

INDIAN MARITIME UNIVERSITY

(A Central University, Government of India)

B.Sc. (Nautical Science) - Semester III

End Semester Examinations December 2017

Bridge Equipment & Watch Keeping Paper - I

Subject Code: UG21T3306

Time: 3 hours

Max Marks: 70

Date: 15.12.2017

Pass Marks: 35

Part – A (compulsory) (5x2 =10 Marks)

1. (a) Why is a sextant so named and what are the uses of a sextant?
(b) What is a lubber line in a magnetic compass?
(c) What are the various methods to call the master to the bridge?
(d) What is anchor turning circle?
(e) What associated equipment shall be kept at hand ready for use while embarking/disembarking Pilot?

Part – B (5x12 = 60 Marks)

Answer **any Five** questions. All questions carry equal marks.

2. Draw a layout of the Bridge with its Navigational Equipment labelled. Briefly explain the purpose of Ten bridge navigational aid equipment.
3. Sketch and describe the construction of a liquid card magnetic compass. What are the practical limitations of the magnetic compass?
4. Briefly explain the principle of a Doppler log and list out the various errors. Explain Janus configuration with respect to Doppler Log.
5. What is the basic principle of an Echo Sounder? Draw a simplified Block Diagram of Echo Sounder. List out the various errors of an Echo Sounder.
6. Explain the watch keeping duties at sea for an Officer of the watch on navigational watch.

7. What are the circumstances when the Officer of a navigational watch will call the Master to the bridge?
8. Explain the importance of recording all relevant information in log books and list out ten entries to be made in the deck log book.
9. How will you as a deck officer keep an effective anchor watch? How will you understand that the anchor is dragging?
