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10MR53

Fifth Semester B.E. Degree Examination, Dec.2015/Jan.2016
Marine Internal Combustion Engine – I

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Explain valve timing diagram of 2-stroke engines. (10 Marks)
b. Difference between 2-stroke and 4-stroke engines. Give atleast ten difference. (10 Marks)
- 2 a. Draw and explain oil cooled piston in detail. (10 Marks)
b. Draw and explain hydraulic exhaust valve. (10 Marks)
- 3 a. With neat sketch explain uniflow scavenging with its own advantages and disadvantages. (10 Marks)
b. With neat sketch, explain Reverseflow scavenging with its own merits and demerits. (10 Marks)
- 4 a. Explain constant pressure turbocharging with neat sketch. (10 Marks)
b. What are the problems you will be facing with turbocharger explain in detail. (10 Marks)

PART – B

- 5 a. Explain properties of fuel atleast ten properties. (10 Marks)
b. Explain factors affecting combustion in detail. (10 Marks)
- 6 a. Explain cooling water treatment in detail. (10 Marks)
b. Explain Bore cooled liners in detail. (10 Marks)
- 7 a. Explain causes and prevention of crankcase explosion. (10 Marks)
b. Explain starting airline explosion. (10 Marks)
- 8 a. Explain developments in fuel injection system. (10 Marks)
b. Explain developments in turbocharger. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.