

Indian Maritime University
(A Central University, Govt of India)
B Sc (Nautical Science)
May-June 2018 End Semester Examinations
Semester-III
UG21T3301-Celestial Navigation Paper-I

Duration:3 Hrs

Max Marks:70 Marks

Date: 02.07.2018

Pass Marks:35 Marks

Note: Question No 1 is compulsory.

Solve any 6 questions form remaining 8 questions.

Use of Norries Nautical Table, Nautical Almanac and Non-Programmable Scientific Calculator is permitted.

- 1).Write Short notes on the following. (5x2=10marks)
 - a)Equinoctial
 - b)Celestial Sphere
 - c)Ecliptic
 - d)SHA
 - e)Declination.

- 2)Explain the laws of Planetary motion enunciated by Kepler? (10 marks)

- 3)Explain in detail about the Seasons ,Solstice and Equinoxes? (10 marks)

- 4) a)Define the Siderial and Synodic period of the moon?
b)Describe briefly the Phases of Moon? (5x2=10 marks)

- 5) a) Explain with the help of diagram the Solar and Lunar Eclipses?
b) What are the conditions necessary for the occurrence of Solar and Lunar Eclipses? (5x2=10 marks)

- 6) a)What is d correction and v correction?
b)What is Zone Time and Standard Time? (5x2=10 marks)

- 7) a) On a certain day in Longitude 35 deg W,the moons LHA was 335 deg, when GHA Y was 263 deg.Find the SHA of the moon?
b) Find the GMT ,when LMT in long 125 deg 30 minE was 05 d 03 h 15m 04s (10 marks)

- 8) On 14 th Sept 2008, the sextant altitude of suns UL was 56 deg 11.6 min. If the IE was 2.4' off the arc and HE was 16 m. Find the true altitude? (10 marks)
- 9) On 23 rd Sept 2008, in DR 23 deg 40 min N 161 deg 56 min E, the sextant Meridian altitude of the Sun's lower limb was 66 deg 10.6 min. If IE was 2.3 min on the arc and HE was 10.5 min. Find the latitude and LOP. (10 marks)
