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10MR53

Fifth Semester B.E. Degree Examination, June/July 2015
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 4-stroke engine with neat sketch. (10 Marks)
b. Deviation from ideal condition in actual engines. Explain with neat sketch. (05 Marks)
c. Explain heat balance diagram with neat sketch. (05 Marks)
- 2 a. Explain oil cooled piston with neat sketch. (10 Marks)
b. Explain hydraulic operated exhaust valve with neat sketch. (10 Marks)
- 3 a. What is scavenging? (02 Marks)
b. Explain types of scavenging and their advantages with neat sketches. (18 Marks)
- 4 a. Explain pulse type turbocharger with neat sketch. Write its advantages also. (10 Marks)
b. Explain turbocharger faults (problems). (10 Marks)

PART – B

- 5 a. Draw the fuel injector and mention its parts. (10 Marks)
b. Explain combustion phases with neat sketch. (10 Marks)
- 6 a. Explain cooling water treatment. (10 Marks)
b. i) Explain Bore cooled liner. (05 Marks)
ii) Explain load dependent liner cooling. (05 Marks)
- 7 a. Explain causes and prevention of crankcase explosion. (10 Marks)
b. Draw starting air line diagram with safety fittings. (10 Marks)
- 8 a. Explain development of long-stroke engines. (10 Marks)
b. Explain implication of stroke-bore ratio. (10 Marks)

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