

GANPAT UNIVERSITY**B. Tech. Semester: VI Marine Engineering****Regular Examination April – June 2016****2MR603 Marine Internal Combustion Engine- II****Time: 3 Hours / As per Scheme****Total Marks: 70****Instruction:** 1 Attempt all Questions.

2 Assume suitable data if necessary.

3 Figure to right indicate full Marks.

4 Start new Questions on New Page.

Section - I

- Que. – 1 (a) Which are the two types of main injection methods? 5
 (b) What is Super VIT? How is it achieved in MAN B&W Engine's Pump? 7

OR

- Que. – 1 Describe Bosch Jerk Pump with simple sketch. Sketch a graph of pressure rise against crank angle degrees, marking different processes of fuel injection. 12

- Que. – 2 (a) What do you understand by Electronically Controlled Common Rail System? Explain with Sketch. 6
 (b) Enlist the various latest development features with regards to Combustion Chamber, Liner and Cylinder lubrication. 5

OR

- Que. – 2 (a) What normal maintenance of air starting valves is required and what are the consequences, if this is neglected? 5
 (b) Explosions have occurred in the starting air pipelines of marine engines. As a post inspection Engineer, what are the conditions you would consider that could lead to such accident and what precautions you would suggest avoiding such risks in the future. 6
- Que. – 3 Explain with sketch how the starting and reversing of a large main propulsion engine is accomplished. 12

Section – II

- Que. – 4 What are functions of piston rings? How piston rings are calibrated? What will be effects on engine running with excessive clearances? 12

OR

- Que. – 4 What are the requirements for Unmanned Machinery Space operation? 12
- Que. – 5 Describe how you would detect the following faults during the operation of a diesel engine. State possible causes and remedies. 11
 a) After burning c) Early ignition
 b) Low compression d) Late ignition

OR

- Que. – 5 Sketch indicator diagrams for a slow running large two stroke diesel engine. How are diagrams taken and information can be gained from them? How is power balancing carried out? 11
- Que. – 6 Explain procedure for removal main bearing of a large two stroke engine. What are the Criteria for rejection of main bearing? 12

END OF PAPER