

# Annexure – I

## Detail of THEORY Syllabus

SL NO	CONTENT	DETAILS
1	<b>Introduction to personal safety, Measuring Instruments and Hand Tools.</b>	(1.1) Knowledge of safe working environment (1.2) Knowledge about occupational health and personal safety. (1.3) Precautions on fire and safety hazards. (1.4) Basic first aid. (1.5) Use of different fire extinguishers. (1.6) Use of different measuring instruments(Vernier Caliper, Micrometer, Feeler gauge, Multimeter, Tachometer) (1.7) General purpose hand tools used in Automobile workshop.
2	<b>Introduction to 2 wheeler and 3 wheeler : Main Components and their uses</b>	2.1 Knowledge on different parts of 2wheeler 2.2 Differences between motorcycles, scooters, auto rickshaw 2.3 Define the use of different parts of 3 wheeler 2.4 Functions of main parts of an IC engine.
3	<b>Four stroke engine: Working Principle.</b>	3.1 Working principle of four stroke engine 3.2 Difference between two stroke and four stroke engine
4	<b>Alternating fuel feed system 3 wheeler.</b>	4.1 Different alternative fuel feed system in 3 wheeler 4.2 Function of CNG kit/LPG kit in a 3 wheeler
5	<b>Basic pollution norms, traffic rules and preventive maintenance</b>	5.1 Knowledge about BS I, II,III,IV 5.2 Difference between BS & Euro norms. 5.3 Preventive maintenance on selective parts. 5.4 Basic knowledge about Road Transport & Traffic rules.

## Detail of Practical Syllabus

SL NO	CONTENT	DETAILS
1	<b>Use of different types of fire extinguishers</b>	1.1 Application of A,B,C type fire extinguishers. 1.2 Do & Don't in fire hazards.
2	<b>Use of Vernier Caliper, Micrometer, Feeler Gauge, Multimeter &amp; Tachometer.</b>	2.1 Measurement of length, depth, diameter(inside & outside). 2.2 Measurements of Spark plug gap and valve tappet clearance. 2.3 Measurement of voltage, currents & resistance. 2.4. Measurement of RPM.
3	<b>Troubleshooting of problems related to Carburettor &amp; Alternate Fuel Feed System (LPG/CNG).</b>	3.1 Basic problems in a carburettor and their causes. 3.2 Dismantle different parts of a carburettor 3.3 Cleaning, Inspecting & refitting of different parts of a carburettor. 3.4 Tuning of a carburettor. 3.5 Basic problems in alternating fuel feed system(LPG/CNG) 3.6 Dismantling, Cleaning, inspecting & refitting of different parts of Multi valve, LPR, HPR.
4	<b>Troubleshooting of problems related to Clutch.</b>	4.1 Basic problem of a clutch and their causes. 4.2. Dismantling, replacing any parts and reassembling a clutch 4.3. Trouble shooting of clutch.
5	<b>Troubleshooting of problems related to Gear Box.</b>	5.1 Trouble shooting of Gear Box 5.2 Dismantling, Cleaning, Inspecting & assembling a Gear Box. 5.3 Understanding Gear Train & Gear shifting mechanism.
6	<b>Troubleshooting of problems related to Wheel,</b>	6.1 Basic problem of brake system and their causes. 6.2 Dismantling, Cleaning, Inspecting & assembling Brake assembly.

	<b>Brake &amp; Suspension System</b>	6.3 Trouble shooting of Brake system. 6.4 Brake bleeding process. 6.5. Checking of Toe in & Toe out in 3 wheeler. 6.6 Overhauling of suspension system.
7	<b>Troubleshooting of problems related to Battery, Ignition System, Starter Motor &amp; Electrical Accessories.</b>	7.1 Basic problems of ignition system and their causes 7.2 Dismantling, Cleaning, replacing parts of ignition system 7.3 Basic problems of battery and their causes. 7.4 Replacing a Battery in a correct sequence 7.5 Basic problems of lighting system, switch, relay, and their causes 7.6 Trouble shooting of Starter motor. 7.7 Basic trouble shooting in electrical accessories.

### Detail of Employability Skills Syllabus

Sl. No.	Content	Details
1.	English Literacy & Communication Skills	<p>Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)</p> <p>Transformation of sentences, Voice change, Change of tense, Spellings. Reading and understanding simple sentences about self, work and environment. Construction of simple sentences, Writing simple English.</p> <p>Speaking with preparation on self, on family, on friends, classmates, on know, picture reading gain confidence through role-playing . Taking messages, passing messages on and filling in message forms Greeting and introductions office hospitality, Resumes or curriculum vita essential parts, letters of application reference to previous communication.</p> <p>Communication and its importance, Principles of Effective communication, Types of communication – verbal, non verbal, written, email, talking on phone. Non verbal communication –characteristics, components-Para-language, Body – language,</p> <p>Barriers to communication and dealing with barriers.</p> <p>Handling nervousness/ discomfort.</p> <p>Self awareness, Importance of Commitment, Ethics and Values, Ways to Motivate Oneself, Personal Goal setting and Employability Planning.</p> <p>Manners, Etiquettes, Dress code for an interview, Do's &amp; Don'ts for an interview, Problem Solving, Confidence Building, Attitude.</p>
2.	I.T. Literacy	<p>Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.</p> <p>Basics of Operating System, WINDOWS, The user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc, Use of Common applications.</p> <p>Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion &amp; creation of Tables. Printing document.</p> <p>Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets</p> <p>Internet, Concept of Internet (Network of Networks), Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication.</p> <p>Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT – ACT, types of cyber crimes.</p>
3.	Entrepreneurship Skills	<p>Entrepreneurship vs. management, Entrepreneurial motivation. Performance &amp; Record, Role &amp; Function of Entrepreneur, Qualities of a good Entrepreneur, SWOT and Risk Analysis. Concept &amp; application of PLC, Sales &amp; distribution Management. Different Between Small Scale &amp; Large Scale Business, Market Survey, Method of marketing, Publicity and advertisement, Marketing Mix.</p>

		<p>Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programmes &amp; procedure &amp; the available scheme.</p> <p>Project formation, Feasibility, Legal formalities i.e., Shop Act, Estimation &amp; Costing, Investment procedure – Loan procurement – Banking Processes.</p>
4	Productivity & Quality Tools	<p>Definition, Necessity, Meaning of GDP.</p> <p>Personal / Workman – Incentive, Production linked Bonus, Improvement in living standard. Industry Nation.</p> <p>Skills, Working Aids, Automation, Environment, Motivation. How improves or slows down.</p> <p>Banking processes, Handling ATM, KYC registration, safe cash handling, Personal risk and Insurance.</p> <p>Meaning of quality, Quality characteristic. Definition, Advantage of small group activity, objectives of quality Circle, Roles and function of Quality Circles in Organization, Operation of Quality circle. Approaches to starting Quality Circles, Steps for continuation Quality Circles.</p> <p>Idea of ISO 9000 and BIS systems and its importance in maintaining qualities.</p> <p>Purpose of Housekeeping, Practice of good Housekeeping. Basic quality tools with a few examples</p>
5	Occupational safety, health and Environment Education & Labour Welfare Legislation	<p>Introduction to Occupational Safety and Health importance of safety and health at workplace. Basic Hazards, Chemical Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards.</p> <p>Occupational health, Occupational hygienic, Occupational Diseases/ Disorders &amp; its prevention.</p> <p>Basic principles for protective equipment.</p> <p>Accident Prevention techniques – control of accidents and safety measures.</p> <p>Care of injured &amp; Sick at the workplaces, First-Aid &amp; Transportation of sick person.</p> <p>Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's compensation Act.</p>