D’LAT AND D’LONG

EXERCISE-4

Note: This module will be understood best if studied along with the video provided for subscription where by same topics have been in large explained by me and hence this transcription is here only to help and enhance your concepts about the basic of D’Lat and D’Long.

In the last section of this module we learnt how to calculate final Lat for a given initial Lat and D’Lat. Carrying the explanation forward in this exercise I have explained the calculation of final Long for a given initial Long and D’Long.

The following examples explain the above concept through suitable sketches:-

For Example:-

1. Long A- 020° 10’ E
   D’long- 005° 20’ E
   Long B- 025° 30’ E (Long B= Long A+ D’long as we are going away from the equator there will be increase in value and we are not crossing equator so direction will be same.)

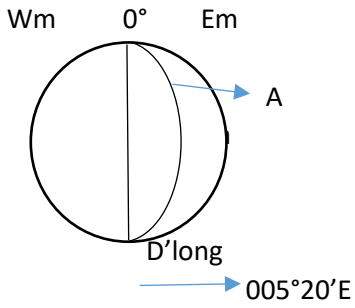

Fig of Ex: 1

Note: The working of Final Long on the 0° side is similar to that of Final Lat. Hence detailed description is not mentioned here. It is recommended that candidates revise the previous exercise once more before attempting this one.

2. Long A- 010° 30’ E
   <u>D’long- 030° 40’ W</u>
   Long B- 020° 10’ W (Long B= D’long – Long A as we are crossing equator)

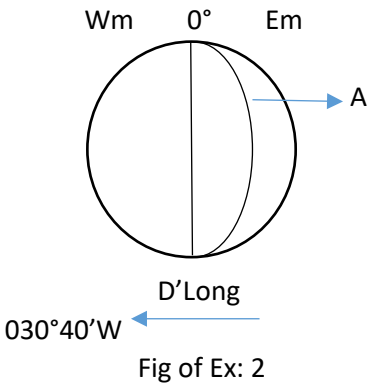

Fig of Ex: 2

3. Long A- 170° 45’ E
   <u>D’long- 020° 30’ E</u>
   Long B- 168 ° 45’ W [Long B= 360°- (Long A+ D’long) as we are going towards 180°]

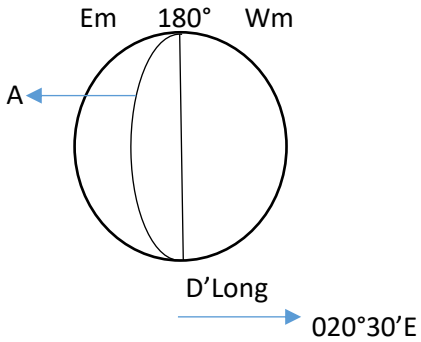

Fig of Ex: 3

Note: In ex.3 you should remember that whenever the direction of movement for D’Long is towards 180°, always add D’Long to initial Long. If after this addition your answer comes out to be less than 180° then that is your final longitude with name same as the initial one. If the answer comes out to be more than 180° as in the above case then subtract it from 360° as Long cannot be more than 180° and change the name to opposite of initial Long to get your final longitude.

4. Long A- 178° 50’W
   D’Long- 030°10’E
   Long B- 148°40’W (Moving away from 180°, value decreases hence subtract and retain the name of initial Long)

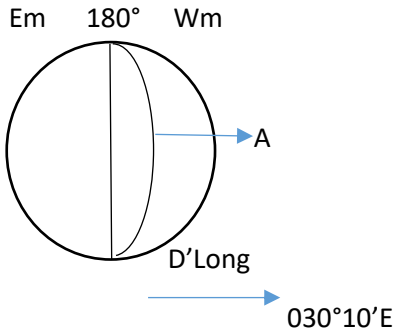

Fig of Ex: 4

Practice Exercise:

1. Long A- 018°45’E
   D’Long- 005°30’E

2. Long A- 095°10’W
   D’Long- 020°25’E

3. Long A- 003°15’E
   D’Long- 015°30’W

4. Long A- 165°50’E
   D’Long- 045°15’W

5. Long A- 175°40’W
   D’Long- 025°10’W

ANSWERS:-

1. 024°15’E 2. 074°45’W 3. 012°15’W 4. 120°35’E 5. 159°10’E