

CBCS SCHEME

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BMR502

Fifth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Marine IC Engine and Propulsion System

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Describe mean piston speed, what is the significance of mean piston speed and list out the limitations.	10	L1	CO1
	b.	Explain 4-stroke cycle with the help of valve timing diagram.	10	L2	CO2
OR					
Q.2	a.	With the help of diagram explain the deviation of actual cycle from the theoretical cycle.	10	L1	CO1
	b.	Explain i) M.C.R of C.S.R. ratings ii) Thermal efficiency iii) Heat balance sheet iv) Morse test.	10	L2	CO2
Module – 2					
Q.3	a.	Define fatigue failure. What are the factors effecting fatigue life and explain its causes.	10	L1	CO1
	b.	With the help of neat sketch, explain tie rods and A-Frame.	10	L2	CO2
OR					
Q.4	a.	Explain the differences between 2-stroke and 4-stroke pistons.	10	L1	CO2
	b.	Explain the different types of liner wear.	10	L2	CO2
Module – 3					
Q.5	a.	List and explain the properties of lube oil.	10	L2	CO2
	b.	With a neat sketch explain VIT.	10	L3	CO3
OR					
Q.6	a.	What is scavenging? Explain the different types of scavenging.	10	L2	CO3
	b.	With a neat sketch, explain constant pressure turbo charging and write the advantages of it.	10	L3	CO4
1 of 2					

Module – 4

Q.7	a.	Explain : i) RD and RND engine reversing ii) RTA engine reversing	10	L3	CO3
	b.	Define vibration. Explain the different types of vibration.	10	L3	CO4
OR					
Q.8	a.	Explain the factors affecting. Crank shaft deflection.	10	L3	CO3
	b.	Explain the limits and remedy and control of SO _x and NO _x emissions.	10	L3	CO4
Module – 5					
Q.9	a.	Explain keyed propeller type of attachment with a neat sketch.	10	L3	CO3
	b.	Sketch and explain shafting system in ship.	10	L4	CO3
OR					
Q.10	a.	Explain muff coupling with a neat sketch.	10	L3	CO3
	b.	Explain controlled pitch and fixed pitch propeller.	10	L4	CO3
