UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 7 Examination in Engineering: May 2026

Module Number: MN7302 **Module Name: Engineering Knowledge (Motor) – III (C18)**

[Three Hours]

[Answer **five questions only**, each question carries **Fourteen (14) marks**]

[Provide neat sketches where necessary; make reasonable assumptions and state them clearly]

Q1 a) Explain Pre-Starting checks that should be carried out prior to starting the Marine Diesel Generator Engine.

[8.0 Marks]

b) Explain the importance of maintaining the Engine room log book with proper readings.

[3.0 Marks]

c) State 10 (Ten) most important readings you would enter in the Engine Room Log book.

[3.0 Marks]

Q2 a) Discuss the list of permits and assessments that are required to follow prior to proceeding with,

i. Welding work on deck.
ii. Scavenge space inspection.
iii. Compressor overhaul.
iv. Leaky pipe rectification on 3m Height from the platform.
v. Overhauled motor coupling removal which is seized to the shaft.

[7.0 Marks]

b) State how Scavenge fire occurs in a large Two Stroke Bore Engine and explain methods that are used to extinguish the fire and the precautions are to be taken to avoid the same.

[7.0 Marks]

Q3 a) Assume your sailing vessel Boiler just completed the 5 yearly survey at the port of Galle. State the Boiler starting procedure and steps that would be followed to bring it to the normal working pressure.

[6.0 Marks]

b) Draw a boiler safety v/v and State the procedure of boiler safety v/v reset.

[8.0 Marks]

Q4 a) Explain the importance of maintaining Boiler water in proper condition stating three tests that would be carried out for Boiler water.

[7.0 Marks]

b) Sketch and describe the Pressure Jet Burner in an auxiliary Boiler.

[7.0 Marks]

Q5 With respect to large bore two Stroke Main Engines;

a) State the Crank case inspection procedure including safety checks.

[7.0 Marks]

b) Explain common methods used to check the bearing condition and name the bearing clearances that are measured routinely.

[4.0 Marks]

c) Explain how to check crank shaft misalignment and the factors effecting the crank shaft deflection readings.

[3.0 Marks]

Q6 a) State the list of checks and activities that are required to be carried out during Morning Engine room rounds as a Junior Engineer.

[7.0 Marks]

b) Explain the procedure to be observed when taking over the responsibility for the engine room on a ship that is operating under Unmanned Machinery Space [UMS] conditions.

[7.0 Marks]