



**EAST AFRICAN SCHOOL OF AVIATION**  
**EXAMINATION**  
**SAFETY SECTION**

**DIPLOMA IN FLIGHT DISPATCH**

**FLD 38**

**FINAL EXAMINATION**

**SUBJECT: FLIGHT PLANNING**

Duration: 02 Hrs: 30 Min

DAY/DATE:

TIME: 0830HRS – 1030HRS

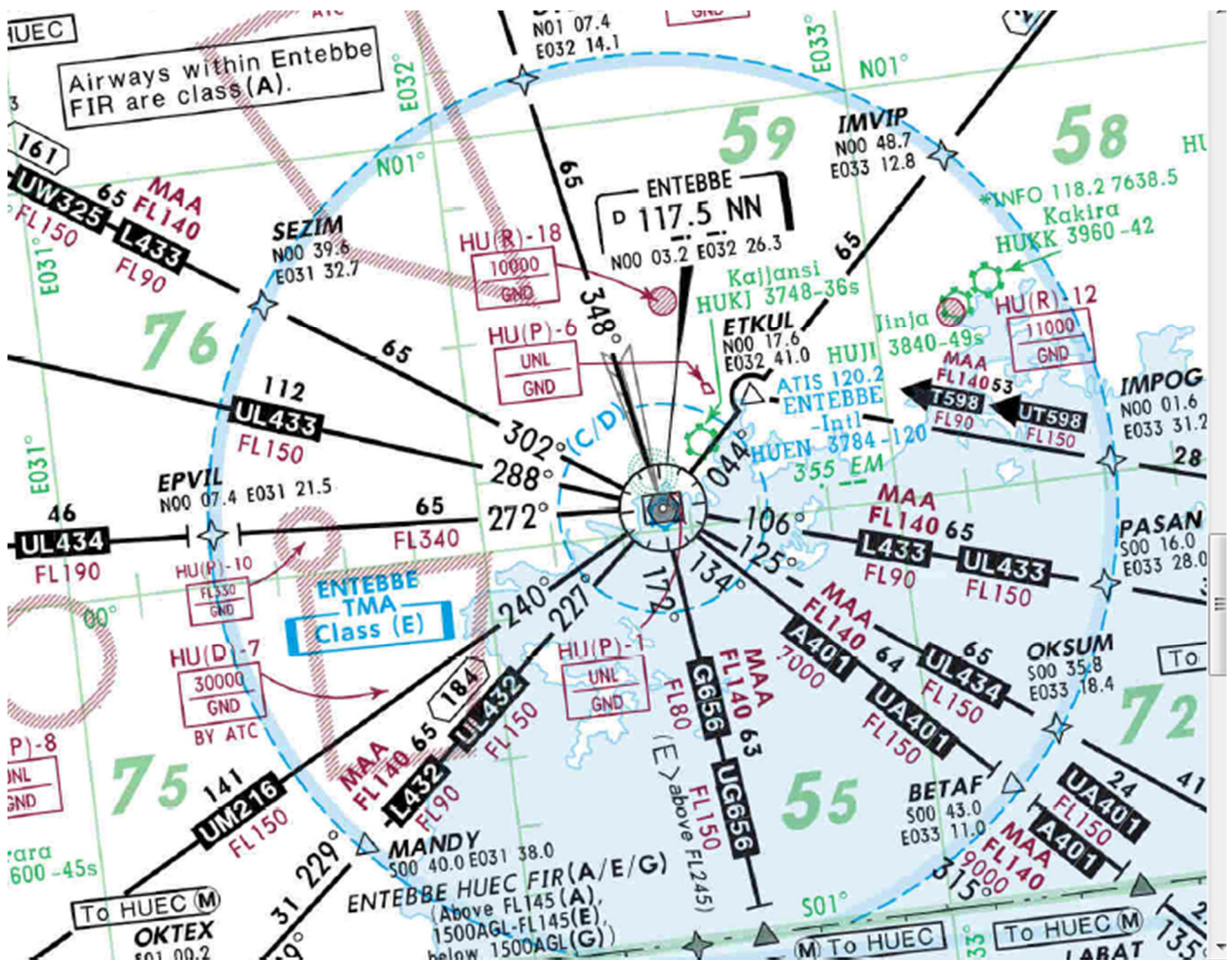
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## PART A

1. For this question use the chart below

An aircraft flying from Entebbe intl airport on the airway UG656 above FL245 can select

- a)FL240                      b)FL350                      c)FL320                      d)FL210



2. Name two prohibited, two restricted and two danger airspaces depicted on the chart above

3) (For this question use the chart above)

The bearing/distance from Entebbe (NN) to PASAN on airway UL433 is:

A 065°/106 NM                      B 106°/65 NM                      C 125°/65 NM                      D 132°/43 NM

4) (For this question use the chart above)

The VOR and DME at Entebbe 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

5) For a flight to an off-shore platform, an alternate aerodrome is compulsory, except if :

1 - flight duration does not exceed two hours

2 - during the period from two hours before to two hours after the estimated landing time, the forecast conditions of ceiling and visibility are not less than one and a half times the applicable minima

3 - the platform is available and no other flight either from or to the platform is expected between the estimated time of departure and one half hour after the estimated landing time

The combination which regroups all of the correct statements is :

A 1 – 2

B 1 – 3

C 2 – 3

D 1 - 2 – 3

6) 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 minimum ramp fuel required is:

A 76 100 kg

B 80 500 kg

C 79 200 kg

D 77 800 kg

7) 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

A 342 NM

B 375 NM

C 408 NM

D 403 NM

8) (For this question use Flight Planning Manual MRJT 1 Figure 4.4)

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 1180 kg, 45 min

C 1180 kg, 30 min

D 2360 kg, 30 min

9) 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 6 400 kg.

B 4 300 kg.

C 6 185 kg.

D 9 000 kg.

10) Following in-flight depressurization, 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 30 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 45 minutes flying time

11) 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 14400 kg

C 8600 kg

D 11100 kg

12) 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 1153 NM

C 1130 NM

D 1025 NM

13) When using decision point procedure, you reduce the

A holding fuel by 30%.

B contingency fuel by adding contingency only from the burnoff between decision point and destination.

C contingency fuel by adding contingency only from the burnoff between the decision airport and destination.

D reserve fuel from 10% down to 5%.

14) From the options given below select those flights which require flight plan notification:

1 - 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 water

A 1+2+3

B 3+4+5

C 2+4

D 1+5

15) An airway is marked FL 80 1500 a. This indicates that:

A the minimum enroute altitude (MEA) is FL 80.

B the airway base is 1500 ft MSL.

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

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

16) The purpose of the decision point procedure is ?

A To reduce the landing weight and thus reduce the structural stress on the aircraft.

B To increase the safety of the flight.

C To increase the amount of extra fuel.

D To reduce the minimum required fuel and therefore be able to increase the traffic load.

17) 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, additional fuel of :

A 7380 kg.

B 1845 kg.

C 3500 kg.

D 8120 kg.

18) 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 Neither statement

B Statement 1 only

C Statement 2 only

D Both statements

19) 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 33.0 US gallons/hour

B 37.9 US gallons/hour

C 21.3 US gallons/hour

D 30.3 US gallons/hour

20) 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 and Alternate Fuel.

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

D Zero Fuel Mass plus Final Reserve Fuel.

21) An airway is marked 3500T 2100 a. This indicates that:

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

B the minimum obstruction clearance altitude (MOCA) is 3500ft

C the minimum enroute altitude (MEA) is 3500 ft

D the airway base is 3500 ft MSL

22) 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 - 4

B 1 - 3

C 2 - 4

D 1 - 2 - 3

23) 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 30 minutes at holding speed at 450 m above MSL in standard conditions

B 30 minutes at holding speed at 450 m above aerodrome elevation in standard conditions

C 2 hours at normal cruise consumption

D 45 minutes plus 15% of the flight time planned to be spent at cruising level or two hours whichever is less

24) 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

25) 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 500 kg

B 800 kg

C 1000 kg

D 700 kg

26) From which of the following would you expect to find the dates and times when temporary danger areas are active

A SIGMET

B RAD/NAV charts

C NOTAM and AIP (Air Information Publication)

D Only AIP (Air Information Publication)

27) 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 24 min

B 20 min

C 10 min 40 sec

D 16 min

28) 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 10 NM

B 25 NM

C 20 NM

D 15 NM

29) 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 AGA chapter of the French Aeronautical Information Publication (AIP)

B in the GEN chapter of the French Aeronautical Information Publication (AIP)

C by telephoning the aerodrome's local chamber of commerce, this type of information not being published

D in the FAL section of the French Aeronautical Information Publication (AIP).

30) 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 necessary, unless the captain decides to continue on his own responsibility.

C Diversion to a nearby alternate is necessary, because the remaining fuel is not sufficient.

D Diversion to a nearby alternate is not necessary, because the reserve fuel has not been used completely

31) 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 60 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 45 minutes at holding speed at 1500 ft (450 m) above aerodrome elevation in standard conditions.

32) Unless otherwise shown on charts for standard instrument departure the routes are given with:

A true course

B true headings

C magnetic course

D magnetic headings

33) An airway is marked 5000 2900a. The notation 5000 is the :

A base of the airway (AGL)

B minimum enroute altitude (MEA)

C maximum authorised altitude (MAA)

D minimum holding altitude (MHA)

34) Which of the following statements is relevant for forming route portions in integrated range flight planning?

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

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

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

D Each reporting point requires a new segment.

35) 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



A 2 h 43 min  
C 3 h 43 min

B 2 h 51 min  
D 2 h 59 min

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

- A AIP (Air Information Publication)
- B NAV/RAD charts
- C ATCC
- D NOTAM

37) 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 floor of the airway is at 8 000 ft
- B the minimum safe altitude is 8 000 ft
- C the minimum flight level is FL 80
- D the altitude of the highest obstacle is 8 000 ft

38) 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

## **PART B 20MRKS**

1. Briefly describe 3 MRKS
  - I. MEA
  - II. MOCA
  - III. MORA
2. The AIP is divided into three parts. Name them. (3 marks)
3. State and explain four components of reserve fuel (4marks)
4. state the three categories of NOTAMS disseminated by the Aeronautical Fixed Service (AFS): (3marks)
5. Briefly describe the EDTO flight procedure (3 marks)
6. Refer to the chart used for question 1. in PART A. (4marks)

What is the

  - I. Elevation of the airport and
  - II. Length of the runway

