

UNIVERSITY OF RUHUNA

BACHELOR OF SCIENCE HONOURS IN FISHERIES AND MARINE SCIENCES DEGREE

Level IV Semester I Examination – August/ September 2018

OCG 4141– Navigation and International Signals

Time: 1 hour

Answer All questions in PART A and **Only Two (2)** Questions form PART B

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PART A

1. Filling the blanks

- a. \_\_\_\_\_ is the process of planning and carrying out the movement of transport of all kinds from one place to another at sea, on land or in space.
- b. Latitudes are measured from  $0^{\circ}$  to  $90^{\circ}$  north or south from the \_\_\_\_\_.
- c. Longitudes are measured from \_\_\_\_\_ east or west of Greenwich.
- d. One nautical mile per hour is known as \_\_\_\_\_.
- e. The meridian passing through Greenwich is called the \_\_\_\_\_.
- f. One international nautical mile equaling to \_\_\_\_\_ m.
- g. \_\_\_\_\_ gives the shortest distance between two points on the earth's surface.
- h. \_\_\_\_\_ is the northerly direction of the meridian and is the reference from which true bearing & courses are measured.
- j. Any line which crosses the meridians or the parallels of latitude at the same angle is called a \_\_\_\_\_.
- K. Parallels of latitude also known as \_\_\_\_\_

(10 Marks)

2. State if True or False

- i. Earth rotates from East to West around its axis ( )
- ii. Distance of a Sea mile is longer at poles than at the Equator ( )
- iii. Ship's Gyro compass is influence by earth magnetic field ( )
- iv. Great Circle gives the longest distance between two points ( )
- v. Variation is the different between Compass course and Magnetic course ( )

(05 Marks)

3. Choose the most appropriate answer.

- i. The shape of the Earth is known as
  - a) Spheroid
  - b) Oblate spheroid
  - c) Perfect sphere
  - d) Sphere
  
- ii. The length of one minute of arc measured along the meridian in the latitude of the position is called,
  - a) Sea mile
  - b) Geographical mile
  - c) Nautical mile
  - d) Statute mile
  
- iii. The correct abbreviation of nautical mile is
  - a) nm
  - b) NM
  - c) N Mile
  - d) n mile
  
- iv. The True north is,
  - a) True direction between two points on the Earth's surface.
  - b) The angle between the meridian and the direction of the object.
  - c) The northerly direction of the meridian.
  - d) The bearings and courses are measured along the great circles.
  
- v. The angle between the geographic (true) and magnetic meridians at any place is called as
  - a) Gyro Error
  - b) Deviation
  - c) Variation
  - d) BA Error

(05 Marks)

**PART B**

- 4.
- i. Describe latitudes with suitable diagram (12 Marks)
  - ii. Describe longitude with a suitable diagram (12 Marks)
  - iii. What are the information shown on a chart? (16 Marks)
5. International Code of Signals provides a way for effective communication essentially to safeguard navigation and persons, especially in case of language difficulties.
- i. Indicate the methods of signaling between Crafts (14 Marks)
  - ii. What are the methods, other than radio/telephone systems, you may use at sea to indicate to others that you are in a distress situation? (14 Marks)
  - iii. What is the international meaning of
    - a. Flag A (Alpha)
    - b. Flag V (victor)(6x2 Marks)
6. International Regulation for Preventing Collision at Sea (COLREGS) 1972 is the most accepted and practicing treaty in the world. Describe following related to ROR
- i. Safe speed – Rule 6 (12 Marks)
  - ii. Look out – Rule 5 (12 Marks)
  - iii. Describe with drawings, navigational lights and its angels of a seagoing vessel (16 Marks)

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