

# Model Curriculum

## Auto Service Technician Level 6

**SECTOR: AUTOMOTIVE**  
**SUB-SECTOR: AUTOMOTIVE VEHICLE SERVICE**  
**OCCUPATION: TECHNICAL SERVICE & REPAIR**  
**REF. ID: ASC/Q1404, VERSION 1**  
**NSQF LEVEL: 6**



## Certificate

### CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

**AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL**

for the

**MODEL CURRICULUM**


Complying to National Occupational Standards of

Job Role/ Qualification Pack: **'Auto Service Technician Level 6'** OP No. **'ASC/Q1404 NSQF Level 6'**

Date of Issuance: **8<sup>th</sup> January, 2016**

Valid up to: **7<sup>th</sup> January, 2017\***

\* Valid up to the next review date of the Qualification Pack

  
Authorised Signatory  
(Automotive Skills Development Council)

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# Auto Service Technician

## Level 6

### CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Auto Service Technician Level 6”, in the “Automotive” Sector/Industry and aims at building the following key competencies amongst the learner

<b>Program Name</b>	<b>Auto Service Technician Level6</b>		
<b>Qualification Pack Name &amp; Reference ID.</b>	Auto Service Technician Level 6 ASC/Q1404		
<b>Version No.</b>	1	<b>Version Update Date</b>	12-06 – 2013
<b>Pre-requisites to Training</b>	Preferably Diploma in Mechanical/ Automobile Engineering		
<b>Training Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Identify various operational faults in the mechanical systems of the vehicle</li> <li>• Complete diagnosing &amp; repair requirements in the engine and other mechanical aggregates</li> <li>• Identify and diagnose advanced electrical and electronic faults in a vehicle</li> <li>• Repair and overhaul engine and related aggregates</li> <li>• Repair and overhaul other mechanical aggregates and systems</li> <li>• Repair and overhaul electrical and electronic systems</li> <li>• Liaise with ancillary and OEM dealers, auto component field service team and repair workshops for service related processes</li> <li>• Plan and organise work requirements including various activities, deliverables or work output required in the given time</li> <li>• Maintain set quality standards</li> <li>• Use resources in a responsible manner (both material / equipment and manpower)</li> <li>• Interact &amp; communicate effectively with colleagues including member in the own group as well as other groups</li> <li>• Monitor the working environment and make sure it meets requirements for health, safety and security.</li> </ul>		

This course encompasses 8 out of 8 National Occupational Standards (NOS) of “Auto Service Technician Level 6” Qualification Pack issued by “SSC: Automotive Skills Development Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1.	<p><b>Introduction</b></p> <p><b>Theory Duration</b> (hh:mm) 08:00</p> <p><b>Practical Duration</b> (hh:mm) 00:00</p> <p><b>Corresponding NOS Code</b> Bridge Module</p>	<ul style="list-style-type: none"> <li>• General Discipline in the class room</li> <li>• General Safety Rules</li> <li>• Introduction to Automotive Industry</li> <li>• Familiarization about various auto manufacturers</li> <li>• Familiarization of terms associated with the sector</li> <li>• Brief outline about the course</li> <li>• Job Opportunities for an Auto Service Technician</li> </ul>	Nil
2.	<p><b>Maintain a healthy, safe and secure working environment</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 15:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 0003</p>	<ul style="list-style-type: none"> <li>• Comply with organisation’s current health, safety and security policies and procedures</li> <li>• Report any identified breaches in health, safety, and security policies and procedures to the designated person</li> <li>• Coordinate with other resources at the workplace to achieve the healthy, safe and secure environment for all incorporating all government norms esp. for emergency situations like fires, earthquakes etc.</li> <li>• Identify and correct any hazards like illness, accidents, fires or any other natural calamity safely and within the limits of individual’s authority</li> <li>• Report any hazards outside the individual’s authority to the relevant person in line with organisational procedures and warn other people who may be affected</li> <li>• Follow organisation’s emergency procedures for accidents, fires or any other natural calamity</li> <li>• Identify and recommend opportunities for improving health, safety, and security to the designated person</li> <li>• Complete all health and safety records are updates and procedures well defined</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Protection Equipment: Gloves, Safety Shoes, goggles, ear plugs, boiler suit</li> <li>• Workshop Safety: Fire extinguishers</li> <li>• First Aid</li> <li>• Safety signs</li> <li>• SOP Charts on safety norms and drills.</li> <li>• Charts of dos and Don’ts in work area.</li> </ul>
3.	<p><b>Assemblies and sub-assemblies in a vehicle and their basic functioning</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p>	<ul style="list-style-type: none"> <li>• Identify and explain the functioning of each system, component and aggregate of a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>• Cut sections, Aggregates, Assemblies/ sub-assemblies and working models of a vehicle (diesel, petrol, electrical, gas, hybrid etc.)</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>Practical Duration</b> (hh:mm) 10:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1407</p>		
4.	<p><b>Introduction to workshop tools and equipment and their usage</b></p> <p><b>Theory Duration</b> (hh:mm) 15:00</p> <p><b>Practical Duration</b> (hh:mm) 15:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1407</p>	<ul style="list-style-type: none"> <li>Identify all tools and equipment in a basic servicing toolkit</li> <li>Demonstrate the usage of each of the tool and equipment</li> <li>Follow standard operating procedures as prescribed by the suppliers in the user manuals of workshop tools and equipment</li> <li>Ensure all workshop tools, equipment and workstations are adequately maintained by carrying out scheduled checks, calibration and timely repairs where necessary</li> <li>Ensure any malfunctions observed in tools and equipment are reported to the concerned persons</li> </ul>	<ul style="list-style-type: none"> <li>Basic Tool Box</li> <li>Workshop tool/equipment :drain pan, oil can, jack hydraulic, bench vice, two post lift/ ramp, pneumatic tool, air compressor, special maintenance tools, bins/ racks, trolley, equipment stands, Wheel aligner, Head light aligner, tyre changer, wheel balancer etc.</li> <li>Tools: pressure indicators: feeler gauges, multi-metre, flow metre, temp gauge, dial gauge, tyre pressure indicator etc.</li> <li>Electrical and electronic testing equipment: volt meters, ammeters, ohmmeters, battery testing equipment, computer based diagnostic equipment, neon timing light, oscilloscopes etc</li> <li>Pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches etc.</li> <li>Measuring equipment: vernier callipers, micrometre, feeler gauges, compression gauge, brake fluid tester, brake fluid bleeding equipment, refract meter, radiator pressure gauge, hydrometer, thermometer, strut compressor, bearing installer, installer and</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
			puller for bearings, oil seal installer and mandrel, AC manifold gauge, multi-metre, flow metre, temp gauge, dial gauge etc.
5.	<p><b>Carry out advanced diagnosis of vehicle for engine and other mechanical repairs requirement</b></p> <p><b>Theory Duration</b> (hh:mm) 55:00</p> <p><b>Practical Duration</b> (hh:mm) 80:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1407</p>	<ul style="list-style-type: none"> <li>• Obtain sufficient information from the job card and customer/ service advisor to make an assessment of service and repair needs of the vehicle</li> <li>• Review the job card and develop clear and complete understanding of customer complaints</li> <li>• Use checklists and standard OEM operating procedures as per the vehicle service manual to confirm need for servicing, replacement of oils, filters and other parts etc.</li> <li>• Conduct routine and non-routine inspections for vehicle fitness assessment, emission testing, safety assessment, post-accident diagnostic assessment, post-repair serviceability assessment and manufacturer recall assessment</li> <li>• Ensure any additional malfunctions or repair requirements observed in the vehicle are reported to the service advisor and discussed with the customer</li> <li>• Conduct inspection of the engine and all other mechanical parts &amp; aggregates to diagnose need for repairs or adjustment</li> <li>• Conduct test drives to assess need for repairs, calibration or adjustment</li> <li>• Supervise dismantling and reassembly of aggregates of a vehicle for the purpose of diagnosing faults</li> <li>• Compare results of diagnostic inspections and tests against vehicle specifications and any regulatory requirements</li> <li>• Utilise various tools including computer-based diagnostic tools for accurate assessment of vehicle's operating parts and systems</li> <li>• Prepare a list of all the service, repair and replacement requirements of the vehicle</li> <li>• Finalise the list of all the service, repair and replacement requirements of the vehicle in consultation with service advisor</li> <li>• Ensure safe movement and parking of the vehicle in the workshop</li> <li>• Supervise junior technicians in their work</li> <li>• Ensure that trainings organized by the OEM from time-to-time are attended and knowledge levels are upgraded (esp. in</li> </ul>	<ul style="list-style-type: none"> <li>• Basic Tool Box</li> <li>• Workshop tool/equipment :drain pan, oil can, jack hydraulic, bench vice, two post lift/ ramp, pneumatic tool, air compressor, special maintenance tools, bins/ racks, trolley, equipment stands, Wheel aligner, Head light aligner, tyre changer, wheel balancer etc.</li> <li>• Diesel/ petrol serviceable training Vehicle</li> <li>• Aggregate Engines and fuel system (diesel, petrol, electrical, gas, hybrid etc.) <ul style="list-style-type: none"> <li>- cooling system</li> <li>- air supply systems</li> <li>- emission and exhaust system</li> <li>- ignition systems</li> <li>- clutch assembly</li> <li>- clutch operating system</li> <li>- gearbox (manual and automatic)</li> <li>- drivelines and hubs</li> <li>- drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>- steering system</li> <li>- suspension system</li> <li>- brake system (including regenerative braking systems)</li> <li>- tyres and wheels (including wheel alignment)</li> <li>- radiator</li> <li>- batteries and power storage system</li> <li>- power-generating systems (including charging systems)</li> </ul> </li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>case of newly launched products, product refreshes)</p> <ul style="list-style-type: none"> <li>• Drive a relevant 2/3/4 wheeler vehicle which is an important part of the diagnosis of the type of vehicle that is dealt by the relevant OEM</li> </ul>	<p>especially for electrical and hybrid vehicles)</p> <ul style="list-style-type: none"> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- energy recuperation systems, if applicable (e.g. in electric, gas and hybrid vehicles)</li> <li>- electronic systems including active and passive safety, media, comfort and convenience, supplementary restraint systems (SRS), networking and other systems</li> <li>- electronic control unit</li> <li>- hydraulic and pneumatic system</li> <li>- various lubrication systems</li> <li>- sensors, actuators, relays etc</li> </ul> <ul style="list-style-type: none"> <li>• Tools: pressure indicators: feeler gauges, multi-metre, flow metre, temp gauge, dial gauge, tyre pressure indicator etc.</li> <li>• Electrical and electronic testing equipment: volt meters, ammeters, ohmmeters, battery testing equipment, computer based diagnostic equipment, neon timing light, oscilloscopes etc</li> <li>• Pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>• Specialty wrenches: alignment wrenches, chain wrenches, locking</li> </ul>



Sr. No.	Module	Key Learning Outcomes	Equipment Required
			<p>wrenches, lug wrenches etc.</p> <ul style="list-style-type: none"> <li>• Measuring equipment: vernier callipers, micrometre, feeler gauges, compression gauge, brake fluid tester, brake fluid bleeding equipment, refract meter, radiator pressure gauge, hydrometer, thermometer, strut compressor, bearing installer, installer and puller for bearings, oil seal installer and mandrel, AC manifold gauge, multi-metre, flow metre, temp gauge, dial gauge etc.</li> <li>• Organic light emitting displays — anti-lock braking system abs/air bag scan tools, automotive scanners, graphing scanners, modular diagnostic information systems</li> <li>• Personal Protection Equipment: Gloves, Safety Shoes, goggles, ear plugs, boiler suit</li> <li>• Workshop Safety: Fire extinguishers</li> <li>• First Aid</li> <li>• Consumable: cotton waste, petrol/diesel, coolant, lubricant, grease, storage containers, air filters, oil filters, spark plugs, glow plugs etc.</li> <li>• Vehicle service manuals, vehicle hand book, job orders, work order, completion material requests, feedback forms, Technical reference books.</li> <li>• Teaching Aids: Charts, CBTs, Videos.</li> <li>• Laptops</li> </ul>
6.	<b>Carry out complete and advanced level diagnosis of vehicle for electrical and</b>	<ul style="list-style-type: none"> <li>• Identify and explain the functioning of various electrical systems, components and aggregates of a vehicle</li> <li>• Obtain sufficient information from customer/ service advisor to make an</li> </ul>	<ul style="list-style-type: none"> <li>• Basic Tool Box</li> <li>• Workshop tool/equipment: drain pan, oil can, jack hydraulic, bench vice, two post lift/ ramp, pneumatic</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>electronic repairs requirements.</b></p> <p><b>Theory Duration</b> (hh:mm) 06:00</p> <p><b>Practical Duration</b> (hh:mm) 80:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1408</p>	<p>assessment of service and repair needs of the vehicle</p> <ul style="list-style-type: none"> <li>● Review the job card and understand customer complaints</li> <li>● Use checklists and standard OEM operating procedures to confirm need for servicing, replacement of oils, filters and other parts etc.</li> <li>● Follow standard operating procedures for using workshop tools and equipment</li> <li>● Ensure all workshop tools, equipment and workstations are adequately maintained by carrying out scheduled checks, calibration and timely repairs where necessary</li> <li>● Ensure any additional malfunctions or repair requirements observed in are reported to the service advisor and discussed with the customer</li> <li>● Ensure any malfunctions observed in tools and equipment are reported to the concerned persons</li> <li>● Conduct routine and non-routine inspections for pre-purchase assessment, vehicle fitness assessment, emission testing, safety assessment, post-accident diagnostic assessment, post-repair serviceability assessment and manufacturer recall assessment</li> <li>● Select the most appropriate analytical and evaluative methodology including diagnostic process, sequence, tests and testing equipment</li> <li>● Identify, select and prepare tools and material required for the specific diagnostic process</li> <li>● Prepare system components for the diagnostic process including park-up, isolation and cleaning requirements</li> <li>● Conduct inspection of electrical and electronic systems including: <ul style="list-style-type: none"> <li>- stability/steering/ suspension systems (including electronic stability systems, vehicle dynamic control, closed loop electronic steering and multi-class Bus systems)</li> <li>- electric over hydraulic systems (including garbage compactors, crane rams, steering control, excavator bucket control, steering rudder control etc.)</li> </ul> </li> </ul>	<p>tool, air compressor, special maintenance tools, bins/ racks, trolley, equipment stands, drums for storage of waste oil, Wheel aligner, Head light aligner, tyre changer, wheel balancer etc.</p> <ul style="list-style-type: none"> <li>● Diesel/ petrol training Vehicle <ul style="list-style-type: none"> <li>- Aggregate cooling system</li> <li>- air supply systems</li> <li>- emission and exhaust system</li> <li>- ignition systems</li> <li>- clutch assembly</li> <li>- clutch operating system</li> <li>- gearbox (manual and automatic)</li> <li>- drivelines and hubs</li> <li>- drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>- steering system</li> <li>- suspension system</li> <li>- brake system (including regenerative braking systems)</li> <li>- tyres and wheels (including wheel alignment)</li> <li>- radiator</li> <li>- batteries and power storage system</li> <li>- power-generating systems (including charging systems especially for electrical and hybrid vehicles)</li> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- energy recuperation systems, if applicable (e.g. in electric, gas and</li> </ul> </li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>- engine management systems (including fuel cell technology/hydrogen, on line maintenance and remote diagnostics, common rail diesel direct injection, drive by wire, multi-class Bus systems and closed loop diesel engine management systems)</li> <li>- transmission/driveline systems (including clutches, torque converters, mechanical and automatic transmissions, drive and power take-off shafts and differentials, mechatronic modules and multi-class Bus systems)</li> <li>- braking systems (including ABS, engine brakes, electric retarders, electric trailer brakes, brake by wire and multi-class Bus systems)</li> <li>- safety systems (including fire suppressing, work load detecting, tyre pressure control, speed/load limiting, traction control, seat belt pre-tensioning, roll over protection, object detection, navigation aids, intelligent transport systems, intelligent SRS systems, adaptive cruise control, multi-class Bus systems, active and passive collision avoidance, infrared vision, lighting and windscreen wipers control)</li> <li>- monitoring/protection systems (including display types such as LCD, VFD, CRT, HUD, re-configurable systems, electronic analogue display, on board diagnostics, remote/wireless monitoring systems and multi-class Bus systems)</li> <li>- convenience and entertainment systems (including audio and visual units, compact disks, analogue tapes, radio, speaker types, amplifiers, crossovers, balancers, aerials and multi-class Bus systems)</li> <li>- theft deterrent systems (including remote keyless entry (RKE), immobiliser system design, passive entry systems, two way RKE, fingerprint technologies, rolling codes, transmitter and receiver operation, satellite systems)</li> <li>- electric and hybrid vehicle systems (including battery technology, motor drive systems, motor controllers, air conditioning systems, electronic protection systems and multi-class Bus systems)</li> <li>- climate control systems (including air conditioning, heating, blending systems and multi-class Bus systems)</li> </ul> <ul style="list-style-type: none"> <li>• Diagnose need for repairs, adjustment or</li> </ul>	<p>hybrid vehicles)</p> <ul style="list-style-type: none"> <li>- electronic systems including active and passive safety, media, comfort and convenience, supplementary restraint systems (SRS), networking and other systems</li> <li>- electronic control unit</li> <li>- hydraulic and pneumatic system</li> <li>- various lubrication systems</li> <li>- sensors, actuators, relays etc</li> </ul> <ul style="list-style-type: none"> <li>• Tools: pressure indicators:multi-metre, flow metre, temp gauge, dial gauge, tyre pressure indicator etc.</li> <li>• Organic light emitting displays — anti-lock braking system abs/air bag scan tools, automotive scanners, graphing scanners, modular diagnostic information systems</li> <li>• Trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc.</li> <li>• Other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, brake roller tester, chassis dynamometer, suspension activation, security activator etc</li> <li>• Pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>• Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>part replacement in electrical and electronic systems</p> <ul style="list-style-type: none"> <li>• Conduct test drives to assess need for repairs, calibration or adjustment</li> <li>• Compare results of diagnostic inspections and tests against vehicle specifications and any regulatory requirements</li> <li>• Prepare a list of all the service, repair and replacement requirements of the vehicle</li> <li>• Finalise the list of all the service, repair and replacement requirements of the vehicle in consultation with service advisor</li> <li>• Ensure safe movement and parking of the vehicle in the workshop</li> <li>• Assist junior technicians in their work</li> <li>• Utilise any computer-based diagnostic applications</li> <li>• Ensure that trainings organized by the OEM from time-to-time are attended and knowledge levels are upgraded (esp. in case of newly launched products, product refreshes)</li> <li>• Drive a relevant 2/3/4 wheeler vehicle which is an important part of the diagnosis of the type of vehicle that is dealt by the relevant OEM</li> </ul>	<p>etc.</p> <ul style="list-style-type: none"> <li>• Measuring equipment: vernier callipers, micrometre, feeler gauges, steel ruler, measuring tape analogue and digital multi-meters, lab oscilloscopes, data scanners, test lights, test LEDs, pulse generators etc.</li> <li>• Personal Protection Equipment: Gloves, Safety Shoes, goggles, ear plugs, boiler suit</li> <li>• Workshop Safety: Fire extinguishers</li> <li>• First Aid</li> <li>• Consumable: cotton waste, petro;/diesel, coolant, lubricant, grease, storage containers, air filters, oil filters, spark plugs, glow plugs etc</li> <li>• Samples: seals, sealants, fittings, gaskets, joints, fasteners, etc</li> <li>• Worn out/ defective/ spurious samples: seal, gaskets, clutch plate, brake shoes, brake pads, spark plug, oil filter, air cleaner etc.</li> <li>• Vehicle service manuals, vehicle hand book, job orders, work order, completion material requests, feedback forms, Technical reference books.</li> <li>• Teaching Aids: Charts, CBTs, Videos.</li> </ul>
7.	<p><b>Carry out servicing, repairs and overhauling of a vehicle (Advanced)</b></p> <p><b>Theory Duration (hh:mm)</b> 40:00</p>	<ul style="list-style-type: none"> <li>• Ensure that the correct spare parts, lubricants, tools and other materials required have been obtained</li> <li>• Service, repair and overhaul: <ul style="list-style-type: none"> <li>- engine and fuel system (diesel, petrol, electrical, gas etc.)</li> <li>- radiator</li> <li>- emission and exhaust system</li> <li>- brake system</li> <li>- clutch assembly</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Basic Tool Box</li> <li>• Workshop tool/equipment: drain pan, oil can, jack hydraulic, bench vice, two post lift/ ramp, pneumatic tool, air compressor, special maintenance tools, bins/ racks, trolley, equipment stands, drums for storage of waste oil, Wheel aligner, Head light aligner, tyre changer, wheel</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>Practical Duration</b> (hh:mm) 60:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1409</p>	<ul style="list-style-type: none"> <li>- gearbox, drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>- steering system</li> <li>- suspension system</li> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- electronic active and passive safety, media, comfort and convenience, supplementary restraint systems (SRS), networking and other systems</li> <li>- electronic control unit</li> <li>- tyres and wheels</li> <li>- cooling system</li> <li>- hydraulic and pneumatic system</li> <li>- various lubrication systems</li> <li>• Carry out service, repair and overhauling activities safely to ensure:               <ul style="list-style-type: none"> <li>- no damage to the vehicle or other vehicles</li> <li>- no damage to vehicle components and systems</li> <li>- no contact with hazardous materials</li> </ul> </li> <li>• Remove, refit and test electrical components for normal operation following body repair activities</li> <li>• Dismantle, assess, repair, clean, replace, adjust and reassemble vehicle mechanical, electric and electronic units</li> <li>• Ensure all dismantled components are cleaned and conditioned prior to reassembly</li> <li>• Conduct routine and non-routine inspections for vehicle fitness assessment, emission testing, safety assessment and post-repair serviceability assessment</li> <li>• Ensure disposal of materials in accordance with the organisation's policies</li> <li>• Ensure, in consultation with the service advisor, approval of the customer on all repairs carried out</li> <li>• Record all service and repairs carried out and ensure completeness of tasks assigned before releasing vehicle for the next procedure</li> <li>• Follow standard operating procedures for using workshop tools and equipment</li> <li>• Ensure all workshop tools, equipment and workstations are adequately maintained by</li> </ul>	<ul style="list-style-type: none"> <li>balancer etc.</li> <li>• Diesel/ petrol training Vehicle               <ul style="list-style-type: none"> <li>- Aggregate cooling system</li> <li>- air supply systems</li> <li>- emission and exhaust system</li> <li>- ignition systems</li> <li>- clutch assembly</li> <li>- clutch operating system</li> <li>- gearbox (manual and automatic)</li> <li>- drivelines and hubs</li> <li>- drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>- steering system</li> <li>- suspension system</li> <li>- brake system (including regenerative braking systems)</li> <li>- tyres and wheels (including wheel alignment)</li> <li>- radiator</li> <li>- batteries and power storage system</li> <li>- power-generating systems (including charging systems especially for electrical and hybrid vehicles)</li> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- energy recuperation systems, if applicable (e.g. in electric, gas and hybrid vehicles)</li> <li>- electronic systems including active and passive safety, media, comfort and convenience,</li> </ul> </li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>carrying out scheduled checks, calibration and timely repairs where necessary</p> <ul style="list-style-type: none"> <li>• Ensure any malfunctions observed in tools and equipment are reported to the concerned persons</li> <li>• Use resources responsibly (e.g. use of grease and other consumables)</li> <li>• Assist junior technicians in their work</li> <li>• Inform the relevant persons where repairs are economically or technically infeasible</li> <li>• Utilise any computer-based applications relevant to repairs and installations</li> <li>• Ensure that trainings organized by the OEM from time-to-time are attended and knowledge levels are upgraded (esp. in case of newly launched products, product refreshes)</li> </ul>	<p>supplementary restraint systems (SRS), networking and other systems</p> <ul style="list-style-type: none"> <li>- electronic control unit</li> <li>- hydraulic and pneumatic system</li> <li>- various lubrication systems</li> <li>- sensors, actuators, relays etc</li> </ul> <ul style="list-style-type: none"> <li>• Tools: pressure indicators: multi-metre, flow metre, temp gauge, dial gauge, tyre pressure indicator etc.</li> <li>• Trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc.</li> <li>• Other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, brake roller tester, chassis dynamometer, suspension activation, security activator etc</li> <li>• Pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>• Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches etc.</li> <li>• Measuring equipment: vernier callipers, micrometre, feeler gauges, steel ruler, measuring tape etc</li> <li>• Personal Protection Equipment: Gloves, Safety Shoes, goggles, ear plugs, boiler suit</li> <li>• Workshop Safety: Fire extinguishers</li> <li>• First Aid</li> <li>• Consumable: cotton waste, petro;/diesel, coolant,</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
			<p>lubricant, grease, storage containers, air filters, oil filters, spark plugs, glow plugs etc</p> <ul style="list-style-type: none"> <li>• Samples: seals, sealants, fittings, gaskets, joints, fasteners, etc</li> <li>• Worn out/ defective/ spurious samples: seal, gaskets, clutch plate, brake shoes, brake pads, spark plug, oil filter, air cleaner etc.</li> <li>• Vehicle service manuals, vehicle hand book, job orders, work order, completion material requests, feedback forms, Technical reference books.</li> <li>• Teaching Aids: Charts, CBTs, Videos.</li> </ul>
8.	<p><b>Carry out electrical and electronic repairs and overhauling of a vehicle(Advanced)</b></p> <p><b>Theory Duration</b> (hh:mm) 40:00</p> <p><b>Practical Duration</b> (hh:mm) 50:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1410</p>	<ul style="list-style-type: none"> <li>• Ensure that the correct spare parts, lubricants, tools and other materials required have been obtained</li> <li>• Repair and overhaul: <ul style="list-style-type: none"> <li>- stability/steering/ suspension systems (including electronic stability systems, vehicle dynamic control, closed loop electronic steering and multi-class Bus systems)</li> <li>- electric over hydraulic systems (including garbage compactors, crane rams, steering control, excavator bucket control, steering rudder control etc.)</li> <li>- engine management systems (including fuel cell technology/hydrogen, on line maintenance and remote diagnostics, common rail diesel direct injection, drive by wire, multi-class Bus systems and closed loop diesel engine management systems)</li> <li>- transmission/driveline systems (including clutches, torque converters, mechanical and automatic transmissions, drive and power take-off shafts and differentials, mechatronic modules and multi-class Bus systems)</li> <li>- braking systems (including ABS, engine brakes, electric retarders, electric trailer</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Basic Tool Box</li> <li>• Workshop tool/equipment: drain pan, oil can, jack hydraulic, bench vice, two post lift/ ramp, pneumatic tool, air compressor, special maintenance tools, bins/ racks, trolley, equipment stands, drums for storage of waste oil, Wheel aligner, Head light aligner, tyre changer, wheel balancer etc.</li> <li>• Diesel/ petrol training Vehicle <ul style="list-style-type: none"> <li>- Aggregate cooling system</li> <li>- air supply systems</li> <li>- emission and exhaust system</li> <li>- ignition systems</li> <li>- clutch assembly</li> <li>- clutch operating system</li> <li>- gearbox (manual and automatic)</li> <li>- drivelines and hubs</li> <li>- drive-train assembly and transmission systems (manual, automatic etc.)</li> </ul> </li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>brakes, brake by wire and multi-class Bus systems)</p> <ul style="list-style-type: none"> <li>- safety systems (including fire suppressing, work load detecting, tyre pressure control, speed/load limiting, traction control, seat belt pre-tensioning, roll over protection, object detection, navigation aids, intelligent transport systems, intelligent SRS systems, adaptive cruise control, multi-class Bus systems, active and passive collision avoidance, infrared vision, lighting and windscreen wipers control)</li> <li>- monitoring/protection systems (including display types such as LCD, VFD, CRT, HUD, re-configurable systems, electronic analogue display, on board diagnostics, remote/wireless monitoring systems and multi-class Bus systems)</li> <li>- convenience and entertainment systems (including audio and visual units, compact disks, analogue tapes, radio, speaker types, amplifiers, crossovers, balancers, aerials and multi-class Bus systems)</li> <li>- theft deterrent systems (including remote keyless entry (RKE), immobiliser system design, passive entry systems, two way RKE, fingerprint technologies, rolling codes, transmitter and receiver operation, satellite systems)</li> <li>- electric and hybrid vehicle systems (including battery technology, motor drive systems, motor controllers, air conditioning systems, electronic protection systems and multi-class Bus systems)</li> <li>- climate control systems (including air conditioning, heating, blending systems and multi-class Bus systems)</li> <li>- gearbox, drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- electronic active and passive safety, media, comfort and convenience, supplementary restraint systems (SRS), networking and other systems</li> </ul>	<ul style="list-style-type: none"> <li>- steering system</li> <li>- suspension system</li> <li>- brake system (including regenerative braking systems)</li> <li>- tyres and wheels (including wheel alignment)</li> <li>- radiator</li> <li>- batteries and power storage system</li> <li>- power-generating systems (including charging systems especially for electrical and hybrid vehicles)</li> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- energy recuperation systems, if applicable (e.g. in electric, gas and hybrid vehicles)</li> <li>- electronic systems including active and passive safety, media, comfort and convenience, supplementary restraint systems (SRS), networking and other systems</li> <li>- electronic control unit</li> <li>- hydraulic and pneumatic system</li> <li>- various lubrication systems</li> <li>- sensors, actuators, relays etc</li> <li>- DC Motor</li> <li>- Alternator</li> </ul> <p>• Tools: pressure indicators:multi-metre, flow metre, temp gauge,</p>



Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>- electronic control unit</li> <li>- hydraulic and pneumatic system</li> <li>• Repair all electrical and electronic faults including direct faults in:               <ul style="list-style-type: none"> <li>- input sensors</li> <li>- output actuators</li> <li>- wiring harnesses</li> <li>- computer systems</li> <li>- calibration/adjustment specifications</li> <li>- component specifications</li> <li>- component assembly</li> <li>- component damage</li> <li>- system modifications</li> </ul> </li> <li>• Repair indirect faults caused by the influence of external systems (electrical and electronic)</li> <li>• Carry out service, repair and overhauling activities safely to ensure:               <ul style="list-style-type: none"> <li>- no damage to the vehicle or other vehicles</li> <li>- no damage to vehicle components and systems</li> <li>- no contact with hazardous materials</li> </ul> </li> <li>• Remove, refit and test electrical componentry for normal operation following body repair activities</li> <li>• Dismantle, assess, repair, clean, replace, adjust and reassemble vehicle electric and electronic units</li> <li>• Ensure all dismantled components are cleaned and conditioned prior to reassembly</li> <li>• Conduct routine and non-routine inspections for vehicle fitness assessment, emission testing, safety assessment and post-repair serviceability assessment</li> <li>• Ensure disposal of materials in accordance with the organisation's policies</li> <li>• Ensure, in consultation with the service advisor, approval of the customer on all repairs carried out</li> <li>• Record all service and repairs carried out and ensure completeness of tasks assigned before releasing vehicle for the next procedure</li> <li>• Follow standard operating procedures for using workshop tools and equipment</li> <li>• Ensure all workshop tools, equipment and workstations are adequately maintained by carrying out scheduled checks, calibration and timely repairs where necessary</li> </ul>	<ul style="list-style-type: none"> <li>dial gauge, tyre pressure indicator etc.</li> <li>• Trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc.</li> <li>• Other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, brake roller tester, chassis dynamometer, suspension activation, security activator etc</li> <li>• Pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>• Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches etc.</li> <li>• Measuring equipment: vernier callipers, micrometre, feeler gauges, steel ruler, measuring tape etc</li> <li>• Personal Protection Equipment: Gloves, Safety Shoes, goggles, ear plugs, boiler suit</li> <li>• Workshop Safety: Fire extinguishers</li> <li>• First Aid</li> <li>• Consumable: cotton waste, petro;/diesel, coolant, lubricant, grease, storage containers, air filters, oil filters, spark plugs, glow plugs etc</li> <li>• Samples: seals, sealants, fittings, gaskets, joints, fasteners, etc</li> <li>• Worn out/ defective/ spurious samples: seal, gaskets, clutch plate, brake shoes, brake pads, spark plug, oil filter, air cleaner etc.</li> <li>• Vehicle service manuals, vehicle hand book, job</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>Ensure any malfunctions observed in tools and equipment are reported to the concerned persons</li> <li>Use resources responsibly (e.g. use of grease and other consumables)</li> <li>Request assistance from a senior technician when required</li> <li>Assist junior technicians in their work</li> <li>Inform the relevant persons where repairs are economically or technically infeasible</li> <li>Utilise any computer-based applications relevant to repairs and installations</li> <li>Ensure that trainings organized by the OEM from time-to-time are attended and knowledge levels are upgraded (esp. in case of newly launched products, product refreshes)</li> </ul>	<p>orders, work order, stock records, repair quotations, personnel records, time sheets, meeting notes, completion material requests, feedback forms, Technical reference books.</p> <ul style="list-style-type: none"> <li>Teaching Aids: Charts, CBTs, Videos.</li> </ul>
9.	<p><b>Liaise with external automotive stakeholders</b></p> <p><b>Theory Duration</b> (hh:mm) 25:00</p> <p><b>Practical Duration</b> (hh:mm) 35:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 1411</p>	<ul style="list-style-type: none"> <li>Establish a process for gathering technical information from the field</li> <li>Identify technical problems with products (tools, spare parts, components etc.)</li> <li>Assist the service centre in solving persistent technical problems arising from tools, spare parts, components etc.</li> <li>Communicate market demand to OEM service function through market product report</li> <li>Handle persistent customer complaints and technical queries, document and report them to OEM service function</li> <li>Handle persistent problems and technical issues arising with vehicles, tools, components and spare parts</li> <li>Provide technical feedback on failure of automotive components and new complaints</li> <li>Handle problems related to break down of vehicles</li> <li>Manage the availability of spare parts</li> </ul>	<ul style="list-style-type: none"> <li>Defect Report <ul style="list-style-type: none"> <li>Tools</li> <li>Spare parts</li> <li>Automotive components, Assemblies, sub assemblies</li> </ul> </li> <li>Inspection Record <ul style="list-style-type: none"> <li>Tools</li> <li>Spare parts</li> <li>Automotive components, Assemblies, sub assemblies</li> </ul> </li> <li>Calibration Record of tools and equipment</li> <li>Tool store and Spare parts Stores Records/Ledgers <ul style="list-style-type: none"> <li>Demand</li> <li>Availability</li> <li>Issue</li> </ul> </li> <li>Sample document for practice: defect report, Demand forms etc</li> </ul>
10.	<p><b>Plan and organise work to meet expected outcomes</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p>	<ul style="list-style-type: none"> <li>Keep immediate work area clean and tidy</li> <li>Treat confidential information as per the organisation's guidelines</li> <li>Work in line with organisation's policies and procedures</li> <li>Work within the limits of job role</li> <li>Obtain guidance from appropriate people, where necessary</li> </ul>	<ul style="list-style-type: none"> <li>Cleaning equipment and solutions</li> <li>Audio/video</li> <li>Training charts</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>Practical Duration</b> (hh:mm) 15:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 0001</p>	<ul style="list-style-type: none"> <li>• Ensure work meets the agreed requirements</li> <li>• Establish and agree on work requirements with appropriate people</li> <li>• Manage time, materials and cost effectively</li> <li>• Use resources in a responsible manner</li> </ul>	
11.	<p><b>Work effectively in a team</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 15:00</p> <p><b>Corresponding NOS Code</b> ASC/ N 0002</p>	<ul style="list-style-type: none"> <li>• Maintain clear communication with colleagues (by all means including face-to-face, telephonic as well as written)</li> <li>• Work with colleagues to integrate work</li> <li>• Pass on information to colleagues in line with organisational requirements both through verbal as well as non-verbal means</li> <li>• Work in ways that show respect for colleagues</li> <li>• Carry out commitments made to colleagues</li> <li>• Let colleagues know in good time if cannot carry out commitments, explaining the reasons</li> <li>• Identify problems in working with colleagues and take the initiative to solve these problems</li> <li>• Follow the organisation's policies and procedures for working with colleagues</li> </ul>	<ul style="list-style-type: none"> <li>• Audio/video</li> <li>• Role Play</li> </ul>
12.	<p><b>Functional English Language</b></p> <p><b>Theory Duration</b> (hh:mm) 16:00</p> <p><b>Practical Duration</b> (hh:mm) 16:00</p> <p><b>Corresponding NOS Code</b> ASC/N 1407, ASC/N 1408, ASC/N 1409, ASC/N 1410, ASC/N 1411, ASC/N 0001, ASC/N 0002, ASC/N 0003</p>	<ul style="list-style-type: none"> <li>• Use good English and communicate effectively with all stakeholders</li> <li>• Understand and use proper grammar and vocabulary</li> <li>• Write reports, case-studies, applications etc. in proper English</li> </ul>	<ul style="list-style-type: none"> <li>• Audio/video on English course</li> <li>• Reference books English</li> <li>• Work books for English</li> </ul>
13.	<p><b>Soft Skills</b></p> <p><b>Theory Duration</b> (hh:mm) 24:00</p>	<ul style="list-style-type: none"> <li>• Deal with colleagues, supervisor, team members, vendors and customers with confidence</li> <li>• Demonstrate etiquettes while dealing with team members and customer</li> <li>• Greet team members, supervisor and customer</li> </ul>	<ul style="list-style-type: none"> <li>• Case Study - Audio/video</li> <li>• Role play</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>Practical Duration</b> (hh:mm) 24:00</p> <p><b>Corresponding NOS Code</b> ASC/N 1407, ASC/N 1408, ASC/N 1409, ASC/N 1410, ASC/N 1411, ASC/N 0001, ASC/N 0002, ASC/N 0003</p>	<ul style="list-style-type: none"> <li>• Demonstrate efficient problem solving skills</li> <li>• Provide timely feedback to team members</li> <li>• Motivate team to perform efficiently and timely</li> <li>• Apply balanced judgement to different situations</li> <li>• Analyze Data and Activities</li> </ul>	
14.	<p><b>Computer Training</b></p> <p><b>Theory Duration</b> (hh:mm) 24:00</p> <p><b>Practical Duration</b> (hh:mm) 24:00</p> <p><b>Corresponding NOS Code</b> ASC/N 1407, ASC/N 1408, ASC/N 1409, ASC/N 1410, ASC/N 1411</p>	<ul style="list-style-type: none"> <li>• Operate a computer and other peripherals</li> <li>• Retrieve, create, modify and delete data using computer</li> <li>• Create analytical reports from data available</li> <li>• Create documents using MS Office (word, excel)</li> <li>• Send and receive emails</li> <li>• Browse Internet to find relevant solutions to problems</li> </ul>	<ul style="list-style-type: none"> <li>• CBTs on working on computer</li> <li>• Computer system</li> <li>• UPS</li> <li>• Internet connection</li> </ul>
15.	<p><b>OJT</b></p> <p><b>Theory Duration</b> (hh:mm) 00:00</p> <p><b>Practical Duration</b> (hh:mm) 164:00</p> <p><b>Corresponding NOS Code</b> Bridge Module</p>	<ul style="list-style-type: none"> <li>• Practical training at selected organization/workshop</li> </ul>	
	<p><b>Total Duration</b></p> <p><b>Theory Duration</b> <b>347</b></p> <p><b>Practical Duration</b> <b>603</b></p>	<p><b>Unique Equipment Required:</b></p> <ul style="list-style-type: none"> <li>• Basic Tool Box</li> <li>• Workshop tool/equipment: drain pan, oil can, jack hydraulic, bench vice, two post lift/ ramp, pneumatic tool, air compressor, special maintenance tools, bins/ racks, trolley, equipment stands, drums for storage of waste oil , Wheel aligner, Head light aligner, tyre changer, wheel balancer etc.</li> <li>• Diesel/ petrol training Vehicle</li> <li>- Aggregate cooling system</li> <li>- air supply systems</li> <li>- emission and exhaust system</li> <li>- ignition systems</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>- clutch assembly</li> <li>- clutch operating system</li> <li>- gearbox (manual and automatic)</li> <li>- drivelines and hubs</li> <li>- drive-train assembly and transmission systems (manual, automatic etc.)</li> <li>- steering system</li> <li>- suspension system</li> <li>- brake system (including regenerative braking systems)</li> <li>- tyres and wheels (including wheel alignment)</li> <li>- radiator</li> <li>- batteries and power storage system</li> <li>- power-generating systems (including charging systems especially for electrical and hybrid vehicles)</li> <li>- electrical wire harness, lighting, ignition, electronic and air-conditioning systems etc.</li> <li>- energy recuperation systems, if applicable (e.g. in electric, gas and hybrid vehicles)</li> <li>- electronic systems including active and passive safety, media, comfort and convenience, supplementary restraint systems (SRS), networking and other systems</li> <li>- electronic control unit</li> <li>- hydraulic and pneumatic system</li> <li>- various lubrication systems</li> <li>- sensors, actuators, relays etc</li> <li>- DC Motor</li> <li>- Alternator</li>   <li>• Tools: pressure indicators: multi-metre, flow metre, temp gauge, dial gauge, tyre pressure indicator etc.</li> <li>• Trim or moulding tools: carbon scrapers, gasket scrapers, scrapers, spoons etc.</li> <li>• Other tools: hand tools, power tools, lifting and jacking equipment, tensioning equipment, brake roller tester, chassis dynamometer, suspension activation, security activator etc</li> <li>• Pullers: ball joint separators, bearing pullers, gear puller tools, slide hammers etc.</li> <li>• Specialty wrenches: alignment wrenches, chain wrenches, locking wrenches, lug wrenches etc.</li> <li>• Measuring equipment: vernier callipers, micrometre, feeler gauges, compression gauge, brake fluid tester, brake fluid bleeding equipment, refract meter, radiator pressure gauge, hydrometer, thermometer, strut compressor, bearing installer, installer and puller for bearings, oil seal installer and mandrel, AC manifold gauge, multi-metre, flow metre, temp gauge, dial gauge etc.</li> <li>• Personal Protection Equipment: Gloves, Safety Shoes, goggles, ear plugs, boiler suit</li> <li>• Workshop Safety: Fire extinguishers</li> <li>• First Aid</li> <li>• Safety signs</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• SOP Charts on safety norms and drills</li> <li>• Consumable: cotton waste, petro;/diesel, coolant, lubricant, grease, storage containers, air filters, oil filters, spark plugs, glow plugs etc</li> <li>• Samples: seals, sealants, fittings, gaskets, joints, fasteners, etc</li> <li>• worn out/ defective/ spurious samples: seal, gaskets, clutch plate, brake shoes, brake pads, spark plug, oil filter, air cleaner etc.</li> <li>• Vehicle service manuals, vehicle hand book, job orders, work order, stock records, repair quotations, personnel records, time sheets, meeting notes, completion material requests, feedback forms, Technical reference books.</li> <li>• Teaching Aids: Charts, CBTs, Videos.</li> <li>• Cleaning equipment and solutions</li> <li>• Case Study - Audio/video</li> <li>• Charts of dos and Don'ts in work area.</li> <li>• Audio/video on English course</li> <li>• Reference books English</li> <li>• Work books for English</li> <li>• CBTs on working on computer</li> <li>• Computer system/ Laptop</li> <li>• UPS</li> </ul> <p>Internet connection</p>	

**Grand Total Course Duration: 950 Hours 0 Minutes\***

**\* These are only notional number of hours. The training must achieve competency outcomes as define by the QP/NOS**

**(This syllabus/ curriculum has been approved by Automotive Skills Development Council (name of relevant Sector Skill Council or NSDC designated authority)**

## Trainer Prerequisites for Job role: “Auto Service Technician Level 6” mapped to Qualification Pack: “ASC/Q1404, Version 1”

Sr. No.	Area	Details
1	<b>Job Description</b>	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “ASC/Q1404, Version 1”.
2	<b>Personal Attributes</b>	<ul style="list-style-type: none"> <li>▪ Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training.</li> <li>▪ Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused.</li> <li>▪ Eager to learn and keep oneself abreast of the latest developments and newer technologies used in the various systems of the vehicle and its aggregates is highly desirable.</li> <li>▪ Should be able to demonstrate the usage of workshop equipment, instruments, special instruments and tools.</li> <li>▪ Should have sharp diagnostic abilities for identifying reasons of problems in vehicles and troubleshoot.</li> <li>▪ Should be hands-on with servicing of vehicles to provide experiential training.</li> </ul>
3	<b>Minimum Educational Qualifications</b>	Engineer/ Diploma/ ITI in mechanical engineering from a recognized institute
4a	<b>Domain Certification</b>	Certified for Job Role: “Senior Trainer Service Technician” mapped to QP: <u>ASC/Q1401, ASC/QQ1402, ASC/Q 1403, ASC/Q 1404, ASC/Q 1408, ASC/Q 1409, ASC/Q 1411, ASC/Q1414, ASC/Q 1415, ASC/Q1416, ASC/Q 1101</u> ”. Minimum accepted score-75%, as per ASDC guidelines.
4b	<b>Platform Certification</b>	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “SSC/Q1402”. Minimum accepted score as per respective SSC guidelines.
5	<b>Experience</b>	<ul style="list-style-type: none"> <li>▪ Minimum 10 years of experience in Automotive Service Industry</li> <li>▪ Experience of working on latest technology</li> <li>▪ Minimum of five years of experience as trainer with OEMs</li> <li>▪ Age: Preferably, not over 35-45 years old; ex-service person and retired auto industry trainers may also apply</li> </ul>

## Annexure: Assessment Criteria

<b>Assessment Criteria for Auto Service Technician Level 6</b>	
<b>Job Role</b>	<b>Auto Service Technician Level 6</b>
<b>Qualification Pack</b>	<b>ASC/Q1404, Version 1</b>
<b>Sector Skill Council</b>	<b>Automotive Skills Development Council</b>

<b>Sr. No.</b>	<b>Guidelines for Assessment</b>
1	Assessment to be conducted by ASDC as per competency output defined in the NOS/QP and the assessment criteria provided in the NOS/QP
2	Assessment to be carried out by a third party Assessment Body duly affiliated to the SSC.
3	ASDC assessments will be comprehensive and cover all aspects of acquired knowledge, practical skills and also basic ability to communicate. Accordingly, evaluation process would include: <ol style="list-style-type: none"> <li>Theory/Knowledge test</li> <li>Practical demonstration test</li> <li>Face to Face Viva</li> </ol>
4	Theory/Knowledge assessment will be carried out on line through a link provided for each assessment that generates a random paper from a bank of questions available at the back end. <ul style="list-style-type: none"> <li>- Exception to an online test in favour of Paper Test would be subject to non-availability of requisite broad band and/or hardware.</li> <li>- On line test would be conducted in the presence of an ASDC assessor till web enabled proctoring is deployed.</li> </ul>
5	ASDC assessor would be conducting Practical and Viva as per the criteria provided in the NOS/QP.
6	Cut off criteria for certification (Marks obtained in %):75%



Sr. No.	NOS No.	NOS Name	Total Marks	Marks Allocation: Skills	Marks Allocation: Knowledge
1	ASC/N 1407	Carry out advanced diagnosis of vehicle for engine and other mechanical repairs requirement	260	160	100
2	ASC/N 1408	Carry out complete and advanced level diagnosis of vehicle for electrical and electronic repairs requirements.	260	160	100
3	ASC/N 1409	Carry out servicing, repairs and overhauling of a vehicle (Advanced)	195	120	75
4	ASC/N 1410	Carry out electrical and electronic repairs and overhauling of a vehicle(Advanced)	195	120	75
5	ASC/N 1411	Liaise with external automotive stakeholders	130	80	50
6	ASC/N 0001	Plan & organize work to meet expected outcome	65	40	25
7	ASC/N 0002	Work effectively in a team	65	40	25
8	ASC/N 0003	Maintain a healthy, safe and secure working environment	65	40	25
<b>Total:</b>			<b>1235</b>	<b>760</b>	<b>475</b>
<b>Percentage Weight age:</b>				<b>62%</b>	<b>38%</b>
<b>Minimum Pass% to qualify:</b>				<b>75%</b>	<b>75%</b>



## **Automotive Skills Development Council**

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