

NSQF- Automotive Level 3

SL NO	Semester	Topics	Practical topics Classes	No of Hours
1	1 st Semester 15-07-2021 to 15-09-2021	<p>a) Unit-3 Regular Maintenance of an Engine. Session 1: Inspection of an engine. Session 2: Washing of an engine. Session 3 : Tuning fuel system of an engine. Session 4 : Tuning of an ignition system of Engine. Session 5: Tuning of engine lubrication System. Session 6: Tuning of engine cooling system. Session 7: Tightening of fastener (Nuts/Bolts/Screws). Session 8: Engine Timing (Tuning).</p> <p>b) Unit 1-Introduction to Engineering Geometrics and drawing. Session 1: Basic Geometric Constructions Session 2: Engineering Drawing</p> <p>c) Unit 2- Materials for construction of automotive components. Session 1 : Engineering materials. Session 2 : Basic manufacturing process.</p>	<p>a) I) Able to trace different leakages like oil, coolant and combustion gases. II) Able to handle the washing equipment. III) Able to set carburetor for ideal speed IV) Able to check the fuel line for leakage. V) Check the terminals for loose connection. VI) Able to check the level and quality of lubricating oil. VII) Able to trace for coolant leakage. VIII) Able to tight fasteners with specified torque and with sequence. IX) Able to feel the sound change after tuning process.</p> <p>b) I) Able to make geometric construction. II) Able to identify and describe various simple engineering drawing. III) Able to draw engineering drawing IV) Able to do dimensioning</p> <p>c) I) Able to identify engineering material used in automobiles. II) Able to list basic manufacturing process used in fabrication of a part of automobile. III) Able to list process used in manufacturing.</p>	<p>70</p> <p>15</p> <p>15</p>
2	1 st Test 13-09-2021 to 15-09-2021			
3	Assignment -1			

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4	2 nd Semester 16-09-2021 to 30-11-2021	<p>a) Unit-4 Regular maintenance of the Transmission system. Session 1 : Transmission System. Session 2: Clutch Maintenance and Adjustment.</p> <p>b) Unit-5 Regular maintenance of Gears. Session 1: Lubrication of gear box Session 2: Setting of gear box</p>	<p>a) I) Able to understand the function of different units used to transmit engine power. II) Able to identify the different units of the transmission system. III) Able to adjust the drive chain. IV) Able to inspect the functioning of clutch linkage for free Movement. V) Able to set free play adjustment of clutch. VI) Able to inspect the power transmission from clutch assembly VII) Able to set pedal travel adjustment of clutch pedal</p> <p>b) I) Able to check the level of lubricating oil and quality of oil in the gear box. II) Able to change the lubricating oil from the gearbox. III) Able to check the various combination of gears . IV) Able to set gear lever and selecting mechanism. V) Able to check the power transmission through respective gears.</p>	<p>55</p> <p>45</p>
5	Assignment -2			
6	Mid Term Exam			
7	3 RD Semester	<p>a) Unit 6- <u>Service of wheels</u>. Session 1: Importance of wheel. Session 2 : Importance of hub greasing and bearing play adjustments.</p>	<p>a) I) Able to identify different types of wheels II) Able to list the functions of wheels III) Able to remove the wheel and hub from axle. IV) Able to replace wheel stud and clean wheel bearing. V) Able to do greasing of hub and wheel bearing. VI) Able to adjust wheel play (Bearing) adjustment</p>	55

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		<p>b) Unit 7- <u>Maintenance of tubes and tyres.</u> Session 1: Tyre and tube maintenance. Session 2: Repairing of punctured tube</p> <p>c) Unit 8- <u>Maintenance of Brakes.</u> Session 1: Brake and its maintenance.</p>	<p>a) I) Able to measure air pressure in tyres as per specifications. II) Able to rotate tyres for normal wear. III) Able to repair punctured tubes with hot patch, and cold patch. IV) Able to do repairing a puncture of tubeless tyres.</p> <p>c) I) Able to understand different components of different types of brakes. II) Inspect and lubricate the controls of the braking system. III) Able to carry out Checking efficiency of brake IV) Able to carry out adjustments of rear brake. V) Able to carry out adjustments of front brake.</p>	<p>15</p> <p>30</p>
8	Assignmnet -3			
9	Final Exam			