

CBCS SCHEME

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18MR53

Fifth Semester B.E. Degree Examination, July/August 2021 Marine Internal Combustion Engine - I

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Explain different types of power rating. (10 Marks)
b. State and explain the value timing diagram of 4 stroke engine. (10 Marks)
- 2 a. With the aid of sketch explain heat balance of an engine. (10 Marks)
b. Define the following terms :
i) Compression ratio
ii) Specific fuel oil consumption
iii) Brake power
iv) Mechanical efficiency
v) Mean effective power. (10 Marks)
- 3 a. Explain the causes of linear wear. (10 Marks)
b. Sketch and explain thin wall shell bearing. (10 Marks)
- 4 a. Draw a neat sketch of trunk piston. (10 Marks)
b. Explain the important functions of following main engine parts.
i) Bid plate ii) 'A' frame iii) Tie rods iv) Holding down bolts. (10 Marks)
- 5 a. Explain the types of scavenging process. (10 Marks)
b. Draw a neat sketch of pulse type turbo charger. (10 Marks)
- 6 a. Write a note on gas exchange process. (10 Marks)
b. Explain the procedure to carry out T/C turbine and blower side water washing. (10 Marks)
- 7 a. How crank case explosion take place. Write the cause and prevention and indication. (10 Marks)
b. Why high pressure pipe is used, explain with diagram. (10 Marks)
- 8 a. Draw a neat sketch of fuel injector. (10 Marks)
b. Write a note on uptake fire. (10 Marks)
- 9 a. Explain the types of lubrication. (10 Marks)
b. Explain the characteristics properties of lubricating oil. (10 Marks)
- 10 a. Draw a line diagram showing the crank case lube oil of main engine to other parts. (10 Marks)
b. Write down the test carried on board for lubricating oil. (10 Marks)

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.