits-4096 codes) and mode C, is :

- **a** B
- **b** **C**
- **c** A
- **d** P

33.02.02. Completing the flight plan

33.02.02.01. Information for flight plan obtained from

108 id 67 — An aeroplane is flying from an airport to another. In cruise, the calibrated airspeed is 150kt, true airspeed 180 kt, average groundspeed 210 kt, the speed box on the filed flight plan shall be filled as follows:

- **a** K0150
- **b** K0210
- **c** K0180
- **d** **N0180**

109 id 554 — On a flight plan you are required to indicate in the box marked "speed" the planned speed for the first part of the cruise or for the entire cruise. This speed is:

- **a** The estimated ground speed
- **b** The equivalent airspeed
- **c** The indicated airspeed
- **d** **The true airspeed**

110 id 2534 — The navigation plan reads: Trip fuel: 100 kg Flight time: 1h35min Taxi fuel: 3 kg Block fuel: 181 kg The endurance on the ICAO flight plan should read:

- **a** 1h 35min
- **b** **2h 49min**
- **c** 2h 04min
- **d** 2h 52min

111 id 2535

The navigation plan reads: Trip fuel: 136 kg Flight time: 2h45min Calculated reserve fuel: 30% of trip fuel Fuel in tank is minimum (no extra fuel on board) Taxi fuel: 3 kg The endurance on the ICAO flight plan should read:

a 2h49min

b 2h45min

c **3h34min**

d 3h38min

---

112 id 5514

If your destination airport has no ICAO indicator, in the appropriate box of your flight plan, you write:

a ////

b AAAA

c XXXX

d **ZZZZ**

---

113 id 5525

The cruising speed to write in the appropriate box of a flight plan is:

a ground speed

b indicated air speed

c **true air speed**

d calibrated air speed

---

114 id 5526

In the appropriate box of a flight plan, for endurance, one must indicate the time corresponding to:

a **the total usable fuel on board**

b the required fuel for the flight

c the required fuel for the flight plus the alternate and 45 minutes

d the total usable fuel on board minus reserve fuel

---

115 id 5529

The maximum permissible take-off mass of an aircraft for the L wake turbulence category on a flight plan is:

a **7 000 kg**

b 2 700 kg

c 5 700 kg

d 10 000 kg

---

116 id 5530

In the appropriate box of a flight plan form, concerning equipment, the letter to be used to indicate that the aircraft is equipped with a mode A 4096 codes transponder with altitude reporting capability is :

a S

b P

c **C**

d A

---

117 id 5543

When a pilot fills in a flight plan, he must indicate the wake turbulence category. This category is a function of which mass?

a actual take-off mass

b estimated take-off mass

c maximum certified landing mass

d **maximum certified take-off mass**

118 id 5545 | In the appropriate box of a flight plan form, corresponding to the estimated time of departure, the time indicated is that at which the aircraft intends to :

a start-up

b take-off

c **go off blocks**

d pass the departure beacon

33.02.03. Filing the flight plan

33.02.03.01. Procedures for filing

119 id 959 | You have a flight plan IFR from Amsterdam to London. In the flight plan it is noted that you will deviate from the ATS route passing the FIR boundary Amsterdam/London. The airway clearance reads: Cleared to London via flight planned route. Which of the following statements is correct?

a **The route according to the flight plan is accepted.**

b The filed deviation is not accepted.

c You will get a separate clearance for the deviation.

d It is not allowed to file such a flight plan.

120 id 1398 | How many hours in advance of departure time should a flight plan be filed in the case of flights into areas subject to air traffic flow management (ATFM)?

a 1:00 hour.

b **3:00 hours.**

c 0:30 hours.

d 0:10 hours.

121 id 5524 | For a flight plan filed before the flight, the indicated time of departure is:

a **the estimated off-block time**

b the time at which the flight plan is filed.

c the time of take-off.

d the time overhead the first reporting point after take-off.

122 id 5536 | It is possible, in flight, to: 1 - file an IFR flight plan 2 - modify an active IFR or VFR flight plan 3 - cancel an active VFR flight plan 4 - close an active VFR flight plan Which of the following combinations contains all of the correct statements?

a 2 - 3 - 4

b 1 - 2 - 4

c 1 - 2 - 3

d **1 - 2 - 3 - 4**

123 id 5544 | The planned departure time from the parking area is 1815 UTC The estimated take-off time is 1825 UTC The IFR flight plan must be filed with ATC at the latest at:

a 1755 UTC

b 1725 UTC

c 1745 UTC

d **1715 UTC**

33.02.03.03. Requirements of the State

124
id 69

From the options given below select those flights which require flight plan notification: I - Any Public Transport flight. 2 - Any IFR flight 3 - Any flight which is to be carried out in regions which are designated to ease the provision of the Alerting Service or the operations of Search and Rescue. 4 - Any cross-border flights 5 - Any flight which involves overflying

a 1+5

b **2+4**

c 1+2+3

d 3+4+5

33.02.04. Closing the flight plan

33.02.04.01. Responsibilities and procedures

125
id 66

If a pilot lands at an aerodrome other than the destination aerodrome specified in the flight plan, he must ensure that the ATS unit at the destination aerodrome is informed within a certain number of minutes of his planned ETA at destination. This number of minutes is:

a 10

b 15

c **30**

d 45

33.02.05. Adherence to flight plan

33.02.05.01. Tolerances allowed by the State

126
id 5660

When an ATS flight plan has been submitted for a controlled flight, the flight plan should be amended or cancelled in the event of the off-block time being delayed by :

a 90 minutes or more

b 45 minutes or more

c 60 minutes or more

d **30 minutes or more**

33.02.05.02. In-flight amendment of flight plan

127
id 958

An aeroplane is on an IFR flight. The flight is to be changed from IFR to VFR. Is it possible?

a **Yes, the pilot in command must inform ATC using the phrase "cancelling my IFR flight".**

b No, you have to remain IFR in accordance to the filed flight plan.

c No, only ATC can order you to do this.

d Yes, but only with permission from ATC.

128
id 1397

During an IFR flight TAS and time appear to deviate from the data in the flight plan. The minimum deviations, that should be reported to ATC in order to conform to PANS-RAC, are:

a TAS 5 kt and time 5 minutes.

b TAS 3% and time 3 minutes.

c **TAS 5% and time 3 minutes.**

d TAS 10 kt and time 2 minutes.

33.03. PRACTICAL FLIGHT PLANNING

33.03.01. Chart preparation

33.03.01.01. Plot tracks and measure directions

129 id 4395 Flying from SAULGAU airport (48°02'N, 009°31'E) to ALTENSTADT airport (47°50'N, 010°53'E). Find magnetic course and the distance.

a Magnetic course 102°, distance 82 NM

b Magnetic course 282°, distance 56 NM

c **Magnetic course 102°, distance 56 NM**

d Magnetic course 078°, distance 82 NM

130 id 4396 Flying from ERBACH airport (48°21'N, 009°55'E) to POLTRINGEN airport (48°33'N, 008°57'E). Find magnetic course and the distance.

a Magnetic course 108°, distance 60 NM

b Magnetic course 252°, distance 41 NM

c **Magnetic course 287°, distance 41 NM**

d Magnetic course 287°, distance 60 NM

131 id 4397 Flying from Position SIGMARINGEN (48°05'N, 009°13'E) to BIBERACH airport (48°07'N, 009°46'E). Find magnetic course and the distance.

a Magnetic course 086°, distance 32 NM

b Magnetic course 093°, distance 41 NM

c Magnetic course 267°, distance 22 NM

d **Magnetic course 086°, distance 22 NM**

132 id 5725 On airway PTS P from Vigra (62°334N 006°02'E), the initial great circle grid course is :

a 347

b 353

c **344**

d 350

133 id 5726 On a direct great circle course from Shannon (52°43' N 008°53'W) to Gander (48°54'N054°32'W), the (a) average true course, and (b) distance, are :

a a) 244° (b) 1520 NM

b a) 281° (b) 2730 NM

c **(a) 262° (b) 1720 NM**

d a) 281° (b) 1877 NM

134 id 5727 The initial great circle true course from Keflavik (64°00'N 022°36' W) to Vigra (62°33'N 006°02'E) measures 084°. On a polar enroute chart where the grid is aligned with the 000° meridian the initial grid course will be :

a 096°

b 080°

c **106°**

d 066°

135 id 5728 The initial great circle course from position A (80°00'N 170°00'E) to position B (75°00'N 011°E) is 177° (G). The final grid course at position B will be :

a 172° (G)

b 194° (G)

c **177° (G)**

d 353° (G)

33.03.02. Navigation plans

33.03.02.01. Completing the navigation plan using:

136 id 2207 A descent is planned from 7500 ft MSL so as to arrive at 1000 ft MSL 6 NM from a VORTAC. With a GS of 156 kts and a rate of descent of 800 ft/min. The distance from the VORTAC when descent is started is :

a 15,0 NM

b **27,1 NM**

c 11,7 NM

d 30,2 NM

137 id 2768 A sector distance is 450 NM long. The TAS is 460 kt. The wind component is 50 kt tailwind. What is the still air distance?

a 414 Nautical Air Miles (NAM)

b 499 Nautical Air Miles (NAM)

c **406 Nautical Air Miles (NAM)**

d 511 Nautical Air Miles (NAM)

138 id 2770 The still air distance in the climb is 189 Nautical Air Miles (NAM) and time 30 minutes. What ground distance would be covered in a 30 kt head wind?

a 188 NM

b 203 NM

c **174 NM**

d 193 NM

33.03.03. Simple fuel plans

33.03.03.01. Preparation of fuel logs

139 id 2065 (For this question use Flight Planning Manual MEP 1 Figure 3.2) A flight is to be made in a multi engine piston aeroplane (MEP1). The cruising level will be 11000ft. The outside air temperature at FL is -15 ° C. The usable fuel is 123 US gallons. The power is set to economic cruise. Find the range in NM with 45 min reserve fuel at 45 % power.

a **752 NM**

b 852 NM

c 610 NM

d 602 NM

140 id 2564 (For this Question use Flight Planning & Monitoring MEP1 Fig. 3.5) Given: FL 75 Lean mixture Economy Powersetting Find: Endurance in hours with no reserve

a 06:12

b **05:01**

c 06:06

d 05:11

141 id 4574

(For this Question use Flight Planning & Monitoring SEP1) A flight has to be made with the single engine sample aeroplane. For the fuel calculation allow 10 lbs fuel for start up and taxi, 3 minutes and 1 gallon of additional fuel to allow for the climb, 10 minutes and no fuel correction for the descent. Planned flight time (overhead to overhead) is 03 hours and 12 minutes. Res

a **283 lbs**

b 268 lbs

c 252 lbs

d 215 lbs

---

142 id 4575

(For this Question use Flight Planning & Monitoring SEP1) A flight has to be made with the single engine sample aeroplane. For the fuel calculation allow 10 lbs fuel for start up and taxi, 3 minutes and 1 gallon of additional fuel to allow for the climb, 10 minutes and no fuel correction for the descent. Planned flight time (overhead to overhead) is 02 hours and 37 minutes. Res

a 250 lbs

b 208 lbs

c 270 lbs

d **265 lbs**

33.04. IFR (AIRWAYS) FLIGHT PLANNING

33.04.01. Meteorological considerations

143 id 5210 | Which describes the worst hazard, if any, that could be associated with the type of feature at 37.7°N 015°E ?

a Reduced visibility

b Severe attenuation in the HF R/T band

c **Engine flame out and windscreen damage**

d There is no hazard

144 id 5211 | The surface weather system over England (53°N 002°W) is

a a warm front moving southeast

b a depression moving north

c **an occluded front moving east**

d a cold front moving east

145 id 5212 | In the vicinity of PARIS (49°N 003°E) the tropopause is at about

a **FL350**

b FL340

c FL400

d FL380

146 id 5213 | Which describes the maximum intensity of icing, if any, at FL110 in the vicinity of CASABLANCA (33°N 008°W) ?

a Light

b **Moderate**

c Severe

d Nil

147 id 5214 | Which best describes the significant cloud, if any, forecast for the area southwest of BODO (67°N 014°E)

a Nil

b 5 to 7 oktas AC, base FL100, tops FL180

c 3 to 7 oktas AC, base below FL100, tops FL180

d **5 to 7 oktas AC, base below FL100, tops FL180**

148 id 5215 | Which best describes be maximum intensity of icing, if any, at FL150 in the vicinity (west)of BUCHAREST (45°N 026°E) ?

a Nil

b Light

c Severe

d **Moderate**

149 id 5216 | Which best describes the maximum intensity of CAT, if any, forecast for FL330 over BENGHAZI (32°N 020°E) ?

a **Nil**

b Light

c Moderate

d Severe

150 id 5217 | The maximum wind velocity (°/kt) shown in the vicinity of MUNICH (48°N 012°E) is :

a **260/130**

b 080/130

c 260/160

d 290/230

151 id 5218 | The wind velocity over GERMANY is

a 130 kt at FL320 maximum velocity not shown on chart

b 130 kt at FL340 maximum velocity not shown on chart

c a maximum of 230 kt at FL 320

d **a maximum of 130 kt at FL320**

152 id 5219 | The wind direction and velocity (°/kt) at 50°N 040°E is:

a 170/35

b **350/35**

c 280/20

d 300/35

153 id 5220 | The wind direction and velocity (°/kt) at 60°N 015°E is

a **200/20**

b 020/20

c 210/25

d 030/25

154 id 5222 | What is the mean temperature deviation (°C) from the ISA over 50°N 010°W ?

a **+/-0**

b +15

c +9

d -5

155 id 5223 | The wind direction and velocity (°/kt) at 40°N 040°E is

a 280/20

b 330/60

c 150/20

d **330/20**

156 id 5228 — A METAR reads : SA1430 35002KY 7000 SKC 21/03 QI024 = Which of the following information is contained in this METAR ?

a **temperature/dewpoint**

b runway in use

c day/month

d period of validity

157 id 5229 — What mean temperature (°C) is likely on a course of 360° (T) from 40°N to 50°N at 040°E ?

a -19

b **-23**

c -21

d -56,5

158 id 5230 — Which of the following flight levels, if any, is forecast to be clear of significant cloud, icing, turbulence, and CAT along the marked route from SHANNON (53°N 10°W) to BERLIN (53°N 13°E) ?

a FL250

b FL 210

c FL290

d **None**

159 id 5686 — The W/V (°/kt) at 50°N015°W is:

a **320/40**

b 140/40

c 320/25

d 140/25

160 id 5687 — What mean temperature (°C) is likely on a true course of 270° from 025° E to 010°E at 45°N ?

a -5

b -25

c **-15**

d -30

161 id 5688 — The W/V (°/kt) at 40°N 020°W is

a 170/60

b 334/40

c 135/40

d **350/60**

162 id 5689 — What is the temperature deviation (°C) from ISA over 50° N 010°E ?

a -55

b **+8**

c +2

d -8

163 id 5690 — The W/V (°/kt) at 60° N015° W is

- a **250/10**
- b 070/10
- c 270/10
- d 090/10

164 id 5691 — The approximate mean wind component (kt) along true course 180° from 50°N to 40°N at 005° W is

- a headwind 20 kt
- b tail wind 25 kt
- c tail wind 15 kt
- d **headwind 15 kt**

165 id 5693 — Which best describes the maximum intensity of icing, if any, at FL160 in the vicinity of BUDAPEST?

- a **moderate**
- b severe
- c light
- d nil

166 id 5694 — Which describes the intensity of turbulence, if any, at FL 150 in the vicinity of ALGIERS?

- a moderate
- b **moderate or severe**
- c light
- d nil

167 id 5695 — The surface system west of PARIS is a

- a **cold front moving southeast**
- b warm front moving north
- c stationary occluded front
- d cold front moving west

168 id 5696 — In the vicinity of GLASGOW the tropopause is at about FL

- a 300
- b **270**
- c 250
- d 290

169 id 5697 — Which best describes the significant cloud forecast over TOULOUSE (44°N001°E) ?

- a **broken/overcast layer, base below FL100 tops FL180, moderate icing**
- b well separated CB base FL100 tops to FL 180
- c broken/overcast layer, base below FL100 tops FL180, severe icing
- d broken/overcast layer, base below FL100 tops FL180, severe turbulence

170 id 5698 | Which describes the maximum intensity of turbulence, if any, forecast for FL260 over TOULOUSE (44°N001°E) ?

a **moderate**

b severe

c light

d nil

171 id 5700 | Over LONDON (51°N000°E/W), the lowest FL listed which is unaffected by CAT is:

a 360

b 390

c 250

d **220**

33.04.02. Selection of routes

33.04.02.01. Preferred airways routings

172 id 2054 | (For this question use Route Manual chart E(HI)4&5) An aeroplane has to fly from Salzburg (48°00.2'N 012°53.6'E) to Klagenfurt (46°37.5'N 014°33.8'E). Which statement is correct ?

a The airway UB5 is closed for southbound traffic above FL 200.

b The airway UB5 cannot be used, there is one way traffic to the north.

c **The airway UB5 can be used for flights to/from Klagenfurt and Salzburg.**

d The airway UB5 is closed in this direction except during the weekends.

173 id 5049 | Of the following, the preferred airways routing from FRANKFURT FFM 114.2 (50°03' N008°38'E) to KOKSY (51°06'N 002°39'E) above FL245, on a Wednesday is :

a **UR10 NTM UB6 BUB ATS**

b UG1

c UB69 DINKI UB6 BUB ATS

d UG108 SPI UG1

174 id 5050 | Of the following, the preferred airways routing from MARTIGUES MTG 117.3 (43°23'N 005°05'E) to ST PREX SPR 113.9 (46°28'N 006°27'E) above FL245 is :

a UB28

b UB284 VILAR UB28

c **UB282 DGN UB46**

d UA6 LSA UG52

175 id 5051 | Of the following, the preferred airways routing from AMBOISE AMB 113.7 (47°26'N 001°04'E) to AGEN AGN (43°53°'N 000°52'E) above FL200 is:

a UH40 FOUCO UH20 PERIC UA34

b UB19 POI UB195

c **UA34**

d UB19 CGC UA25

176 id 5052 — Of the following, the preferred airways routing from CLACTON CLN 114.55 (51°51'N 001°09'E) to DINARD DIN 114.3 (48°35'N 002°05'W) above FL245 is:

- **a** **UB29 LAM UR1 ORTAC UR14**
- **b** UR12 MID UA47 DPE UA475 SOKMU UH111
- **c** UR12 MID UR8 SAM UB11 BARLU UW115
- **d** UB29 LAM UR1 MID UA34 LILAN UR9

33.04.02.02. Extraction of tracks and distances

177 id 2052 — (For this question use Route Manual chart E(HI)4) An aeroplane has to fly from Abbeville (50°08.1'N 001°51.3'E) to Biggin (51°19.8'N 000°00.2'E). What is the distance of this leg ?

- **a** 62NM
- **b** 38 NM
- **c** 64NM
- **d** **100 NM**

178 id 2053 — (For this question use Route Manual chart E(HI)4) An aeroplane has to fly from Abbeville (50°08.1'N 001°51.3'E) to Biggin (51°19.8'N 00°00.2'E). At Biggin you can find : 141°. This is :

- **a** The average true course of the great circle from Biggin to Abbeville.
- **b** The magnetic course to fly inbound to Biggin.
- **c** **The magnetic great circle course from Biggin to Abbeville.**
- **d** The radial, referenced to true north, of Biggin to fly inbound.

179 id 2329 — (For this question use Route Manual chart E(HI)4) Planning a IFR flight from Paris Charles de Gaulle (N49 00.9 E002 36.9) to London Heathrow (N51 29.2 W000 27.9). Find the average true course from Paris to London.

- **a** 330°.
- **b** 142°.
- **c** **322°.**
- **d** 343°.

180 id 2330 — (For this question use Route Manual chart E(HI)4) Planning a IFR flight from Paris Charles de Gaulle (N49 00.9 E002 36.9) to London Heathrow (N51 29.2 W000 27.9). Determine the preplanning distance by calculating the direct distance plus 10%. The preplanning distance is:

- **a** 188 NM.
- **b** **207 NM.**
- **c** 308 NM.
- **d** 218 NM.

181 id 4389 — Planning an IFR-flight from Paris to London (Heathrow). Assume: STAR is BIG 2A, Variation 5° W, en-route TAS 430 kts, W/V 280/40, descent distance 76NM. Determine the magnetic course, ground speed and wind correction angle from ABB 116.6(N50 08.1 E001 51.3) to top of descent.

- **a** MC 141°, GS 396 kt, WCA -3°
- **b** MC 141°, GS 396 kt, WCA +3°
- **c** MC 319°, GS 396 kt, WCA -3°
- **d** **MC 321°, GS 396 kt, WCA -3°**

182 id 4562 Planning an IFR-flight from Paris to London. Determine the distance of the departure route ABB 8A.

a 72.5 NM

b **74.5 NM**

c 56 NM

d 83 NM

183 id 4563 Planning an IFR-flight from Paris (Charles de Gaulle) RWY 27 to London. Given: Distance from PARIS Charles-de-Gaulle to top of climb 50 NM Determine the distance from the top of climb (TOC) to ABB 116.6.

a 36.5 NM

b 33 NM

c **24.5 NM**

d 31 NM

184 id 4567 Planning an IFR-flight from Paris to London (Heathrow) via initial approach fix (IAF) Biggin VOR . Given: distance from top of descent (TOD) to Rwy 27R is 76 NM Determine the distance from ABB 116.6 to TOD.

a **49 NM**

b 60 NM

c 100 NM

d 55 NM

185 id 4569 Planning an IFR-flight from Paris Charles de Gaulle to London. SID is ABB 8A. Assume Variation 3° W, TAS 430kts, W/V 280/40 and distance to top of climb 50NM Determine the magnetic course, ground speed and wind correction angle from top of climb to ABB 116.6.

a MC 169°, GS 450 kt, WCA +4°

b MC 169°, GS 414 kt, WCA +5°

c MC 349°, GS 414 kt, WCA +5°

d **MC 349°, GS 414 kt, WCA -5°**

186 id 5053 The magnetic course/distance from DINKELSBUHL DKB 117.8 (49°09'N010°14'E) to ERLANGEN ERL 114.9 (49°39'N011°09'E) on airway UR11 is;

a **050°/47 NM**

b 230°/97NM

c 133°/85 NM

d 052°/97 NM

187 id 5054 The magnetic course/distance from GROSTENQUIN GTQ 111.25 (49°00'N 006°43'E) to LINNA (49°41'N 006°15'E) on airway R7 is:

a 157°/58 NM

b **337°/46 NM**

c 337°/31 NM

d 337°/58 NM

188 id 5055 The magnetic course/distance from ELBE LBE 115.1 (53°39'N 009°36'E) to LUNUD (54°50'N 009°19'E) on airway H12 is:

a 339°/80 NM

b 352°/96 NM

c **352°/72 NM**

d 339°/125 NM

189 id 5056 The initial magnetic course/distance from EELDE EEL 112.4 (53°10'N 006°40'E) to WELGO (54°18'N 007°25'E) on airway A7 is:

a 024°/ 73 NM

b 023°/ 73 NM

c 024°/ 20 NM

d 024°/ 47 NM

190 id 5057 The magnetic course/distance from CAMBRAI CMB 112.6 (50°14'N 003°09'E) to TALUN (49°33'N 003°25'E) on airway B3 is:

a 169°/68 NM

b 349°/26 NM

c 169°/42 NM

d 349°/42 NM

191 id 5058 The magnetic course/distance from WALLASEY WAL 114.1 (53°23N 003°28'W° to LIFFY (53°29'N 005°30'W) on airway B1 is:

a 279°/114 NM

b 279°/85 NM

c 311°/114 NM

d 311°/85 NM

192 id 5059 The magnetic course/distance from TRENT TNT 115.7 (53°03'N 001°40'W) to WALLASEY WAL 114.1 (53°23'N 003°08W) on airway VR3 is:

a 297°/70 NM

b 117°/57 NM

c 297°/57 NM

d 117°/71 NM

193 id 5060 The magnetic course/distance from TANGO TGO 112.5 (48°37'N 009°16'E) to DINKELSBUHL DKB 117.8 (49°09'N 010°14E) on airway UR11 is:

a 007°/60 NM

b 052°/50 NM

c 105°/105 NM

d 132°/43 NM

194 id 5061 The magnetic course/distance from ST PREX SPR 113.9 (46°28'N 006°27'E) to FRIBOURG FRI 115.1 (46°47'N 007°14'E) on airway UG60 is:

a 061°/28 NM

b 048°/46 NM

c 061°/37 NM

d 041°/78 NM

195 id 5062 The magnetic course/distance from SALZBURG SBG 113.8 (48°00'N 012°54'E) to STAUB (48°44'N 012°38'E) on airway UB5 is:

a 346°/64 NM

b 346°/45 NM

c 166°/64 NM

d 346°/43 NM

196 id 5063 The magnetic course/distance from ELBA ELB 114.7 (42°44'N 010°24'E) to SPEZI (43°49'N 009°34'E) on airway UA35 is:

- **a** 332°/118 NM
- **b** 152°/42 NM
- **c** 322°/60 NM
- **d** **332°/76 NM**

197 id 5064 The magnetic course/distance from LIMOGES LMG 114.5 (45°49'N 001°02'E) to CLERMONT FERRAND CMF 117.5 (45°47'N 003°11'E) on airway UG22 is:

- **a** 067°/ 122 NM
- **b** **094°/ 90 NM**
- **c** 113°/ 142 NM
- **d** 046°/ 70 NM

33.04.02.03. Frequencies and identifiers

198 id 2056 (For this question use Route Manual chart E(HI)4) An aeroplane has to fly from Salzburg (48°00.2'N 012°53.6'E) to Klagenfurt (46°37.5'N 014°33.8'E). At Salzburg there is stated on the chart D 113.8 SBG. That means :

- **a** **VOR/DME with identification SBG frequency 113.8 MHz can be used.**
- **b** Only the DME with identification SBG can be used, for which frequency 113.8 MHz should be tuned, VOR is not available.
- **c** VOR/DME SBG will be deleted in the future and cannot be used for navigation.
- **d** ILS/DME 113.8 MHz of Salzburg airport can be used for navigation.

199 id 5065 The radio navigation aid at TOPCLIFFE (54°12'N 001°22'W) is a:

- **a** **TACAN only, channel 84, (frequency 113.7 MHz)**
- **b** TACAN, channel 84, and a VOR frequency 113.7 MHz only
- **c** TACAN, channel 84, and an NDB frequency 92 kHz only
- **d** VORTAC, frequency 113.7 MHz, and an NDB frequency 92 kHz

200 id 5066 The radio navigation aid serving STRASBOURG (48°30'N 007°34'E) is a:

- **a** VOR only, frequency 115.6 MHz
- **b** **VOR/TACAN, frequency 115.6 MHz**
- **c** DME only, channel 115.6
- **d** TACAN only, frequency 115.6 MHz

201 id 5067 The radio navigation aid at ST DIZIER (48°38N 004°53'E) is a:

- **a** TACAN, channel 87, and NDB frequency 114.0 kHz
- **b** VOR, frequency 114.0 MHz, and TACAN channel 87
- **c** TACAN, channel 114.0
- **d** **TACAN, channel 87, frequency 114.0 MHz**

202 id 5069 The radio navigation aid STAD (51°45'N 004°15'E) is:

- **a** a VOR, frequency 386 MHz
- **b** **an NDB, frequency 386 kHz**
- **c** a VOR/DME, on channel 386
- **d** a TACAN, on channel 386

203 id 5070 | The radio navigation aid at CHIOGGIA (45°04'N 012°17'E) is a:

a **VOR/DME, frequency 114.1 MHz, and NDB frequency 408 kHz**

b VOR, frequency 114.1 MHz, and TACAN channel 408

c VOR, frequency 114.1 MHz, and TACAN frequency 408 MHz

d VOR/DME only, frequency 114.1 MHz

204 id 5071 | The radio navigation aid on airway UG4 at LUXEUIL (47°41'N 006°18'E) is a:

a **VOR only, identifier LUL**

b VOR, identifier LUL, frequency paired with TACAN identifier LXI

c VOR/DME and NDB, identifier LXI

d VOR/DME only, identifier LUL

205 id 5072 | The radio navigation aid at BELFAST CITY (54°37'N 005°53'W) is :

a a TACAN, channel 420

b **an NDB, frequency 420 kHz, NOT continuous operation**

c a fan marker, frequency 420 kHz

d an NDB, frequency 420 kHz, continuous operation

206 id 5073 | The radio navigation aid at SHANNON (52°43'N 008°53'W) is :

a an NDB, frequency 352 kHz

b **a VOR/DME, frequency 113.3 MHz**

c a TACAN, frequency 113.3 kHz

d a VOR only, frequency 113.3 MHz

207 id 5074 | The VOR and TACAN on airway G9 at OSNABRUCK (52°12'N 008°17'E) are:

a **NOT frequency paired, and have different identifiers**

b frequency paired, and have different identifiers

c NOT frequency paired, and have the same identifier

d frequency paired, and have the same identifier

208 id 5075 | The NDB at DENKO (52°49'N 015°50'E) can be identified on:

a Channel 440, BFO on

b **Frequency 440 kHz, BFO on**

c Channel 440, BFO off

d Frequency 440 kHz, BFO off

209 id 5076 | The airway intersection at RONNEBY (56°18'N 015°16'E) is marked by:

a **an NDB callsign N**

b a TACAN callsign RON

c a fan marker callsign LP

d an NDB callsign LF

33.04.02.04. Minimum en-route altitudes

210 id 2055 (For this question use Route Manual chart E(HI)4) An aeroplane has to fly from Salzburg (48°00.2'N 012°53.6'E) to Klagenfurt (46°37.5'N 014°33.8'E). Which statement is correct ?

a The minimum enroute altitude (MEA) is 13400 ft.

b **The minimum grid safe altitude on this route is 13400 ft above MSL.**

c The minimum sector altitude (MSA) is 13400 ft.

d The minimum obstacle clearance altitude (MOCA) on this route is 10800 ft above MSL.

---

211 id 5081 Aeroplanes intending to use airway UR14 should cross GIBSO intersection (50°45'N 002°30'W) at or above:

a FL160

b FL140

c **FL250**

d FL200

---

212 id 5082 An airway is marked 3500T 2100 a. This indicates that:

a the minimum enroute altitude (MEA) is 3500 ft

b **the minimum obstruction clearance altitude (MOCA) is 3500 ft**

c the airway base is 3500 ft MSL

d the airway is a low level link route 2100 ft - 3500 ft MSL

---

213 id 5083 The minimum enroute altitude available on airway UR160 from NICE NIZ 112.4 (43°46'N 007°15'E) to BASTIA BTA 116.2 (42°32'N 009°29'E) is:

a FL260

b FL200

c FL210

d **FL250**

---

214 id 5084 The minimum enroute altitude that can be maintained continuously on airway UA34 from WALLASEY WAL 114.1 (53°23'N 003°08'W) to MIDHURST MID 114.0 (51°03'N 000°37'W) is :

a FL250

b FL245

c **FL290**

d FL330

---

215 id 5086 An airway is marked FL 80 1500 a. This indicates that:

a 1500 ft MSL is the minimum radio reception altitude (MRA).

b the airway base is 1500 ft MSL.

c the airways extends from 1500 ft MSL to FL 80.

d **the minimum enroute altitude (MEA) is FL 80.**

216 id 5087 The minimum enroute altitude (MEA) that can be maintained continuously on airway G4 from JERSEY JSY 112.2 (49°13'N 002°03'W) to LIZAD (49°35'N 004°20'W) is :

a 2800 ft MSL

b FL60

c **FL140**

d 1000 ft MSL

217 id 5088 An airway is marked 5000 2900a. The notation 5000 is the :

a base of the airway (AGL)

b maximum authorised altitude (MAA)

c minimum holding altitude (MHA)

d **minimum enroute altitude (MEA)**

218 id 5089 The minimum enroute altitude that can be maintained continuously on airway B65/H65 from DOXON (55°27'N 018°10'E) to RONNE ROE 112.0 (55°04'N 014°46'E) is :

a 1000ft

b FL60

c **FL100**

d 2500 ft

33.04.02.05. Standards Instrument Departures

219 id 2066 Unless otherwise shown on charts for standard instrument departure the routes are given with:

a true course

b magnetic headings

c **magnetic course**

d true headings

220 id 2327 (For this question use Route Manual chart SID PARIS Charles-De-Gaulle (20-3)) Planning a IFR flight from Paris (Charles de Gaulle) to London (Heathrow). Find the elevation of the departure aerodrome.

a 217 ft.

b 268 ft.

c **387 ft.**

d 2 ft.

221 id 2328 (For this question use Route Manual chart STAR LONDON Heathrow (10-2)) Planning a IFR flight from Paris (Charles de Gaulle) to London (Heathrow). Find the elevation of the destination aerodrome.

a 77 ft.

b **80 ft.**

c 177 ft.

d 100 ft.

222 id 4390 | Planning an IFR-flight from Paris to London (Heathrow). Name the identifier and frequency of the initial approach fix (IAF) of the BIG 2A arrival route.

- **a** EPM 316 kHz
- **b** **BIG 115.1 MHz**
- **c** OCK 115.3 MHz
- **d** BIG 115.1 kHz

223 id 4409 | The minimum holding altitude (MHA) and maximum holding speed (IAS) at MHA at OCKHAM OCK 115.3 are:

- **a** **7000 ft and 220kt**
- **b** 9000ft and 220kt
- **c** 7000ft and 250kt
- **d** 9000ft and 250kt

224 id 4410 | The route distance from CHIEVRES (CIV) to BOURSONNE (BSN) is :

- **a** 88 NM
- **b** 83 NM
- **c** **96 NM**
- **d** 73 NM

225 id 4411 | EGLL: Which of the following is a correct Minimum Safe Altitude (MSA) for the Airport?

- **a** West sector 2300 ft within 25 NM
- **b** **West sector 2100 ft within 25 NM**
- **c** East sector 2100 ft within 50 NM
- **d** East sector 2300 ft within 50 NM

226 id 4412 | LEMD: For runway 33 arrivals from the east and south, the Initial Approach Fix (IAF) inbound from airway UR10 is :

- **a** CJN
- **b** **VTB**
- **c** CENTA
- **d** MOTIL

227 id 4413 | LSZH: Which is the correct ALBIX departure via AARAU for runway 16?

- **a** ALBIX 7A
- **b** **ALBIX 7S**
- **c** ALBIX 6H
- **d** ALBIX 6E

228 id 4414 | EHAM: The route distance from runway 27 to ARNEM is:

- **a** 52 NM
- **b** 35 NM
- **c** 59 NM
- **d** **67 NM**

229 id 4415 | EHAM: Which of the following statements is correct for ANDIK departures from runway 19L?

a Maximum IAS 250kt turning left at SPL 3.1 DME

b Cross ANDIK below FL60

c The distance to ANDIK is 25 NM

d **Contact SCHIPOL DEPARTURE 119.05 passing 2000 ft and report altitude**

230 id 4416 | EDDM: The correct arrival route and Initial Approach Fix (IAF) for an arrival from the west via TANGO for runway 08 L/R is:

a AALEN 1T, IAF MBG

b **AALEN 1T, IAF ROKIL**

c NDG 1T, IAF ROKIL

d DKB 1T, IAF ROKIL

231 id 5100 | LSZH: Aeroplane arriving via route BLM 2Z only, should follow the following route to EKRON int:

a WIL R018 outbound to EKRON int

b TRA R247 outbound to EKRON int

c **BLM R111 to GOLKE int then TRA R-247 inbound to EKRON int**

d HOC R067 via GOLKE to EKRON int

232 id 5101 | EDDM: Which is the correct departure via KEMPTEN from runway 26L ?

a KEMPTEN THREE ECHO

b **KEMPTEN FIVE SIERRA**

c KEMPTEN THREE QUEBEC

d KEMPTEN THREE NOVEMBER

33.04.02.06. MNPS-RVSM

233 id 8961 | Your aircraft is approved for MNPS and RVSM. What do you have to insert in item 10 of the ATC flight plan?

a W

b Y

c X

d **W, X**

234 id 8962 | Which is the correct date of the implementation of the RVSM in the European Airspace?

a 1 January 2002

b **24 January 2002**

c 1 February 2005

d 1 July 2001

235 id 8963 | RVSM In-Flight procedure: Cross checks of the primary altimeters shall be made at intervals of approximately one hour. These primary altimeters shall agree within

a 50 ft

b 100 ft

c 150 ft

d **200 ft**

236 id 8964 RVSM Pre-Flight procedure: The flight crew shall verfiy the altimetry accuracy by setting the QNH or QFE. The reading should then agree with the altitude of the apron or the zero height indication within

a 25 ft

b 30 ft

c **75 ft**

d 150 ft

---

237 id 8965 Which flight level is not a RVSM level?

a **FL 280**

b FL 290

c FL 300

d FL 310

---

238 id 8966 Which equipment failure must not be reported to ATC on a RVSM level?

a Loss of thrust on one or more engines which requires a descent

b **Main hydraulic-pump failure**

c Loss of one or more altimetry systems

d Failure of all automatic altitude-control systems

---

239 id 8967 Do you need TCAS/ACAS Version 7.0 to operate in EUR-RVSM airspace?

a **Yes, if the aircraft has more than 30 seats or the aircraft weight is over 15000kg**

b No

c

d

---

240 id 8968 Your aircraft is not RVSM approved. Are you able to enter RVSM airspace?

a **Yes, but not as a civil operator**

b Yes, but only over HMU's

c Yes, but I can climb and descend through RVSM airspace only

d Yes, only on FL310 and FL350

---

241 id 8969 What does HMU mean?

a Horizontal measuring unit

b Height measuring unit

c Height metering unit

d **Height monitoring unit**

---

242 id 8970 RVSM In-Flight procedure: When changing levels, the aircraft shall not overshoot or undershoot the cleared flight level by more than

a 50 ft

b **150 ft**

c 200 ft

d 100 ft

243 What is the proper phraseology if ATC wants to know if you are RVSM approved?
id 8971

a RVSM ok

b RVSM approved

c Affirmative RVSM

d **Affirm RVSM**

244 Which equipment is not necessary to get a RVSM approval?
id 8972

a Altitude alerting system

b **GPS with altitude reporting system**

c Automatic altitude control system

d SSR transponder with altitude reporting system in use for altitude keeping

245 When approaching a cleared Flight level, the vertical speed should not exceed
id 8973

a 2000 ft/min.

b 350 ft/min.

c 750 ft/min.

d **1500 ft/min.**

246 Which document provides guidance for the approval of RVSM aircraft?
id 8974

a AIC 22

b JAR-FCL

c **JAA TGL No. 6**

d IL 20

247 RVSM was first implemented in which airspace?
id 8975

a Pacific

b Europe

c **NAT**

d Africa

248 Which transponder code is correct if you are 40 minutes before entering NAT airspace?
id 8976

a 7500

b 2000

c **as requested by ATC**

d 7000

249 In case of an engine failure, unable to maintain altitude, how many miles do you have to fly offset of NAT track?
id 8977

a 2 NM

b 2 NM left

c **30 NM left or right**

d 15 NM left

250 id 8978 | What is the Polar Track System?

a 5 routes between Alaska over the North Pole to Japan

b 2 flex tracks from Tokyo to Honolulu

c 6 tracks between Hawaii and USA

d **Fixed tracks between Europe over the North Pole to Alaska**

---

251 id 8979 | You are entering the NAT. What is the tolerance of the boundary window?

a 5 minutes

b 3 minutes, but only between FL 310 and FL 390

c **3 minutes**

d no boundary window required

---

252 id 8980 | What is the NAT Track Message?

a The publication of the Preferred Route Message (PRM)

b The ATC clearance given before the boundary window

c The complete MNPS flight plan

d **The publication of the Organized Track Message (OTS)**

---

253 id 8981 | You are flying from ZRH to JFK (EET 8h04'). The EOBT is 1800Z. Are you able to fly the following track? A 54/15 55/20 55/30 53/40 51/50 CYMON EAST LVLS NIL WEST LVLS 310 330 340 350 360 370 390 EUR RTS VIA BABAN NAR N144B N148B-

a Yes

b **No**

c Yes, but only via exit point BABAN

d Yes, but only via exit point CYMON

---

254 id 8982 | Your position is N50° W20°. Your altimeter shows FL263 descending. Which airspace is that?

a **A**

b MNPS

c F

d C

---

255 id 8983 | Your HF radio is u/s. Are you able to cross the NAT?

a No, before departure, HF radio is a must

b Yes, I can fly the OTS

c **Yes, but only on special routes**

d It is up to you

---

256 id 8984 | Before take off on an MNPS flight, one of your Long Range Navigation System fails. What is your action in case you have one system left?

a The Copilot has to exchange the two black boxes

b Continue, because only one system must be operative

c Fly 15NM offset to the normal tracks

d **File Special routes or fly above or below the MNPS**

257 id 8985 | Day time OTS are valid between...

a 1130 LT until 1800 LT

b 1130 Z until 1800 LT

c **1130 Z until 1800 Z**

d 0100 Z until 0900 Z

258 id 8986 | On which VHF frequency can you obtain the NAT clearance from Shanwick?

a **127. 65 (if your aircraft is registered E of 30 W)**

b 120.00 (if your aircraft is registered W of 30 W)

c 123.95 (if your aircraft is registered E of 30 W)

d only possible on HF

33.04.02.07. ETOPS

259 id 8996 | An aerodrome with weather reports indicating that the weather conditions are at or above operation minima from one hour prior to one hour after the anticipated arrival is defined as:

a adequate

b **suitable**

c not suitable and not adequate

d enroute alternate

260 id 8997 | On the ground in ZRH the APU on your B737-300 cannot be started. Can you accept the aircraft for an ETOPS flight?

a Yes, company procedures do not required it's use

b **No**

c Yes, providing both engine driven generators operates normally

d Yes, as it is not a required item to dispatch the aircraft

261 id 8998 | What is the Extended Range Entry point (or ETOPS entry point)?

a The ETP

b The point on the route which is 120 minutes flying time (with approved single engine cruise speed) from a suitable alternate

c **The point of the route which is 60 minutes flying time (with approved single engine cruise speed) from an alternate airport**

d The point where you enter the extended range speed into the FMC

262 id 8999 | What is general the "most critical fuel scenario" on the B737-300?

a **The two engine fuel scenario**

b Drift down without APU to 10'000 ft

c One engine fuel scenario

d If you have less fuel than for 30 minutes on board

263 id 9000 (North Atlantic Plotting Chart, ETOPS) You are flying from Shannon (EINN) to Keflavik (BIKF). The wind component to BIKF is 10kts headwind and to Shannon you will have 20kts tailwind. The ETP from EINN to BIKF is?

- **a** **416 NM from EINN**
- **b** 400 NM from BIKF
- **c** 384 NM from EINN
- **d** 416 NM from BIKF

264 id 9001 North Atlantic Plotting Chart, ETOPS) You are flying from Santa Maria (LPLA) to St. John's (CYYT). The wind component to CYYT is 30kts headwind and to LPLA you will have 20kts tailwind. The ETP from SMA to YYT is?

- **a** **580 NM from YYT**
- **b** 580 NM from YQX
- **c** 580 NM from SMA
- **d** 650 NM from SMA

265 id 9002 (Critical fuel reserves long range cruise, CAP698) You have an engine failure and a decompression at the same time. Your data are: Tailwind: 25 kts Distance to diversion airport: 820 kts ISA: +10°C Weight: 55'000 kg Icing conditions: YES What is your diversion fuel?

- **a** 8300 kg
- **b** 7035 kg
- **c** 7000 kg
- **d** **8440 kg**

266 id 9003 (Critical fuel reserves long range cruise, CAP698) You have a decompression at your cruising altitude and following information: Tailwind: 25 kts Distance to diversion airport: 820 kts ISA: +20°C Weight: 55'000 kg Icing conditions: No What is your diversion fuel?

- **a** **7270 kg**
- **b** 7000 kg
- **c** 8581 kg
- **d** 7480 kg

267 id 9004 (Area of Operation, CAP 698) You have following information: Weight: 57.5 t Speed schedule: LRC ETOPS approval: 180 min What is your area of operation?

- **a** 1169 NM
- **b** 804 NM
- **c** **1100 NM**
- **d** 1134 NM

268 id 9005 Who is able to perform an ETOPS pre-departure service check on an A330?

- **a** Every mechanic who has an A330 licence
- **b** **Only an ETOPS qualified maintenance person can do that**
- **c** Only TMC is allowed to do that
- **d** No pre-departue service checks are required

33.04.03. General flight planning tasks

33.04.03.01. Checking of AIP and NOTAM

269
id 5077 From which of the following would you expect to find information regarding known short unserviceability of VOR, TACAN, and NDB ?

a **NOTAM**

b AIP (Air Information Publication)

c SIGMET

d ATCC broadcasts

270
id 5078 From which of the following would you expect to find the dates and times when temporary danger areas are active

a Only AIP (Air Information Publication)

b **NOTAM and AIP (Air Information Publication)**

c SIGMET

d RAD/NAV charts

271
id 5079 From which of the following would you expect to find details of the Search and Rescue organisation and procedures (SAR) ?

a ATCC broadcasts

b **AIP (Air Information Publication)**

c NOTAM

d SIGMET

272
id 5080 From which of the following would you expect to find facilitation information (FAL) regarding customs and health formalities ?

a NOTAM

b NAV/RAD charts

c ATCC

d **AIP (Air Information Publication)**

33.04.03.02. Selection of altitudes or flight levels

273
id 2051 (For this question use Route Manual chart E(HI)4) An aeroplane has to fly from Abbeville (50°08.1'N 001°51.3'E) to Biggin (51°19.8'N 00°00.2'E). What is the first FL above FL295 that can be flown on an IFR flightplan ?

a FL 330

b **FL 310**

c FL 320

d FL 300

274
id 4376 (For this Question use Fuel Planning MRJT1 Fig. 4.2.1) Find the OPTIMUM ALTITUDE for the twin jet aeroplane. Given: Cruise mass=54000 kg, Long range cruise or .74 MACH

a 33800 ft

b **34500 ft**

c 35300 ft

d maximum operating altitude

275 id 4377 — (For this Question use Fuel Planning MRJT1 Fig. 4.2.1) Find the OPTIMUM ALTITUDE for the twin jet aeroplane. Given: Cruise mass=50000 kg, .78 MACH

a 36200 ft

b **35500 ft**

c 36700 ft

d maximum operating altitude

---

276 id 4378 — (For this Question use Fuel Planning MRJT1) Find the FUEL MILEAGE PENALTY for the twin jet aeroplane with regard to the given FLIGHT LEVEL . Given: Long range cruise, Cruise mass=53000 kg, FL 310

a **4 %**

b 1 %

c 10 %

d 0 %

---

277 id 5090 — An appropriate flight level for flight on airway UR1 from ORTAC (50°00'N 002°00'W) to MIDHURST MID 114.0 (51°03'N 000°37'W) is:

a FL230

b FL260

c FL240

d **FL250**

---

278 id 5091 — An appropriate flight level for flight on airway UG1 from ERLANGEN ERL 114.9 (49°39°'N 011°09'E) to FRANKFURT FFM 114.2 (50°03'N 008°38'E) is :

a **FL310**

b FL290

c FL300

d FL320

---

279 id 5093 — An appropriate flight level for flight on airway UG5 from MENDE-NASBINALS MEN 115.3 (44°36'N 003°10'E) to GAILLAC GAI 115.8 (43°57'N 001°50'E) is :

a FL300

b FL280

c **FL290**

d FL310

---

280 id 5094 — An appropriate flight level for flight on airway UR24 from NANTES NTS 117.2 (47°09'N 001°37'W) to CAEN CAN 115.4 (49°10'N 000°27'W) is:

a FL300

b FL290

c **FL310**

d FL270

---

281 id 5095 — An appropriate flight level for flight on airway B3 from CHATILLON CTL 117.6 (49°08'N 003°35'E) to CAMBRAI CMB 112.6 (50°14'N 003°09'E) is :

a FL80

b **FL170**

c FL60

d FL50

282 id 5097 — An appropriate flight level for flight on airway R10 from MONTMEDY MMD 109.4 (49°24'N 005°08'E) to CHATILLON CTL 117.6 (49°08'N 003°35'E) is :

a FL70

b **FL60**

c FL50

d FL40

283 id 5098 — An appropriate flight level for IFR flight in accordance with semi-circular height rules on a course of 180° (M) is:

a **FL100**

b FL90

c FL95

d FL105

284 id 5099 — An appropriate flight level for IFR flight in accordance with semi-circular height rules on a magnetic course of 200° is:

a FL320

b **FL310**

c FL290

d FL300

285 id 5534 — You must fly IFR on an airway orientated 135° magnetic with a MSA at 7 800 ft. Knowing the QNH is 1 025 hPa and the temperature is ISA + 10°, the minimum flight level you must fly at is:

a 75

b 80

c **90**

d 70

286 id 5535 — An aircraft, following a 215° true track, must fly over a 10 600 ft obstacle with a minimum obstacle clearance of 1 500 ft. Knowing the QNH received from an airport close by, which is almost at sea-level, is 1035 and the temperature is ISA - 15°C, the minimum flight level will be:

a **140**

b 120

c 130

d 150

287 id 5538 — On an IFR navigation chart, in a 1° quadrant of longitude and latitude, appears the following information "80". This means that within this quadrant:

a **the minimum safe altitude is 8 000 ft**

b the minimum flight level is FL 80

c the altitude of the highest obstacle is 8 000 ft

d the floor of the airway is at 8 000 ft

288 id 5546 — On an instrument approach chart, a minimum sector altitude (MSA) is defined in relation to a radio navigation facility. Without any particular specification on distance, this altitude is valid to:

a 20 NM

b **25 NM**

c 15 NM

d 10 NM

289 id 5547 An IFR flight is planned outside airways on a course of 235° magnetic. The minimum safe altitude is 7800 ft. Knowing the QNH is 995 hPa, the minimum flight level you must fly is:

a 80

b 90

c 85

d **100**

33.04.03.05. Completion of fuel plan

290 id 1394 An aeroplane has the following masses: ESTLWT= 50 000 kg Trip fuel= 4 300 kg Contingency fuel= 215 kg Alternate fuel (final reserve included)= 2 100kg Taxi= 500 kg Block fuel= 7 115 kg Before departure the captain orders to make the block fuel 9 000 kg. The trip fuel in the operational flight plan should read:

a **4 300 kg.**

b 6 185 kg.

c 9 000 kg.

d 6 400 kg.

33.04.03.06. Preliminary study of instrument approach

291 id 4028 EGLL ILS DME Rwy 09L: The Decision Altitude (DA) for a ILS straight-in landing is :

a **280 ft**

b 200 ft

c 400 ft

d 480 ft

292 id 4029 EHAM VORDME Rwy 22: The Missed Approach procedure is to climb to an alitude of (i)------------ on a track of (ii) ----------

a (i) 3000 ft (ii) 223°

b (i) 200 ft (ii) 223°

c (i) 3000 ft (ii) 160°

d **(i) 2000 ft (ii) 160°**

293 id 5103 LSZH ILS Rwy 14: The minimum glide slope interception altitude for a full ILS is:

a **4000 ft**

b 3370 ft

c 2598 ft

d 1968 ft

294 id 5104 The Radio Altimeter minimum altitude for a CAT 2 ILS DME :

a **100 ft**

b 88 ft

c 300 ft

d 188 ft

295 id 5105 | EGLL ILS DME Rwy 09R: The Minimum Descent Altitude (MDA) for an ILS glide slope out, is:

a 275 ft

b 405 ft

c **480 ft**

d 200 ft

296 id 5106 | LFPG, VORDME Rwy 27: The crossing altitude and descent instruction for a propeller aircraft at COULOMMIERS (CLM) are :

a Cross at FL60 and maintain

b Cross at FL70 descend to 4000 ft

c Cross at FL80 descend to FL70

d **Cross at FL60 descend to 4000 ft**

297 id 5107 | EDDM ILS Rwy 26R: The ILS frequency and identifier are:

a 108.7 IMSW

b **108.7 IMNW**

c 108.3 IMNW

d 108.3 IMSW

298 id 5108 | LFPG ILS Rwy 09: The ILS localizer course is :

a 100°

b **088°**

c 118°

d 268°

299 id 5110 | EDDM NDB DME Rwy 26L: The frequency and identifier of the NDB for the published approachs are:

a 108.6 DMS

b 338 MNW

c **400 MSW**

d 112.3 MUN

300 id 8857 | Which approach segment starts at the point were you report "established" ?

a Final approach

b Initial approach

c Go around

d **Intermediate approach**

301 id 8858 | Which approach segment starts at the FAF and ends at the MAP?

a Initial approach

b **Final approach**

c Go around

d Intermediate approach

33.04.04. IR Flightplan exercices

302
id 4564

Planning an IFR-flight from Paris to London for the twin jet aeroplane. Given: Estimated Landing Mass 49700 kg, FL 280, W/V 280°/40 kt, Average True Course 320°, Procedure for descent .74 M/250 KIAS Determine the distance from the top of descent to London (elevation 80 ft).

a 87 NM

b **76 NM**

c 97 NM

d 65 NM

303
id 4565

Planning an IFR-flight from Paris to London for the twin jet aeroplane. Given: Estimated Landing Mass 49700 kg, FL 280, W/V 280°/40 kt, Average True Course 320°, Procedure for descent .74 M/250 KIAS Determine the time from the top of descent to London (elevation 80 ft).

a 10 min

b **19 min**

c 17 min

d 8 min

304
id 4566

Planning an IFR-flight from Paris to London for the twin jet aeroplane. Given: Estimated Landing Mass 49700 kg, FL 280, W/V 280°/40 kt, Average True Course 320°, Procedure for descent .74 M/250 KIAS Determine the fuel consumption from the top of descent to London (elevation 80 ft).

a 263 kg

b **273 kg**

c 210 kg

d 320 kg

33.05. JET AEROPLANES FLIGHT PLANNING

33.05.01. Additional flight planning aspects for jet aeropla

33.05.01.01. Fuel planning

305 id 960 Mark the correct statement: If a decision point procedure is applied for flight planning,

- **a** the trip fuel to the destination aerodrome is to be calculated via the suitable enroute alternate.
- **b** **the trip fuel to the destination aerodrome is to be calculated via the decision point.**
- **c** a destination alternate is not required.
- **d** the fuel calculation is based on a contingency fuel from departure aerodrome to the decision point.

306 id 1612 An operator (turbojet engine) shall ensure that calculation up of usable fuel for a flight for which no destination alternate is required includes, taxi fuel, trip fuel, contingency fuel and fuel to fly for:

- **a** 45 minutes plus 15% of the flight time planned to be spent at cruising level or two hours whichever is less
- **b** 2 hours at normal cruise consumption
- **c** **30 minutes at holding speed at 450 m above aerodrome elevation in standard conditions**
- **d** 30 minutes at holding speed at 450 m above MSL in standard conditions

307 id 1783 Planning a flight from Paris (Charles de Gaulle) to London (Heathrow) for a twin - jet aeroplane. Preplanning: Maximum Take-off Mass: 62 800 kg Maximum Zero Fuel Mass: 51 250 kg Maximum Landing Mass: 54 900 kg Maximum Taxi Mass: 63 050 kg Assume the following preplanning results: Trip fuel: 1 800 kg Alternate fuel: 1 400 kg Holding fuel (final reserve): 1 225 k

- **a** 55 765 kg.
- **b** **51 515 kg.**
- **c** 51 425 kg.
- **d** 52 265 kg.

308 id 1855 The required time for final reserve fuel for turbojet aeroplane is:

- **a** 45 min.
- **b** **30 min.**
- **c** 60 min.
- **d** Variable with wind velocity.

309 id 1978 The quantity of fuel which is calculated to be necessary for a jet aeroplane to fly IFR from departure aerodrome to the destination aerodrome is 5352 kg. Fuel consumption in holding mode is 6 000 kg/h. Alternate fuel is 4380 kg. Contingency should be 5% of trip fuel. What is the minimum required quantity of fuel which should be on board at take-off?

- **a** 13370 kg.
- **b** 14500 kg.
- **c** **13000 kg.**
- **d** 13220 kg.

310 id 1979 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 77 800 kg

b 74 800 kg

c 79 800 kg

d 77 200 kg

311 id 1981 A jet aeroplane has a cruising fuel consumption of 4060 kg/h, and 3690 kg/h during holding. If the destination is an isolated airfield, the aeroplane must carry, in addition to contingency reserves, additionnal fuel of :

a 7380 kg.

b 8120 kg.

c 1845 kg.

d 3500 kg.

312 id 1982 A jet aeroplane is to fly from A to B. The minimum final reserve fuel must allow for :

a 20 minutes hold over alternate airfield.

b 30 minutes hold at 1500 ft above destination aerodrome elevation, when no alternate is required.

c 30 minutes hold at 1500 ft above mean sea level.

d 15 minutes hold at 1500 ft above destination aerodrome elevation.

313 id 2060 (For this question use Flight Planning Manual MRJT 1 Figure 4.3.1.B) Given : estimated zero fuel mass 50 t; estimated landing mass at alternate 52 t; final reserve fuel 2 t; alternate fuel 1 t; flight to destination, distance 720 NM, true course (TC) 030, W/V 340/30; cruise: long range FL 330, outside air temperature -30 ° C. Find : estimated trip fuel and time

a 4 800 kg; 01 : 45

b 4 400 kg; 02 : 05

c 4 750 kg; 02 : 00

d 4 600 kg; 02 : 05

314 id 2061 (For this question use Flight Planning Manual MRJT 1 Figure 4.3.6) Given: estimated dry operation mass 35 500 kg; estimated load 14 500 kg; final reserve fuel 1200 kg; distance to alternate 95 NM; average true track 219°; head wind component 10 kt Find : fuel and time to alternate.

a 1 100 kg; 44 min

b 1 100 kg; 25 min

c 800 kg; 24 min

d 800 kg; 40 min

315 id 2062 (For this question use Flight Planning Manual MRJT 1 Figure 4.3.3C) Given: ground distance to destination aerodrome 1 600 NM; headwind component 50 kt; FL 330; cruise 0.78 Mach; ISA + 20 ° C; estimated landing weight 55000 kg . Find: simplified flight planning to determine estimated trip fuel and trip time.

a 12 400 kg. 04h 12 min

b 11 400 kg. 04h 12 min

c 12 400 kg. 03h 55 min

d 11 400 kg. 03h 55 min

316 id 2063 (For this question use Flight Planning Manual MRJT 1 Figure 4.4) Given: dry operating mass 35 500 kg; estimated load 12 000 kg, contingency approach and landing fuel 2 500 kg; elevation at departure aerodrome 500 ft; elevation at alternate aerodrome 30 ft. Find: final reserve fuel for a jet aeroplane (holding) and give the elevation which is relevant.

- **a** 2 360 kg;destination elevation
- **b** 2 360 kg; alternate elevation
- **c** 1 180 kg;destination elevation
- **d** **1 180 kg; alternate elevation**

---

317 id 2185 The purpose of the decision point procedure is ?

- **a** To increase the safety of the flight.
- **b** To reduce the landing weight and thus reduce the structural stress on the aircraft.
- **c** **To reduce the minimum required fuel and therefore be able to increase the traffic load.**
- **d** To increase the amount of extra fuel.

---

318 id 2186 When using decision point procedure, you reduce the

- **a** holding fuel by 30%.
- **b** contingency fuel by adding contingency only from the burnoff between the decision airport and destination.
- **c** reserve fuel from 10% down to 5%.
- **d** **contingency fuel by adding contingency only from the burnoff between decision point and destination.**

---

319 id 2765 (For this Question use Fuel Planning MRJT1) Find the SPECIFIC RANGE for the twin jet aeroplane flying below the optimum altitude (range loss = 6%) and using the following data. Given: MACH .74 CRUISE, Flight level = 310, Gross mass = 50000 kg, ISA conditions

- **a** 2807 NAM/1000 kg
- **b** 187 NAM/1000 kg
- **c** 2994 NAM/1000 kg
- **d** **176 NAM/1000 kg**

---

320 id 2766 (For this Question use Fuel Planning MRJT1) Find the FUEL FLOW for the twin jet aeroplane with regard to the following data. Given: MACH .74 cruise, Flight level 310, Gross mass 50000 kg, ISA conditions

- **a** 1497 kg/h
- **b** 1150 kg/h
- **c** **2300 kg/h**
- **d** 2994 kg/h

---

321 id 4371 (For this Question use Fuel Planning MRJT1 Fig. 4.3.6) In order to find ALTERNATE FUEL and TIME TO ALTERNATE, the AEROPLANE OPERATING MANUAL shall be entered with:

- **a** **distance in nautical miles (NM), wind component, landing mass at alternate**
- **b** distance in nautical air miles (NAM), wind component, landing mass at alternate
- **c** distance in nautical miles (NM), wind component, zero fuel mass
- **d** distance in nautical miles (NM), wind component, dry operating mass plus holding fuel

322 id 4372 The final reserve fuel for aeroplanes with turbine engines is

a fuel to fly for 45 minutes at holding speed at 1000 ft (300 m) above aerodrome elevation in standard conditions.

b fuel to fly for 45 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.

c **fuel to fly for 30 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.**

d fuel to fly for 60 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.

323 id 4373 Which of the following statements is relevant for forming route portions in integrated range flight planning?

a **The distance from take-off up to the top of climb has to be known.**

b No segment shall be more than 30 minutes of flight time.

c Each reporting point requires a new segment.

d A small change of temperature (2 °C) can divide a segment.

324 id 4379 (For this Question use Fuel Planning MRJT1) Find: Final fuel consumption for this leg Given: Long range cruise, Temperature -63°C, FL 330, Initial gross mass enroute 54100 kg, Leg flight time 29 min

a 1100 kg

b 1107 kg

c **1093 kg**

d 1000 kg

325 id 4380 (For this Question use Fuel Planning MRJT1) Find: Air distance in Nautical Air Miles (NAM) for this leg and fuel consumption Given: Flight time from top of climb at FL 280 to the enroute point is 48 minutes. Cruise procedure is long range cruise. Temperature is ISA -5°C. The take-off mass is 56000 kg and climb fuel 1100 kg.

a 345 NAM; 2000 kg

b 349 NAM; 2000 kg

c **345 NAM; 1994 kg**

d 345 NAM; 2006 kg

326 id 4381 (For this Question use Fuel Planning MRJT1) Given: Brake release mass 57500 kg, Initial FL 280, average temperature during climb ISA -10°C, average head wind component 18 kt Find: Climb time for enroute climb 280/.74

a **13 min**

b 11 min

c 15 min

d 14 min

327 id 4382 (For this Question use Fuel Planning MRJT1) Given: Brake release mass 57500 kg, Temperature ISA -10°C, Headwind component 16 kt, Initial FL 280 Find: Still air distance (NAM) and ground distance (NM) for the enroute climb 280/.74

a **62 NAM, 59 NM**

b 59 NAM, 62 NM

c 62 NAM, 71 NM

d 71 NAM, 67 NM

328 id 4383 (For this Question use Fuel Planning MRJT1) Given: Brake release mass 57500 kg, Temperature ISA -10°C, Average headwind component 16 kt, Initial FL 280 Find: Climb fuel for enroute climb 280/.74

a 1040 kg

b 1238 kg

c 1387 kg

d **1138 kg**

---

329 id 4386 (For this Question use Fuel Planning MRJT1) Given: Long range cruise, OAT -45°C at FL 350, Gross mass at the beginning of the leg 40000 kg, Gross mass at the end of the leg 39000 kg Find: True air speed (TAS) and cruise distance (NAM) for a twin jet aeroplane

a TAS 423 kt, 227 NAM

b **TAS 433 kt, 227 NAM**

c TAS 433 kt, 1163 NAM

d TAS 423 kt, 936 NAM

---

330 id 4387 (For this Question use Fuel Planning MRJT1) Given: Estimated take-off mass 57000 kg, Ground distance 150 NM, Temperature ISA -10°C, Cruise at .74 Mach Find: Cruise altitude and expected true air speed

a **25000 ft, 435 kt**

b 24000 ft, 445 kt

c 33500 ft, 430 kt

d 33900 ft, 420 kt

---

331 id 4551 (For this Question use Fuel Planning MRJT1) Given: twin jet aeroplane, FL 330, Long range cruise, Outside air temperature -63°C, Gross mass 50500 kg Find: True air speed (TAS)

a 433 kt

b **420 kt**

c 431 kt

d 418 kt

---

332 id 5730 (For this Question use Fuel Planning MRJT1) Given: Diversion distance 720NM Tail wind component 25kt Mass at point of diversion 55000kg Temperature ISA Diversion fuel available 4250kg What is the minimum pressure altitude at which the above conditions may be met ?

a 26000ft

b **20000ft**

c 16000ft

d 14500ft

---

333 id 5731 (For this Question use Fuel Planning MRJT1) Given: Diversion distance 650 NM Diversion pressure altitude 16 000 ft Mass at point of diversion 57 000 kg Head wind component 20 kt Temperature ISA + 15°C The diversion (a) fuel required and (b) time, are approximately :

a (a) 4400kg (b) 1h 35min

b (a) 3900kg (b) 1h 45min

c (a) 6200kg (b) 2h 10min

d **(a) 4800kg (b) 2h 03min**

334 (For this Question use Fuel Planning MRJT1) Given: Distance to alternate 950 NM Head wind component 20 kt Mass at point of diversion 50000kg Diversion fuel available 5800kg The minimum pressure altitude at which the above conditions may be met is :
id 5732

a **22000ft**

b 20000ft

c 26000ft

d 18000ft

335 (For this Question use Fuel Planning MRJT1) A descent is planned at .74/250KIAS from 35000ft to 5000ft. How much fuel will be consumed during this descent?
id 5736

a 290kg

b **150kg**

c 278kg

d 140kg

33.05.01.02. Computation of critical point (CP)

336 If CAS is 190 kts, Altitude 9000 ft. Temp. ISA - 10°C, True Course (TC) 350°, W/V 320/40, distance from departure to destination is 350 NM, endurance 3 hours, and actual time of departure is 1105 UTC. The Point of Equal Time (PET) is reached at :
id 2193

a **1213 UTC**

b 1221 UTC

c 1233 UTC

d 1203 UTC

337 If CAS is 190 kts, Altitude 9000 ft. Temp. ISA - 10°C, True Course (TC) 350°, W/V 320/40, distance from departure to destination is 350 NM, endurance 3 hours and actual time of departure is 1105 UTC. The distance from departure to Point of Equal Time (PET) is :
id 2194

a 183 NM

b 147 NM

c **203 NM**

d 167 NM

338 Find the distance from waypoint 3 (WP 3) to the critical point. Given: distance from WP 3 to WP 4 = 750 NM, TAS out 430 kt, TAS return 425 kt, Tailwind component out 30 kt, head wind component return 40 kt
id 2772

a 408 NM

b 375 NM

c **342 NM**

d 403 NM

339 Find the time to the Point of Safe Return (PSR). Given: Maximum useable fuel 15000 kg, Minimum reserve fuel 3500 kg, TAS out 425 kt, Head wind component out 30 kt, TAS return 430 kt, Tailwind component return 20 kt, Average fuel flow 2150 kg/h
id 2774

a 2 h 59 min

b 3 h 43 min

c **2 h 51 min**

d 2 h 43 min

340 id 4024 Given : Distance A to B 2050 NM Mean groundspeed 'on' 440 kt Mean groundspeed 'back' 540 kt The distance to the point of equal time (PET) between A and B is :

- **a** 920 NM
- **b** 1025 NM
- **c** **1130 NM**
- **d** 1153 NM

341 id 4025 Given : Distance A to B 3060 NM Mean groundspeed 'out' 440 kt Mean groundspeed 'back' 540 kt Safe Endurance 10 hours The time to the Point of Safe Return (PSR) is:

- **a** 5 hours 20 minutes
- **b** 5 hours 45 minutes
- **c** 3 hours 55 minutes
- **d** **5 hours 30 minutes**

342 id 4417 Given : X = Distance A to point of equal time (PET) between A and B E = Endurance D = Distance A to B O = Groundspeed 'on' H = Groundspeed 'back' The formula for calculating the distance X to point of equal time (PET) is:

- **a** **D x H X = _____ O + H**
- **b** D x O X = _____ O + H
- **c** E x O x H X = ________ O + H
- **d** D x O x H X = ________ O + H

343 id 4418 Given : Course A to B 088° (T) distance 1250 NM Mean TAS 330 kt Mean W/V 340°/60 kt The time from A to the PET between A and B is :

- **a** 1 hour 54 minutes
- **b** **1 hour 42 minutes**
- **c** 1 hour 39 minutes
- **d** 2 hours 02 minutes

344 id 5102 Given : Distance X to Y 2700 NM Mach Number 0.75 Temperature -45°C Mean wind component 'on' 10 kt tailwind Mean wind compontent 'back' 35 kt tailwind The distance from X to the point of equal time (PET) between X and Y is :

- **a** 1350 NM
- **b** **1386 NM**
- **c** 1313 NM
- **d** 1425 NM

345 id 5520 Given the following: D = flight distance X = distance to Point of Equal Time GSo = groundspeed out GSr = groundspeed return The correct formula to find distance to Point of Equal Time is :

- **a** **X = D x GSr / (GSo + GSr)**
- **b** X = D x GSo / (GSo + GSr)
- **c** X = (D/2) x GSo / (GSo + GSr)
- **d** X = (D/2) + GSr / (GSo + GSr)

33.05.02. Computerised flight planning

33.05.02.01. General principles of present systems

346
id 4026

Which of the following statements is (are) correct with regard to the advantages of computer flight plans ? 1. The computer can file the ATC flight plan. 2. Wind data used by the computer is always more up-to-date than that available to the pilot.

a **Statement 1 only**

b Statement 2 only

c Both statements

d Neither statement

347
id 4027

Which of the following statements is (are) correct with regard to the operation of flight planning computers ? 1. The computer can file the ATC flight plan. 2. In the event of inflight re-routing the computer produces a new plan.

a Statement 2 only

b **Statement 1 only**

c Both statements

d Neither statement

348
id 5111

Which of the following statements is (are) correct with regard to computer flight plans 1. The computer takes account of bad weather on the route and adds extra fuel. 2. The computer calculates alternate fuel sufficient for a missed approach, climb, cruise, descent and approach and landing at the destination alternate.

a Statement 1 only

b Both statements

c **Statement 2 only**

d Neither statement

33.06. PRACTICAL COMPLETION OF A "FLIGHT PLAN"

33.06.01. Extraction of data

33.06.01.01. Extraction of navigational data

349 id 4384 Given: Leg Moulins(N46 24.4 E003 38.0)/Dijon(N47 16.3 E005 05.9). Find: Route designator and total distance

a UG 21, 26 NM

b D, 44 NM

c UG 21, 69 NM

d **Direct route, 69 NM**

33.06.01.03. Extraction of performance data

350 id 2533 (For this question use Flight Planning Manual MRJT 1 Figure 4.3.6) In order to get alternate fuel and time, the twin -jet aeroplane operations manual graph shall be entered with:

a Distance (NM), wind component, zero fuel mass.

b Still air distance, wind component, zero fuel mass.

c Flight time, wind component, landing mass at alternate.

d **Distance (NM), wind component, landing mass at alternate.**

351 id 2836 "Integrated range" curves or tables are presented in the Aeroplane Operations Manuals. Their purpose is

a to determine the optimum speed considering the fuel cost as well as the time related cost of the aeroplane.

b to determine the flight time for a certain leg under consideration of temperature deviations.

c to determine the still air distance for a wind components varying with altitude.

d **to determine the fuel consumption for a certain still air distance considering the decreasing fuel flow with decreasing mass.**

352 id 4374 (For this Question use Fuel Planning MRJT1 Fig. 4.2.2) Find the SHORT DISTANCE CRUISE ALTITUDE for the twin jet aeroplane. Given: Brake release mass=45000 kg, Temperature=ISA + 20°C, Trip distance=50 Nautical Air Miles (NAM)

a 7500 ft

b **10000 ft**

c 12500 ft

d 11000 ft

353 id 4375 (For this Question use Fuel Planning MRJT1 Fig. 4.2.2) Find the SHORT DISTANCE CRUISE ALTITUDE for the twin jet aeroplane. Given: Brake release mass=40000 kg, Temperature=ISA + 20°C, Trip distance=150 Nautical Air Miles (NAM)

a **30000 ft**

b 25000 ft

c 21000 ft

d 27500 ft

354 id 4554

(For this Question use Fuel Planning MRJT1) Given: twin jet aeroplane, Zero fuel mass 50000 kg, Landing mass at alternate 52000 kg, Final reserve fuel 2000 kg, Alternate fuel 1000 kg, Flight to destination: Distance 720 NM, True course 030°, W/V 340°/30 kt, Long range cruise, FL 330, Outside air temperature -30°C Find: Estimated trip fuel and time with simplified flight planning

a 4750 kg, 02 h 00 min

b 4400 kg, 02 h 05 min

c **4800 kg, 01 h 51 min**

d 4600 kg, 02 h 05 min

---

355 id 4555

(For this Question use Fuel Planning MRJT1) Given: Twin jet aeroplane, Ground distance to destination aerodrome is 1600 NM, Headwind component 50 kt, FL 330, Cruise .78 Mach, ISA Deviation +20°C and Landing mass 55000 kg Find: Fuel required and trip time with simplified flight planning

a 11400 kg, 04 h 12 min

b **12400 kg, 04 h 00 min**

c 11600 kg, 04 h 15 min

d 12000 kg, 03 h 51 min

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356 id 4556

(For this Question use Fuel Planning MRJT1) Given: twin jet aeroplane, Dry operating mass 35500 kg, Traffic load 14500 kg, Final reserve fuel 1200 kg, Distance to alternate 95 NM, Tailwind component 10 kt Find: Fuel required and trip time to alternate with simplified flight planning (ALTERNATE PLANNING)

a 800 kg, 0.4 hr

b 1000 kg, 40 min

c 800 kg, 24 min

d **1000 kg, 24 min**

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357 id 4557

(For this Question use Fuel Planning MRJT1) Given: twin jet aeroplane, Estimated mass on arrival at the alternate 50000 kg, Estimated mass on arrival at the destination 52525 kg, Alternate elevation MSL, Destination elevation 1500 ft Find: Final reserve fuel and corresponding time

a 2360 kg, 01 h 00 min

b 2360 kg, 30 min

c **1180 kg, 30 min**

d 1180 kg, 45 min

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358 id 4558

(For this Question use Fuel Planning MRJT1) Given: twin jet aeroplane, Estimated mass on arrival at the alternate 50000 kg, Elevation at destination aerodrome 3500 ft, Elevation at alternate aerodrome 30 ft Find: Final reserve fuel

a 1150 kg

b 2360 kg

c **1180 kg**

d 2300 kg

33.06.01.05. Completion of fuel plan

359 id 1859 Given: Dry operating mass (DOM)= 33500 kg Load= 7600 kg Maximum allowable take-off mass= 66200 kg Standard taxi fuel= 200 kg Tank capacity= 16 100 kg The maximum possible take-off fuel is:

- **a** **15 900 kg**
- **b** 17 100 kg
- **c** 16 300 kg
- **d** 17 300 kg

360 id 2044 (For this question Flight Planning Manual MRJT 1 Figure 4.5.3.1) Given: long range cruise: temp. -63° C at FL 330 initial gross mass enroute 54 100 kg; leg flight time 29 min Find: fuel consumption for this leg

- **a** 1 200 kg
- **b** **1 100 kg**
- **c** 1 020 kg
- **d** 1 680 kg

361 id 2045 (For this question Flight Planning Manual MRJT 1 Figure 4.5.3.1) Given: flight time from top of climb to the enroute point in FL280 is 48 min. Cruise procedure is long range cruise (LRC). Temp. ISA -5° C Take-off mass 56 000 kg Climb fuel 1 100 kg Find: distance in nautical air miles (NAM) for this leg and fuel consumption:

- **a** **345 NAM; 2000 kg**
- **b** 350 NAM; 2000 kg
- **c** 345 NAM; 2100 kg
- **d** 437 NAM; 2100 kg

362 id 2046 (For this question use Flight Planning Manual MRJT 1 Figure 4.5.1) Given: estimated take-off mass 57 500 kg; initial cruise FL 280; average temperature during climb ISA -10°C; average head wind component 18 kt Find: climb time

- **a** 15 min
- **b** 11 min
- **c** **13 min**
- **d** 14 min

363 id 2047 (For this question use Flight Planning Manual MRJT 1 Figure 4.5.1) Given : brake release mass 57 500 kg temperature ISA -10°C; head wind component 16 kt initial FL 280 Find: still air distance (NAM) and ground distance (NM) for the climb

- **a** 59 NAM;62 NM
- **b** **62 NAM; 59 NM**
- **c** 67 NAM; 71 NM
- **d** 71 NAM;67 NM

364 id 2048 (For this question use Flight Planning Manual MRJT 1 Figure 4.5.1) Given : mass at brake release 57 500 kg; temperature ISA -10°C; average head wind component 16 kt initial cruise FL 280 Find: climb fuel

- **a** **1138 kg**
- **b** 1238 kg
- **c** 1387 kg
- **d** 1040 kg

365 id 2050 (For this question Flight Planning Manual MRJT 1 Figure 4.5.3.1) Given :FL 330; long range cruise; OAT -63°C; gross mass 50 500 kg. Find: true airspeed (TAS)

a **420 kt**

b 433 kt

c 431 kt

d 418 kt

366 id 2057 (For this question Flight Planning Manual MRJT 1 Figure 4.5.3.1) Given: long range cruise; outside air temperature (OAT) -45 ° C in FL 350; mass at the beginning of the leg 40 000 kg; mass at the end of the leg 39 000 kg. Find: true airspeed (TAS) at the end of the leg and the distance (NAM).

a TAS 423 kt; 936 NAM

b TAS 423 kt; 227 NAM

c TAS 431 kt; 1163 NAM

d **TAS 431 kt; 227 NAM**

367 id 2059 (For this question use Flight Planning Manual MRJT 1) Given: estimated take-off mass 57 000 kg; still air distance 150 NAM; outside air temperature (OAT) ISA -10K; cruise at 0.74 Mach. Find : cruise altitude and expected true airspeed

a 22 000 ft; 451 kt

b 25 000 ft; 445 kt

c 22 000 ft; 441 kt

d **25 000 ft; 435 kt**

368 id 2331 (For this question use Flight Planning Manual MRJT 1 Figure 4.4) Planning a flight from Paris Charles de Gaulle to London Heathrow for a twin - jet aeroplane. Preplanning: Dry Operating Mass (DOM): 34 000 kg Traffic Load: 13 000 kg The holding is planned at 1 500 ft above alternate elevation. The alternate elevation is 256 ft. The holding is planned for 30 minutes with no

a 48 675 kg.

b 49 250 kg.

c 2 250 kg.

d **48 125 kg.**

369 id 2332 (For this question use Route Manual chart E(HI)4) Planning a flight from Paris Charles de Gaulle (N49 00.9 E002 36.9) to London Heathrow (N51 29.2 W000 27.9) for a twin - jet aeroplane. The alternate airport is Manchester (N53 21.4 W002 15.7) Preplanning: The wind from London to Manchester is 250°/30 kt The distance from London to Manchester is 160 NM. Assume the Estimat

a 1 200 kg and 26 minutes.

b 1 300 kg and 28 minutes.

c 1 600 kg and 36 minutes.

d **1 450 kg and 32 minutes.**

370 id 2333

(For this question use Route Manual chart E(HI)4) Planning a flight from Paris Charles de Gaulle (N49 00.9 E002 36.9) to London Heathrow (N51 29.2 W000 27.9) for a twin - jet aeroplane. Preplanning: Powersetting: Mach= 0.74 Planned flight level FL 280 The Landing Mass in the fuel graph is 50 000 kg The trip distance used for calculation is 200 NM The wind from P

a 1 450 kg.

b 1 550 kg.

c 1 900 kg.

d **1 740 kg.**

371 id 2767

(For this Question use Fuel Planning MRJT1) Finish the ENDURANCE/FUEL CALCULATION and determine ATC ENDURANCE for a twin jet aeroplane, with the help of the table provided. Contingency is 5% of the planned trip fuel and fuel flow for extra fuel is 2400 kg/h.

a **ATC ENDURANCE: 04:07**

b ATC ENDURANCE: 03:52

c ATC ENDURANCE: 03:37

d ATC ENDURANCE: 04:12

372 id 2771

(For this Question use Fuel Planning MRJT1) The aeroplane gross mass at top of climb is 61500 kg. The distance to be flown is 385 NM at FL 350 and OAT -54.3 °C. The wind component is 40 kt tailwind.Using long range cruise procedure what fuel is required?

a 2350 kg

b 2250 kg

c **2150 kg**

d 2050 kg

373 id 2773

(For this Question use Fuel Planning MRJT1) Find: Time, Fuel, Still Air Distance and TAS for an enroute climb 280/.74 to FL 350. Given: Brake release mass 64000 kg, ISA +10°C, airport elevation 3000 ft

a 25 min, 1875 kg, 148 Nautical Air Miles (NAM), 391 kt

b 26 min, 2050 kg, 157 Nautical Air Miles (NAM), 399 kt

c 20 min, 1750 kg, 117 Nautical Air Miles (NAM), 288 kt

d **26 min, 1975 kg, 157 Nautical Air Miles (NAM), 399 kt**

374 id 4370

For flight planning purposes the landing mass at alternate is taken as:

a Landing Mass at destination plus Alternate Fuel.

b **Zero Fuel Mass plus Final Reserve Fuel.**

c Zero Fuel Mass plus Final Reserve Fuel and Alternate Fuel.

d Zero Fuel Mass plus Final Reserve Fuel and Contingency Fuel.

375 id 4552

Given: Maximum allowable take-off mass 64400 kg, Maximum landing mass 56200 kg, Maximum zero fuel mass 53000 kg, Dry operating mass 35500 kg, Traffic load 14500 kg, Trip fuel 4900 kg, Minimum Take-off Fuel 7400 kg Find: Maximum allowable take-off fuel

a 11400 kg

b **11100 kg**

c 14400 kg

d 8600 kg

376 id 4553 Given: Maximum allowable take-off mass 64400 kg, Maximum landing mass 56200 kg, Maximum zero fuel mass 53000 kg, Dry operating mass 35500 kg, Traffic load 14500 kg, Trip fuel 4900 kg, Take-off fuel 7400 kg Find: Maximum additional load

a 5600 kg

b 4000 kg

c 7000 kg

d **3000 kg**

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377 id 4559 (For this Question use Fuel Planning MRJT1) Planning an IFR-flight from Paris to London for a twin jet aeroplane. Given: Estimated Take-off Mass (TOM) 52000 kg, Airport elevation 387 ft, FL 280, W/V 280°/40 kt, ISA-Deviation -10°C, Average True Course 340° Find: Ground distance to the top of climb (TOC)

a 53 NM

b 56 NM

c **50 NM**

d 47 NM

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378 id 4560 (For this Question use Fuel Planning MRJT1) Planning an IFR-flight from Paris (Charles de Gaulle) to London (Heathrow) for the twin jet aeroplane. Given: Estimated Take-off Mass (TOM) 52000 kg, Airport elevation 387 ft, FL 280, W/V 280°/40 kt, ISA Deviation -10°C, Average True Course 340° Find: Time to the top of climb (TOC)

a 12 min

b 3 min

c **11 min**

d 15 min

---

379 id 4561 (For this Question use Fuel Planning MRJT1) Planning an IFR-flight from Paris to London for the twin jet aeroplane. Given: Estimated Take-off Mass (TOM) 52000 kg, Airport elevation 387 ft, FL 280, W/V 280°/40 kt, ISA Deviation -10°C, Average True Course 340° Find: Fuel to the top of climb (TOC)

a 1100 kg

b 1000 lbs

c **1000 kg**

d 1500 lbs

---

380 id 4568 (For this Question use Fuel Planning MRJT1) Planning an IFR-flight from Paris to London for the twin jet aeroplane. Given: Gross mass 50000 kg, FL 280, ISA Deviation -10°C, Cruise procedure Mach 0.74 Determine the TAS

a 417 kt

b 440 kt

c 427 kt

d **430 kt**

---

381 id 5523 When calculating the fuel required to carry out a given flight, one must take into account : 1 - the wind 2 - foreseeable airborne delays 3 - other weather forecasts 4 - any foreseeable conditions which may delay landing The combination which provides the correct statement is :

a 1 - 2 - 3

b 1 - 3

c 2 - 4

d **1 - 2 - 3 - 4**

33.06.01.06. Computation of CP (critical point)

382 id 2769 | Find the distance to the POINT OF SAFE RETURN (PSR). Given: maximum useable fuel 15000 kg, minimum reserve fuel 3500 kg, Outbound: TAS 425 kt, head wind component 30 kt, fuel flow 2150 kg/h, Return: TAS 430 kt, tailwind component 20 kt, fuel flow 2150 kg/h

a 1463 NM

b 1143 NM

c **1125 NM**

d 1491 NM

33.06.01.07. Completion of air traffic flight plan

383 id 5513 | On an ATC flight plan, an aircraft indicated as "H" for "Heavy"

a has a certified take-off mass greater than or equal to 140 000 kg

b has a certified landing mass greater than or equal to 136 000 kg

c **is of the highest wake turbulence category**

d requires a runway length of at least 2 000m at maximum certified take-off mass

384 id 5516 | On a VFR flight plan, the total estimated time is:

a **the estimated time from take-off to overhead the destination airport**

b the estimated time from take-off to overhead the destination airport, plus 15 minutes

c the estimated time from take-off to landing at the alternate airport

d the estimated time from engine start to landing at the destination airport

385 id 5518 | On an ATC flight plan, the letter "Y" is used to indicate that the flight is carried out under the following flight rules.

a **IFR followed by VFR**

b VFR followed by IFR

c IFR

d VFR

386 id 5519 | On an ATC flight plan, to indicate that you will overfly the way-point TANGO at 350 kts at flight level 280, you write:

a TANGO / K0350 FL280

b **TANGO / N0350 F280**

c TANGO / FL280 N0350

d TANGO / KT350 F280

387 id 5528 | On a ATC flight plan, to indicate that you will overfly the way-point ROMEO at 120 kt at flight level 085, you will write :

a ROMEO / K0120 FL085

b **ROMEO / N0120 F085**

c ROMEO / FL085 N0120

d ROMEO / F085 N0120