QUESTION BANK

Course **B.E Marine Engineering**

Batch **B.E (ME) 14**

Semester **VII**

Subject Code **ME 703**

Subject Name **Instrumentation & Control**

Part A

UNIT 1

1 Define Measurement.

2 Define Manometer.

3 Define Sensor.

4 Define Fluid.

5 Define Transducer.

6 Define Strain Gauge.

7 Define Process Pressure.

8 What are the various uses of fluid flow measurement on board?

9 Define pressure transducer.

10 Define DP cell.

UNIT 2

1 Define Torque.

2 Define Viscosity.

3 Define RTD.

4 List the types of pyrometer.

5 Define thermistor.

6 List the various uses of temperature measurement on board.

7 Define Tacho generator.

8 Define Power measurement transmitter.

9 State the uses of power measurement transmitter.

10 Define pulse measurement.

UNIT 3

1 Define Salinity.

2 State the use of salinity meter on board.

3 Define oxygen analyser.

4 What is explosive gas detector?

5 What is oil mist detector?

6 What is ODMCS?

7 Define smoke density meter.

8 What is the use of oily water measurement on board?

9 What is the use of explosive gas detector on board?

10 Define Oil mist.

UNIT 4

1 Define alarm.

2 Define trip circuit.

3 Define fire alarm.

4 Draw a simple fire alarm circuit.

5 What is dead man alarm?

6 Define UMS.

7 What is UMS alarm?

8 Define signal generator.

9 Define pneumatics.

10 Define telemetering.

UNIT 5

1 Define Hydraulics.

2 Define Calibration.

3 List some electrical aspects of hydraulic system.

4 What is a solenoid valve?

5 List the different types of pressure.

6 Define temperature transducer.

7 What is level transmitter?

8 List the level equipments.

9 Define measurement.

10 Define rangeability.

Part B

UNIT 1

1 Define Manometer and explain the types of manometer.

2 Write short note on differential pressure cell.

3 Write short note on Piezoelectric transducer.

4 Define pressure transducer? State and explain the uses of pressure transducer.

5 Explain briefly about remote tank level measurement by resistance sensor.

6 Write short note on boiler level control by DP Transmitter.

UNIT 2

1 Write short note on speed measurement.

2 Write short note on torque measurement.

3 Write short note on viscosity measurement.

4 Explain briefly about RTD with a neat sketch.

5 Explain briefly about thermocouple with a neat sketch.

6 Explain briefly about thermistor with a neat sketch.

UNIT 3

1 Write short note on salinity meter.

2 Write short note on alarm system in fresh water generator.

3 Write short note on boiler and salinity in boiler water.

4 Write short note on explosive gas detector.

5 Write short note on oil mist detector.

6 Write short note on smoke density meter.

UNIT 4

1 Write short note on alarm circuits.

2 Write short note on trip circuit.

3 Write briefly about alarm and trip circuit for various machinery.

4 Draw and explain briefly about simple fire alarm.

5 Explain briefly about dead man alarm.

6 Write short note on I/P and P/I converters.

UNIT 5

1 Write short note on electrical aspects of various hydraulic systems.

2 Write short note on system controlled by solenoid valves.

3 Write short note on tanker cargo valve operating system.

4 Write short note on cargo cranes.

5 Write short note on calibration.

6 Write short note on recording of various pressure.

Part C

UNIT 1

1 Explain in detail about manometer and differential pressure cell in process pressure measurement.

2 List the methods of fluid level measurements and Explain in detail about level sensors and transducers with neat diagrams.

3 Explain in detail about direct level measurement and its types.

4 List the methods of fluid flow measurement and explain in detail about electromagnetic flow meter with neat diagram.

UNIT 2

1 Explain in detail about torque measurement.

2 Explain in detail about RTD and thermocouple with neat diagram.

3 Explain in detail about pyrometer and its types.

4 Explain in detail about salinity and salinity meter.

UNIT 3

1 Explain in detail about thermistor and infrared type measurement.

2 Explain in detail about salinity and alarm system in fresh water generator.

3 Explain in detail about boiler and its alarm systems.

4 Explain in detail about oxygen analyser and explosive gas detector.

UNIT 4

1 Define UMS and explain in detail about UMS alarm system.

2 Explain in detail about alarm and trip circuits with a neat sketch.

3 Explain in detail about telemetering, pneumatic and electrical transducers and receivers.

4 Explain in detail about dead man alarm and UMS alarm.

UNIT 5

1 Explain in detail about steering gear system with diagram.

2 Explain in detail about level transmitter and equipments.

3 Explain in detail about calibration and temperature transducer.

4 Explain in detail about level transmitter and cargo cranes.