



Prerequisite: Zeal to learn the subject

Rationale: Perform breakdown service for a range of mechanical equipment such as machine tools, process control equipment, rotating mechanical equipment, conveyors, equipment for lifting and handling, process plant equipment, in accordance with approved procedures.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
0	0	15	15	0	0	100	100	200

Sr. No.	Topic	No. of Hours
01	<p>Install mechanical equipment at site</p> <p>Installing a range of mechanical equipment such as machine tools, process control equipment, rotating mechanical equipment, conveyors, lifting and handling equipment hydraulic press, furnaces, auto / manual welding machines, shot blasting machines and processing plant machinery that have mechanical systems connected to them, in accordance with approved procedures</p>	30
02	<p>Commission mechanical equipment after installation at site:</p> <p>Commissioning of a range of mechanical equipment such as machine tools, process control equipment, rotating mechanical equipment, equipment for lifting and handling, hydraulic press, furnaces, auto / manual welding machines, shot blasting machines, process plant equipment, after installation, in accordance with approved procedures</p>	30
03	<p>Deliver break down service on mechanical equipment installed and commissioned on site</p> <p>Delivering breakdown service for a range of mechanical equipment installed and commissioned on site such as machine tools, process control equipment, rotating mechanical equipment, conveyors, equipment for lifting and handling, hydraulic press, furnaces, auto / manual welding machines, shot blasting machines, process plant equipment, in accordance with approved procedures</p>	40
04	<p>Basic health and safety practices at the workplace:</p> <p>Identify risks and hazards at workplace, use of PPE, and apply good housekeeping practices, etc.,</p>	5



05	Work effectively with others: Effectively communicate with others and demonstrate good ethical practices and discipline.	5
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Distribution of marks weightage for cognitive level:

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
10	15	40	10	5	5

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

1. Reliability, Maintenance and Safety Engineering by A. K. Gupta, Laxmi Publications (P) Ltd
2. Textbook of Reliability and Maintenance Engineering by S Maheshwarkar, katson books.
3. Maintenance Engineering by Sushil Kumar Srivastava, S. chand Publications.
4. Reliability Engineering by S S Rao, Pearson publications

Course Outcome:

Sr. No.	CO statement	Marks % weightage
CO 1	Installation of different mechanical equipment at site	25
CO 2	Commissioning of mechanical equipment at site after installation	25
CO 3	Deliver breakdown service on mechanical equipment installed and commissioned on site	30
CO 4	Basic health and safety practices at the workplace	5
CO 5	Work effectively with others	5

List of Open Source Software/learning website:

<https://nptel.ac.in>,