

Course Title	BEARING AND LUBRICATION																												
Purpose	Good condition of bearing & prevent from breakdown of machine																												
Eligibility	Degree/Diploma in Mechanical branch or NTC/NAC with 2-3 years relevant trade experience																												
Duration	01 weeks																												
Location	ADVANCED TRAINING INSTITUTE, MUMBAI-22																												
Learning outcomes	After completion of training the candidate will- <ol style="list-style-type: none"> 1. Knowledge of maintenance 2. Knowledge of various types of Bearing 3. Identification of defect bearing failure 4. Knowledge of Bearing Analyer method 5. Caring of machine and its parts 6. Identifies of lubrication level 																												
Teaching methods	1 Lectures in classroom. 2. Demonstration 3. Practical sessions 3 Group exercises & discussion																												
Assessment methods	<table border="1" style="width: 100%;"> <tr> <td colspan="3" style="text-align: center;">1- Formative assessment consist of following things :</td> </tr> <tr> <td style="width: 15%;">Sr. No.</td> <td style="width: 60%;">Criteria for assessment</td> <td style="width: 25%;">Maximum marks</td> </tr> <tr> <td>1---A</td> <td>Attendance & Punctuality</td> <td>20</td> </tr> <tr> <td>2----B</td> <td>Sincerity</td> <td>20</td> </tr> <tr> <td>3----C</td> <td>Ability to grasp the topic</td> <td>10</td> </tr> <tr> <td colspan="3" style="text-align: center;">2- Summative assessment through objective type questions consist of following things:</td> </tr> <tr> <td>Sr. No.</td> <td>Criteria for assessment</td> <td>Maximum marks</td> </tr> <tr> <td>1.</td> <td>Test consist of practical knowledge</td> <td>30</td> </tr> <tr> <td>2.</td> <td>Test consist of Theoretical Knowledge</td> <td>20</td> </tr> </table>		1- Formative assessment consist of following things :			Sr. No.	Criteria for assessment	Maximum marks	1---A	Attendance & Punctuality	20	2----B	Sincerity	20	3----C	Ability to grasp the topic	10	2- Summative assessment through objective type questions consist of following things:			Sr. No.	Criteria for assessment	Maximum marks	1.	Test consist of practical knowledge	30	2.	Test consist of Theoretical Knowledge	20
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Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSTION (1.30 pm – 5.30)
	1	Introduction, Course objectives and Safety in work shop, Principle of maintenance.	Demonstration of various machine and inspection of machine tools
	2	Introduction, Types of Bearing ,Specification , material &its selection	Demo various types of bearing usage of machine .dismantle and inspection of wears, prone machine parts.
	3	Introduction, Installation, Condition & monitoring of bearing	Installation and removal , condition monitoring method of bearing
	4	Use of interchange ability, Limits, Fits , &Tolerance , Use of Bearing Analyser method	Check bearing with Bearing Analyser instrument & check Lubrication of each machine
	5	Introduction, Types of lubrication & its system.	Feedback / Validation
AIDS	LCD projector, white board, Power point , Charts , Models .		
Instruction material	TD/AVTS/AV07./03, CM , Soft copy of course material .		

Course Title	PREVENTIVE MAINTENANCE OF MACHINE TOOLS																												
Purpose	Maintenance of machine tools																												
Eligibility	Degree/Diploma in Mechanical branch or NTC/NAC with 2-3 years relevant trade experience																												
Duration	01 weeks																												
Location	ADVANCED TRAINING INSTITUTE, MUMBAI																												
Learning outcomes	After completion of training the candidate will 7. Knowledge of Preventive maintenance 8. Identification of defect parts of machine 9. Knowledge of various machine inspection 10. Caring of machine and its parts . 11. Identifies of lubrication level and change of machine oil																												
Teaching methods	1 Lectures in classroom. 2. Demonstration 3. Practical sessions 3 Group exercises & discussion																												
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	1	Introduction, Course objectives and Safety in work shop , Principle of Preventive maintenance .	Demonstration of various machine and inspection of machine tools
	2	Explain various parts of machine tools , preparation of maintenance & Inspection Schedule	Dismantle and inspection of wears, prone machine parts.
	3	Maintain the inspection and History Card of machine tools.	Do
	4	Use of different power transmission system in machine tools & Introduction of Lubrication	Lubrication of each machine
	5	Use of interchange ability, Limits, fits, tolerances in machine tool. types of lubrication & its system.	Feedback / Validation
AIDS	LCD projector, white board, Power point , Charts , Models .		
Instruction material	TD/AVTS/AV07./02, CM , Soft copy of course material .		

Course Title	REPAIRS AND MAINTENANCE OF MACHINE TOOLS																												
Purpose	Maintenance of machine tools																												
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Location	ADVANCED TRAINING INSTITUTE, MUMBAI																												
Learning outcomes	After completion of training the candidate will 12. Knowledge of Preventive maintenance 13. Identification of defect parts of machine 14. Knowledge of various machine inspection & Schedule 15. Knowledge of material handling equipments 16. Caring of machine and its parts 17. Identifies of lubrication level and change of machine oil																												
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	1	Introduction, Course objectives and Safety in work shop , Principle of Preventive maintenance .	Demonstration of various machine and inspection of machine tools
	2	Introduction , Maintenance &types of maintenance , Inspection & Schedule, maintain History Card of machine tool .	Dismantle and inspection of wears, prone machine parts.
	3	Introduction, Heat treatment & Material for machine tool	Demonstration of heat treatment method
	4	Standard procedure for dismantling and overhaul	Demonstration standards method of dismantling
	5	Introduction, Types of scraper ,& used	Use various types of scrapers
	6	Introduction , Fastener ,types ,Locking System ,used in machine tool	Use various types of fasteners
	7	Introduction, Power transmission system in machine tools	Demonstration various power transmission in machine tools
	8	Used of Inter change ability , Limits ,Fits ,&Tolerance in machine tool	Do
	9	Introduction, Testing Instruments in Machine tools	Demonstration various testing instruments in machine tools
	10	Introduction ,Lubrication ,Types ,lubrication system	Feedback / Validation
AIDS	LCD projector, white board, Power point , Charts , Models .		
Instruction material	TD/AVTS/AV07./01, CM , Soft copy of course material .		