

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)  
**END SEMESTER EXAMINATIONS –JUNE 2019**  
**B.Sc (Nautical Science)**  
Semester-III  
**Bridge Equipment & Watch Keeping**  
**UG21T3306**

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**Date: 19-07-2019**  
**Time: 3Hrs**

**Maximum Marks: 70**  
**Pass Marks: 35**

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**Note: Question No. 1 & 7 are compulsory.**  
**Scientific Calculator is permitted if required.**

**SECTION A**

**Question no.1 is compulsory.answer any 4 from remaining**

**5 questions**

**(5x2 M)**

- Q1) a) What is maximum angle which can be measured by sextant ?  
b) How compass course can be converted to true course ?  
c) Differentiate between speed over ground and speed over water.  
d) What do you understand by the term "stylus" in echo-sounder ?  
e) Give two uses of day light signalling lamp.
- Q2) a) Draw a layout of the modern day bridge with at least 10 bridge Equipments. (5 M)  
b) Explain the principle of sextant. (5 M)
- Q3) a) What precautions do you take while taking compass bearing. (5 M)  
b) Explain various conditions when you intend to call Master on bridge, as you being OOW. (5 M)
- Q4) a) Explain "Janus Configuration" in Doppler Log System. (5 M)  
b) What do you understand by "ranging" and "phasing" in echo sounder. (5 M)
- Q5) a) Write down entries to be made manually on course recorder paper before starting a voyage, during voyage and end of voyage. (5 M)

b) What is the use of rate of turn indicator ? (5 M)

Q6) a) What are the uses of chronometer ? (5 M)

b) What is the use of day light signalling lamp ? (5 M)

### **SECTION B**

#### **Question No.7 is compulsory answer any 1 more from remaining 2.**

Q7) a) Give the composition of watch in restricted visibility. (5x2 M)

b) What shape is displayed during day when the vessel is at anchor.

c) Name any two entries related to weather to be entered in bridge log book.

d) List two precautions to be taken while pilot boarding.

e) List two ways to check whether anchor is maintain the position or not.

Q8) a) What do you understand by effective use of the Bridge Resources. (5 M)

b) How will you take over watch during night at open sea. (5 M)

Q9) a) Explain the procedure of checking the compasses and applying the Correction. (5 M)

b) Write the contents of Master-Pilot information exchange checklist. (5 M)