

**Indian Maritime University**  
(A Central University, Govt. Of India)  
**End Semester Examination Dec-2019/Jan-2020**  
**B. Tech(Marine Engineering)**  
Semester –IV  
**MARINE BOILER & STEAM ENGINEERING**  
**(UG11T1402/2402)**

Date: 02-01-2020

Max Marks: **70**

Time: 3 Hrs

Pass Marks: **35**

**Part – A (compulsory)**

**Answer the following (10x2=20 Marks)**

1. Explain the term warming up of Boiler.
2. Name any two desirable properties of the refractory materials.
3. Explain the term Scum Blow down.
4. Explain why superheating is required.
5. Mention any four safety alarms present in the boiler.
6. Explain the term Soot Blowing.
7. Draw and explain Labyrinth gland packing
8. What is the necessity for draining of turbine?
9. Mention the methods for stopping blade vibration in turbine.
10. State any two preventive checks to be carried out before starting a Turbine.

**Part – B**

**Answer any 5 out of 7 questions (5 x 10= 50 marks)**

11. Sketch and describe a composite boiler suitable for producing low pressure steam.
12. Name and describe the usage of any ten Boiler mountings.
13. Draw and describe a boiler feed water system.
14. Draw and explain an improved high Lift safety valve.
15. Draw and explain the functioning of Impulse and reaction turbine.
16. With respect to steam turbines draw & label the following,
  - a. Different methods of Blade fixing (5 Marks)
  - b. Lubrication system of steam turbine (5 marks)
17. Describe in detail about the safety procedures to be followed by persons working in steam plants.

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