

# Model Curriculum

## Paver Operator

**SECTOR: INFRASTRUCTURE EQUIPMENT**  
**SUB-SECTOR: EQUIPMENT OPERATIONS**  
**OCCUPATION: OPERATOR**  
**REF ID: IES/Q0120, V1.0**  
**NSQF LEVEL: 4**



## Certificate

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

is hereby issued by the

**INFRASTRUCTURE EQUIPMENT SKILL COUNCIL**

for the

### MODEL CURRICULUM

Complying to National Occupational Standards of  
Job Role/ Qualification Pack: 'Paver Operator' QP No. 'IES/ Q 0120 NSQF Level 4'

Date of issuance: June 1<sup>st</sup>, 2017

Valid up to: April 30<sup>th</sup>, 2018

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



Authorized Signatory  
(Infrastructure Equipment Skill Council)

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# Paver Operator

## CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Paver Operator”, in the “Infrastructure Equipment” Sector/Industry and aims at building the following key competencies amongst the learner

<b>Program Name</b>	<b>Paver Operator</b>		
<b>Qualification Pack Name &amp; Reference ID</b>	IES/Q0120		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	01 June 2017
<b>Pre-requisites to Training</b>	Preferably Class 8th Standard Certification Training in Paver Operations preferred. Preferably 2 years of experience as Junior Paver Operator.		
<b>Training Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• <b>Carry out pre-operation checks on a paver.</b> General introduction to pavers, basic working of parts and systems; engine, hydraulic and electrical, operational controls and instrument panel, preparing machine for operations</li> <li>• <b>Carry out paver operations.</b> Properties of materials and aggregates, starting of paver, loading of materials, monitoring and regulating flow, shutting down and post-operative checks</li> <li>• <b>Carry out maintenance and trouble shooting of paver.</b> General maintenance procedures and periodic service schedule; common faults and their diagnosis; reports and documents.</li> <li>• <b>Comply with worksite health and safety guidelines.</b> Health, safety and environment policies; personal protective equipment, fire-fighting equipment, basic first aid for common injuries at work site</li> </ul>		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of “Paver Operator” Qualification Pack issued by “Infrastructure Equipment Skill Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<p><b>Carry out pre-operation checks on a paver</b></p> <p><b>Theory Duration</b> (hh:mm) 08:00</p> <p><b>Practical Duration</b> (hh:mm) 20:00</p> <p><b>Corresponding NOS Code</b> IES/N0158</p>	<p><b>Organisational Context: Acquire a working knowledge of the following:</b></p> <ul style="list-style-type: none"> <li>• Organisation structure, reporting and escalation line.</li> <li>• Performance standards and procedures in the company.</li> <li>• Work target and review mechanism with supervisor</li> <li>• Location and process for storage and disposal of waste.</li> <li>• Safety policy of the organisation and emergency procedures</li> </ul> <p><b>Technical Knowledge: Understand the fundamentals of the following:</b></p> <ul style="list-style-type: none"> <li>• Different types of pavers, features, performance: <ul style="list-style-type: none"> <li>○ Wheeled</li> <li>○ Tracked</li> </ul> </li> <li>• Parts and systems of pavers and its functioning: <ul style="list-style-type: none"> <li>○ Tractor Unit</li> <li>○ Screed Unit</li> </ul> </li> <li>• <u>Basics of Engine</u> and its systems; procedure for filling and topping up of fuel, coolant, oils.</li> <li>• <u>Basics of Electricals</u>; types of motors used and its functioning.</li> <li>• <u>Basics of Hydraulics</u>; types of pumps and motors and its functioning</li> <li>• Road layers, types of aggregates and its physical characteristics.</li> <li>• Basics of screed heating and various mechanisms.</li> <li>• Method of greasing and lubrication different parts of the equipment</li> <li>• Cabin controls and Instrument panels; their operation.</li> <li>• Optimal working condition of components and monitoring systems</li> <li>• Documents and log books to be maintained for recording activities.</li> <li>• Procedures for reporting defects if beyond his scope.</li> </ul> <p><b>Skills - Core &amp; Professional. Acquire the ability to:</b></p> <ul style="list-style-type: none"> <li>• Read &amp; understand general instructions/guidelines related to equipment &amp; worksite ops.</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Scaled Model of a Paver for theory sessions</u></li> <li>• <u>Active Paver at nearby project site for practical sessions</u></li> <li>• Class room with audio-video system</li> <li>• Manufacturers O and M Manual &amp; Video</li> <li>• Safety video</li> <li>• PPE Items &amp; Safety Gear</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>• Write and record any incidents &amp; deviations on the prescribed formats.</li> <li>• Orally communicate information &amp; instructions to co-workers in a clear and concise manner.</li> <li>• Plan and organise work related tasks with all concerned in most efficient and cost effective way.</li> </ul> <p><b>Performance Criteria: Execute the following tasks and procedures:</b></p> <p><b>Pre-op Checks</b></p> <ul style="list-style-type: none"> <li>• Conduct visual inspection of paver for any leakages, damages, missing or broken parts</li> <li>• <u>Tractor Unit</u> <ul style="list-style-type: none"> <li>○ Air Induction System and Filters/Dirt Evacuators,</li> <li>○ Fuel, lube, coolant and transmission oil levels, top up if necessary</li> <li>○ Battery electrolyte levels, Alternator and mounting brackets,</li> <li>○ Electrical wirings and connections</li> <li>○ Hydraulic: Pumps and motors</li> <li>○ Tow arms and cylinders for damage</li> </ul> </li> <li>• <u>Screed Unit</u> <ul style="list-style-type: none"> <li>○ Screed plate, tamping bar and attack angle</li> <li>○ Sensor assembly</li> <li>○ Heating mechanism; electrical &amp; gas</li> <li>○ Hopper system for wear or damage</li> <li>○ Conveyor belts for wear and tear.</li> <li>○ Distribution system for materials/aggregates, augurs</li> </ul> </li> <li>• Check and clean operators cabin and control console steps and hand holds</li> <li>• Check all the controls related to feeders, conveyors, augurs and brakes</li> <li>• Check instrument panel gauges, indicators, lights, horns and sensors</li> <li>• Lubrication of all controls, pivots and joints, moving parts as applicable.</li> <li>• <u>Wheeled Paver:</u> Check inflation pressure of tyres to be as per specs.</li> <li>• <u>Tracked Paver:</u> Check track tension and</li> </ul>	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p>adjust as necessary.</p> <ul style="list-style-type: none"> <li>Ensure safety covers and guards; equipment in place before operating the paver.</li> </ul> <p><b>Reporting &amp; Documentation</b></p> <ul style="list-style-type: none"> <li>Maintain a log book to record all actions done before starting operations.</li> <li>Follow laid down procedure for reporting defects beyond his scope.</li> </ul>	
2	<p><b>Carry out paver operations.</b></p> <p><b>Theory Duration</b> (hh:mm) 30:00</p> <p><b>Practical Duration</b> (hh:mm) 75:00</p> <p><b>Corresponding NOS Code</b> IES/N0159</p>	<p><b>Organisational Context: Acquire working knowledge of the following:</b></p> <ul style="list-style-type: none"> <li>Procedures and guidelines related to breakdown &amp; maintenance services.</li> <li>Location of tools and equipment and procedure for issue and return.</li> <li>Safety policy of the organisation and emergency drills.</li> </ul> <p><b>Technical Knowledge. Understand the fundamentals of the following:</b></p> <ul style="list-style-type: none"> <li>Basics of equipment operations listed under pre-op checks.</li> <li>Starting procedure as per correct sequence and specs.</li> <li>Operating the various systems to ensure efficient paving.</li> <li>Monitoring systems to ensure optimal output/productivity.</li> <li>Stopping procedure including emergency shutdown.</li> <li>Various hand signals, road safety rules &amp; emergency signs at site.</li> <li>Documents and log books to be maintained for recording activities.</li> <li>Procedures for reporting defects and mal-functions if beyond his scope.</li> </ul> <p><b>Skills - Core &amp; Professional. Acquire the ability to:</b></p> <ul style="list-style-type: none"> <li>In addition to core and generic skills listed above</li> <li>Interpret signage at project work site correctly.</li> <li>Use correct terminology while interacting with others at site</li> <li>Help plan work schedule in time bound and cost effective way.</li> <li>Help identify operational slow-downs and take timely remedial action.</li> </ul>	<ul style="list-style-type: none"> <li>Scaled Model of Paver for theory sessions</li> <li>Active Paver at nearby project site for practical sessions</li> <li>Adequate stocks of aggregates and consumables.</li> <li>Class room with audio-video system</li> <li>Manufacturers O and M Manual &amp; Video</li> <li>Safety video</li> <li>PPE Items &amp; Safety Gear</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p><b>Performance Criteria. Execute the following tasks and procedures:</b></p> <p><b>Starting the Paver.</b></p> <ul style="list-style-type: none"> <li>Start the machine as per sequential procedure and check all systems are functioning.</li> <li>Pre-heat paving screed before placing the asphalt as per the set standards.</li> </ul> <p><b>Operating the Paver</b></p> <ul style="list-style-type: none"> <li>Align the paver into position to receive asphalt from dump truck</li> <li>Navigate the paver as per job requirement.</li> <li>Observe distribution of materials; hopper-conveyor-auger-screed width</li> <li>Ensure to eliminate voids at curbs and joints.</li> <li>Monitor gauges/indicators to ensure continuity and efficient operation.</li> </ul> <p><b>Shutting down the paver</b></p> <ul style="list-style-type: none"> <li>Park the paver on flat even surface before shutting down.</li> <li>Lower all attachments to ground level as per guidelines.</li> <li>Run the engine at idling speed without load for 5 minutes before shutting down</li> <li>Check and clean all the components as per laid down procedure.</li> </ul> <p><b>Safety during operations</b></p> <ul style="list-style-type: none"> <li>Ensure PPE is worn especially dust mask; goggles, safety gloves and shoes when operating the equipment.</li> <li>Identify various hazards at work site and take appropriate preventive measures.</li> </ul> <p><b>Reporting and Documentation</b></p> <ul style="list-style-type: none"> <li>Maintain log book to record all activities (input and output flow) carried out.</li> <li>Report any defects which are beyond his scope to the supervisor</li> </ul>	
3	<p><b>Carry out routine maintenance and trouble shooting of a paver.</b></p> <p><b>Theory Duration (hh:mm)</b> 14:00</p>	<p><b>Organisational Context: Acquire working knowledge of the following:</b></p> <ul style="list-style-type: none"> <li>Emergency organisation structure and maintenance policy.</li> <li>Location of special tools and equipment/ accessories.</li> </ul> <p><b>Technical Knowledge. Understand the</b></p>	<ul style="list-style-type: none"> <li><u>Scaled Model of Paver for theory sessions</u></li> <li><u>Active Paver at nearby project site for practical sessions</u></li> <li>Class room with</li> </ul>



Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<p><b>Practical Duration</b> (hh:mm) 35:00</p> <p><b>Corresponding NOS Code</b> IES/N0160</p>	<p><b>fundamentals of the following:</b></p> <ul style="list-style-type: none"> <li>Maintenance and service Schedule including related checklists.</li> <li>Common defects and general causes for breakdown.</li> <li>Documents and log books to be maintained for recording activities.</li> <li>Procedures for reporting defects if beyond his scope.</li> </ul> <p><b>Skills - Core &amp; Professional. Acquire the ability to:</b></p> <ul style="list-style-type: none"> <li>In addition to core and generic skills listed above;</li> <li>Plan maintenance &amp; servicing keeping operational needs in mind.</li> </ul> <p><b>Performance Criteria. Execute the following tasks and procedures:</b></p> <p><b>Routine Maintenance:</b></p> <ul style="list-style-type: none"> <li>Assess the right service schedule by tracking machine operating hours.</li> <li>Check electronic control unit (ECU) for service and maintenance info.</li> <li>Clean all parts and components of the machine thoroughly; remove debris</li> <li>Carry out scheduled maintenance as per manufacturers specs</li> <li>Clean air filters dust bowls; drain water in fuel separator as necessary.</li> <li>Top up fuel, lubricants and coolants; replace as applicable.</li> <li>Check screed unit and lubricate/grease all the pins, screws and pivot joints.</li> <li>Check augur chains and conveyor belts; lubricate and adjust if need be.</li> <li>Carry out periodic structural inspection and take corrective measures like welding etc.</li> <li><u>Wheeled Paver</u>: Check inflation pressure of tyres to be as per specs.</li> <li><u>Tracked Paver</u>: Check track tension and adjust as necessary.</li> </ul> <p><b>Repair &amp; Trouble Shooting:</b></p> <ul style="list-style-type: none"> <li>Ensure safety before carrying out maintenance / repairs: <ul style="list-style-type: none"> <li>Turn off mains power from control panel completely.</li> <li>Use battery cut off switch for this purpose</li> <li>Engine should not be running</li> </ul> </li> </ul>	<p>audio-video system</p> <ul style="list-style-type: none"> <li>Manufacturers O and M Manual &amp; Video</li> <li>Safety video</li> <li>PPE Items &amp; Safety Gear</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>○ or hot</li> <li>○ Disconnect battery before welding work</li> <li>• Identify service needs and defects through visual inspection.</li> <li>• Monitor indicators that signal need for replacement of parts</li> <li>• Arrange for and assist repairs or replacement of defective components.</li> <li>• Diagnose the defect and rectify; if need be check with supervisor.</li> <li>• Ensure waste is disposed as per guidelines at site.</li> </ul> <p><b>Documentation &amp; Reporting:</b></p> <ul style="list-style-type: none"> <li>• Maintain / complete all records/documents as per company policy.</li> <li>• Report defects and problems in time and escalate as necessary</li> </ul>	
4	<p><b>Comply with Worksite Health and Safety Guidelines</b></p> <p><b>Theory Duration</b> (hh:mm) 08:00</p> <p><b>Practical Duration</b> (hh:mm) 20:00</p> <p><b>Corresponding NOS Code</b> IES/N7601</p>	<p><b>Organisational Context. Acquire working knowledge of the following:</b></p> <ul style="list-style-type: none"> <li>• Health, safety, environmental (HSE) policies and guidelines of the company &amp; their importance</li> <li>• Contact details of personnel responsible for HSE related matters &amp; in case of emergencies.</li> <li>• Location of first aid room / station and assembly points.</li> <li>• Reporting channel and documentation procedure for all HSE related matters.</li> </ul> <p><b>Technical Knowledge. Understand the fundamentals of the following:</b></p> <ul style="list-style-type: none"> <li>• OEMs guidelines for health, safety and security requirements.</li> <li>• Types, use and importance of Personal Protective Equipment (PPE)</li> <li>• Types of common hazards and risks at worksite and preventive measures.</li> <li>• In case of emergencies procedure to stop/ shut down machinery.</li> <li>• Common injuries and appropriate basic first aid treatment.</li> <li>• Firefighting equipment: Basic knowledge of handling and using them.</li> <li>• Guidelines for transport, storage and disposal of hazardous materials and waste</li> <li>• Safety signs/symbols and warnings used in worksites and their meaning</li> </ul>	<ul style="list-style-type: none"> <li>• Scaled Model of Paver for theory sessions</li> <li>• Active Paver at nearby project site for practical sessions</li> <li>• Class room with audio-video system</li> <li>• Organisation's ESH / Safety video</li> <li>• PPE Items &amp; Safety Gear</li> <li>• Firefighting equipment &amp; Charts</li> <li>• First Aid Kit and Charts</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<p><b>Skills - Core &amp; Professional. Acquire the ability to:</b></p> <ul style="list-style-type: none"> <li>In addition to the core and generic skills listed above</li> <li>Use correct PPE and other safety gear while in the work site.</li> </ul> <p><b>Performance Criteria. Execute the following tasks and performances:</b></p> <ul style="list-style-type: none"> <li>Comply with safety, health, environment and security related regulations &amp; guidelines at work.</li> <li>Correct use of Personal Protective Equipment (PPE) and other safety gear at work site.</li> <li>Follow safety measures during operations to ensure health and safety of self and others; general public not at risk.</li> <li>Operate fire extinguishers as applicable.</li> <li>Support in administering basic first aid for common injuries at work site.</li> <li>Record and report details as related to operations, incidents or accidents as applicable.</li> </ul>	
	<p><b>Total Duration</b></p> <p><b>Theory Duration 60:00</b></p> <p><b>Practical Duration 150:00</b></p>	<p><b>Unique Equipment Required:</b></p> <ul style="list-style-type: none"> <li>Scaled Model of Paver for theory sessions</li> <li>Active Paver at nearby project site for practical sessions</li> <li>Adequate stocks of aggregates and consumables.</li> <li>Class room with audio-video projection system</li> <li>Manufacturers O and M Manual &amp; Video; Safety video</li> <li>PPE Equipment: Helmet, masks, gloves, earplugs, goggles, safety shoes</li> <li>Firefighting equipment and 'How to Use' Charts</li> <li>First Aid Box and 'How to Do' Charts</li> </ul>	

Grand Total Course Duration: **210 Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by [Infrastructure Equipment Skill Council](#))

## Trainer Pre-requisites for Job role: “Paver Operator” mapped to Qualification Pack: “IES/Q0120, v1.0”

Sr. No.	Area	Details
1	<b>Description</b>	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “IES/Q 0120 Version 1.0”.
2	<b>Personal Attributes</b>	Aptitude for conducting training, with strong communication and interpersonal skills. Passion for training and developing others; well-organised; and a team player. Eager to learn and keep oneself updated with the latest in the mentioned field.
3	<b>Minimum Educational Qualifications</b>	Class 8 <sup>th</sup> ; preferably 10 <sup>th</sup>
4a	<b>Domain Certification</b>	Certified for Job Role: “Paver Operator” mapped to QP: “IES/Q 0120 – Version 1.0”. Minimum accepted score 70%. Desired: Certification Training in Paver Operations & Maintenance
4b	<b>Platform Certification</b>	Certified for Job Role: “Trainer” mapped to Qualification Pack: SSC/1402. Minimum accepted score 70%.
5	<b>Experience</b>	<ul style="list-style-type: none"> <li>• Around 3 to 4 years’ site experience in Paver Operations.</li> <li>• At least 1 to 2 years’ experience in conducting O and M training programs.</li> </ul>

<b>Assessment Criteria</b>	
<b>Job Role</b>	<b>Paver Operator</b>
<b>Qualification Pack</b>	<b>IES/Q 0120 Version 1.0</b>
<b>Sector Skill Council</b>	<b>Infrastructure Equipment</b>

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for Qualification Pack has been laid down based on the NOS's. Each Performance Criteria (PC) has been assigned marks proportional to its importance within NOS.SSC will also lay down proportion of marks for Theory and Skill Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria.
5	To pass the Qualification Pack, every trainee should score a minimum of 40% in each NOS and 60% aggregate
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification pack.

Assessment Outcomes	Assessment Criteria for the outcome	Total Marks	Marks Allocation		
			Out Of	Theory	Skills Practical
1. IES/N0158 Carry out pre-operational checks on a paver	PC1. Visually inspect the machine for any malfunctioning, missing or broken parts	30	1	0.5	0.5
	PC2. Ensure all covers and guards are in place		1	0.5	0.5
	PC3. Check conditions of parking brake / service brake, main horn, reverse horn, head light and warning lights		1	0.5	0.5
	PC4. Inspect screed plate, tamping bar and screed attack angle for any damages		1.5	0.5	1

	PC5. Check the various controls (including governor on engine), gauges, feeders, conveyors, feed control gates, augers, screed, screed heater, and sensing and control equipment
	PC6. Ensure oil levels of engine, transmission, radiator, and coolant and battery electrolyte level are as per the required levels
	PC7. Check the alternator and brackets for tightness
	PC8. Check for leaks in transmission / propulsion system / hydraulic hoses and take necessary actions as per the operational manual
	PC9. Inspect the air-induction system to ensure that all connections are tight and intact
	PC10. Check the air filter indicator for any malfunctioning
	PC11. Inspect screed assembly and sensor assembly for damage, wear and hose leaks
	PC12. Inspect hopper system for wear or damage
	PC13. Inspect operator's cabin, control console steps, and hand holds are clean and free of grease, oil, dirt, mud and asphalt
	PC14. Inspect instrument panel including all gauges for any indicators of malfunctioning
	PC15. Enter operating platform using step and grab handles for safety (3point climbing procedure)
	PC16. Check for the dirt evacuator which is located at the bottom of the air filter canister
	PC17. Check all the conveyor belts for wear, tension, crack and frays

1.5	0.5	1
1.5	0.5	1
0.5	0	0.5
1	0	1
0.5	0	0.5
0.5	0	0.5
0.5	0	0.5
0.5	0	0.5
1	0.5	0.5
1	0.5	0.5
1	0.5	0.5
0.5	0	0.5
0.5	0	0.5

	PC18. Check the pumps, motors, electrical wires and connections, steps and support for any repairs
	PC19. Ensure that the propane/ LPG cylinder regulator is properly fitted and the pressure gauges are in good working condition
	PC20. Spray cleaning solvent or release agent on any part of the paver that comes in contact with asphalt
	PC21. Ensure daily maintenance checks and greasing as per manufacturer specifications is carried out
	PC22. Check if the safety by-pass valve is kept at correct setting
	PC23. Check the engine safety switch for any malfunctioning
	PC24. Inspect the main control unit in cabin and on the screed for proper functioning
	PC25. Ensure fire extinguisher is properly calibrated and available in the site at all times during paving
	PC26. Check the electronic / manual burner system and all ignition control units and heating system
	PC27. Check the electrical heating system for the screed if fitted
	PC28. Check and inspect the main control unit in cabin and on the screed for proper functioning of all machine systems and buttons functionality and Emergency stop
	PC29. Check the Front Wheel assist relief pressure. It should be set according to the operating surface (addition)

0.5	0	0.5
1	0.5	0.5
1	0.5	0.5
1	0.5	0.5
0.5	0	0.5
0.5	0	0.5
0.5	0	0.5
1	0.5	0.5
1	0.5	0.5
1	0.5	0.5
1.5	0.5	1
1	0.5	0.5

	PC30. Inspect the tow arms, and the tow cylinder for any cracks or damages(addition)		1	0.5	0.5
	PC31. Check for general hydraulic hoses/fittings for any leaks(addition)		0.5	0	0.5
	PC32. Check the inflation pressure of the tires as per the prescribed norms/ the requirement of the ground		0.5	0	0.5
	PC33. Check for track tension and adjust them to measurements prescribed in the manual		0.5	0	0.5
	PC34. Maintain a checking/maintenance logbook to record all activities performed before starting the operation		1	0.5	0.5
	PC35. Report defects precisely to the supervisor if beyond scope of the role		1	0.5	0.5
		<b>Total</b>	<b>30</b>	<b>10</b>	<b>20</b>
2. IES/N0159 Operate a paver	PC1. Ensure the joystick is in neutral position before turning on the paver	<b>35</b>	1	0.5	0.5
	PC2. Fasten seat belt and adjusts seat position as per one's comfort and safety		1.5	1	0.5
	PC3. Place the throttle in idle position or by pressing and holding throttle switch in the up and down position.		1.5	0.5	1
	PC4. Start the engine using the starting key on instrument panel		1.5	1	0.5
	PC5. Re-checks all gauges when engine starts for any inappropriate noise or malfunctioning		2	1	1
	PC6. Preheat paving screed before placing the asphalt as per the set standards		2	1	1
	PC7. Monitor and control temperature during the process to suit the requirements		1.5	0.5	1
	PC8. Operate the paver controls to lower the screed auger, control the hopper, and navigate the direction of the paver as per the requirement of the surface		3.5	0.5	3



	PC9. Align the paving machine into position when receiving asphalt by dump truck, and maintain constant flow of asphalt into hopper; ease paver forward, safely pushing dump truck along construction surface		3.5	0.5	3
	PC10. Observe distribution of asphalt materials from the hopper to the conveyor and to the auger along the screed width		1.5	0.5	1
	PC11. Observe distribution of asphalt materials along the screed and control the direction of the screed to eliminate voids at curbs and joints		1.5	0.5	1
	PC12. Attach extensions to screed to adjust width as per the surface thickness requirement		1	0.5	0.5
	PC13. Park the paver on a flat even surface before shutting down the equipment		1.5	0.5	1
	PC14. Lower all attachments to ground level as per the operational manual		2.5	0.5	2
	PC15. Place transmission in neutral		1	0.5	0.5
	PC16. Run engine at 1/2 speed (RPM) without load for 3 to 5 minutes		1	0.5	0.5
	PC17. Clean components (such as hopper, augers, conveyors, extensions) according to manufacturers' specifications and company policies and procedures		2.5	0.5	2
	PC18. Shut down equipment according to manufacturers' specifications		1.5	0.5	1
	PC19. Record input and output flow as per the desired formats of the organization		1.5	0.5	1
	PC20. Report to the supervisor of any problems while operating the paver		1.5	0.5	1
		<b>Total</b>	<b>35</b>	<b>12</b>	<b>23</b>

3. IES/N0160 Perform routine maintenance and troubleshooting of the paver	PC1. Assess the right service schedule by tracking machine operating hours	<b>20</b>	1	0.5	0.5
	PC2. Check the electronic control unit of the paver for any service / maintenance information		1	0.5	0.5
	PC3. Follow instructions concerning safety that are attached onto the vehicle		1	0.5	0.5
	PC4. Clean air filter dust bowls, footplates, pedals and steps regularly and drain water and sediment/ fuel separators		1	0.5	0.5
	PC5. Replenish coolants, lubricants and fluids as per the running of the machine or as per the schedule		1	0.5	0.5
	PC6. Check auger chains, conveyor chain, lubricate and adjust if required		1	0.5	0.5
	PC7. Check and lubricate all screed points as per manufacturer specifications		0.5	0	0.5
	PC8. Remove any debris from screed and check for hose leaks / cylinders leaks		0.5	0	0.5
	PC9. Check battery electrolyte levels and condition of the terminals and make minor adjustments if required		1.5	0.5	1
	PC10. Lubricate all grease fittings on the auger flight screw, the fitting on the depth screw, and the fittings on the flange bearings located on top of the extension screed		1.5	0.5	1
	PC11. Ensure all the tools are kept in the designated place after usage		1	0.5	0.5
	PC12. Check screws on the rod extensions, tilt screws on the screed pivot		0.5	0	0.5

	PC13. Ensure the diesel operated wash-down pump is functioning properly for cleaning the machine		0.5	0	0.5
	PC14. Check and maintain the hydraulic fluid level, tire rims, air pressure, wheel nuts and treads as per manufacturer's specifications and guidelines		1	0.5	0.5
	PC15. Check for track tension and adjust them to measurements prescribed in the manual		0.5	0	0.5
	PC16. Turn off the mains power from panel completely before carrying out maintenance work, ensure that the battery cut-off switch is used		0.5	0	0.5
	PC17. Ensure that no maintenance task on the engine is performed when running or still hot		1	0.5	0.5
	PC18. Ensure that appropriate tools are used while troubleshooting		1	0.5	0.5
	PC19. Diagnose the problem		1	0	1
	PC20. Dispose waste as per the guidelines of the site/ organization		1	0.5	0.5
	PC21. Ensure that the battery is disconnected if performing any welding on the machine		1	0.5	0.5
	PC22. Complete all documentation in the prescribed standards in a timely manner		0.5	0	0.5
	PC23. Report defects precisely to the supervisor if beyond scope of his role		0.5	0	0.5
		<b>Total</b>	<b>20</b>	<b>7</b>	<b>13</b>
4. IES/N7601 Comply with worksite health and safety guidelines	PC1. Comply with safety, health, security and environment related regulations/ guidelines at the work site	<b>15</b>	1.5	0.5	1

	PC2. Use Personal Protective Equipment (PPE) and other safety gear as applicable to the equipment and the worksite		1.5	0.5	1
	PC3. Follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk		1.5	0.5	1
	PC4. Carry out operations as per the manufacturer's and worksite related health and safety guidelines		1.5	0.5	1
	PC5. Handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines		2	1	1
	PC6. Operate various grades of fire extinguishers, as applicable		2.5	0.5	2
	PC7. Support in administering basic first aid and report to concerned team members, as required, in case of an accident		1.5	0.5	1
	PC8. Respond promptly and appropriately to an accident/incident or emergency situation, within limits of your role and responsibility		1.5	0.5	1
	PC9. Record and report details related to operations, incidents or accidents, as applicable		1.5	0.5	1
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>10</b>