ENROUTE FLIGHTPLANS, NAVIGATION AND AERONAUTIC CHARTS
(48 pts)

Use the attached IFR ENROUTE LOW ALTITUDE CHART FOR REGION AROUND CHICAGO O’HARE AIRPORT (and it’s Legend) to answer the following questions

1. (6 pts)
   A VOR/DME is located at Chicago O’Hare.
   a) What is the ICAO Identifier for the VOR/DME_______ORD_______
   b) What Frequency and Channel does the pilot tune to use the VOR/DME
      ______113.9 MHz______, Channel ______86_______

2. (2 pts)
   The 090 degree radial outbound from the Chicago O’Hare VOR along with a 21nm range from the Chicago O’Hare DME defines an intersection. What is the name of the intersection?
      ______WILA_______

3. (2 pts)
The 089 degree radial outbound from the Chicago O'Hare VOR along with a 14nm range from the Chicago O'Hare DME defines an intersection. What is the name of the intersection?

LAIRD

4. (4pts)

The FARMM intersection is north-west of the Chicago O'Hare VOR/DME on the 314 degree radial outbound of the VOR and 29 nm range from the DME.

The FARMM intersection is located on which airway running approx. east-west?

V24

The FARMM intersection is located on which airway running north-west - south-east?

V217

5. (34pts)

See additional charts provided

MADISON VORTAC (MSN) is located north-west of the Chicago O'Hare VOR/DME (ORD)

a) List the sequence of intersections and nav aids flying the V217 and V228 airways from ORD to MSN. (6 pts)

ORD - FARMM - BESIE - DEBOW - MSN

b) What is the distance between the intersections/nav aids (12 pts)

From: ORD - To: FARMM Distance = 29 nm
From: FARMM - To: BESIE Distance = 9 nm
From: BESIE - To: DEBOW Distance = 23 nm
From: **Debou**  To: __MSN____ Distance = __33__ nm

c) What is the total distance between ORD and MSN flying V217 and V228? (2 pts)

\[ 29 + 9 + 23 + 33 \] nm

d) V228 lists 10,000 feet and V217 lists 2200 feet as the Minimum Enroute Altitude (MEA). (6 pts)

In general, how should pilots use the MEA?

**Do not fly below**

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Given that there are no terrain or obstacles close to 10,000 in the midwestern United States (in the vicinity of the V228 airway), what other reason would there be to assign a MEA of 10,000 for V228?

**Crossing traffic**
**ROUTE DATA**

- **VOR AIRway**
- **LF/MS AIRway**
- **Uncontrolled LF/MS AIRway**
- **Dense Route**
- **ATS Route**

**BOUNDARIES**

- **Air Route Traffic Centre (ARTCC)**
- **Flight Information Region (FIR)**
- **Type of Area Traffic Service**
- **Cardinal**
- **Pico**
- **Call Sign**
- **Location**

**AIRSPACE INFORMATION**

- **Open area** (inland) indicates controlled airspace Class E3 airspace designated.
- **All airspace above 14,500 feet** and above is controlled (Class E3).
- **Shaded area** (ground-controlled) indicates controlled airspace below 14,500 feet (Class G).

**EXAMPLE OF GROUPING**

- **VOR Control Point**
- **NAVAID**
- **MIA**
- **TACAN Fix Data**

**SPECIAL USE AIRSPACE**

- **WALL 1**
- **WALL 2**
- **NOA**
- **MOA**
- **Sea Area Chart**

**MISCELLANEOUS**

- **ALTIMETER**

**MILITARY TRAINING ROUTES (MTR)’s**

- **MTR's 5 NNM or less both sides of centerline**
- **MTR's greater than 5 NNM, either or both sides of centerline**

**CRUISING ALTITUDES - U.S.**

- **IFR**
- **VFR**

**CAUTION:** These charts do not depict MTR's.
What frequency must be tuned to receive signals from BROOKE (enroute) navigation aid?

\[ 114.5 \text{ mHz} \]

13. (2pts)

What is the name of the airway on the 141° radial from BROOKE?

A. V-155.
B. V-286.
C. V-128
D. V-453

14. (2pts)

What is the name of the airway on the 214° radial from BROOKE?

A. V-155.
B. V-268.
C. V-128
D. V-453

15. (2pts)

What is the distance in nautical miles between BROOKE and the next navigation aid (not shown) on the 141° radial from BROOKE?

\[ 88 \text{ nm} \]

16. (2pts)

What is the name of the intersection on the 141° radial from BROOKE that intersects with the V-376 airway used for approach to Washington?

GRUBY