

NOS	Element	Sr	Type of Question	Question Text	Option - 1	Option - 2	Option - 3	Option - 4	E/M/D Marking	Correct Answer	Difficulty Level (Easy/ Medium/ Difficult)
ELE/N5901: Check site conditions, collect tools and raw materials	Introduction of solar technology and identify plan the work target materials	1	CS	During the installation of a rooftop solar setup, a trainee observed that the solar panels were generating electricity only when sunlight was available. The technician explained that sunlight is converted into electrical energy through special cells mounted inside the panels. He also explained that the inverter changes the generated power into usable form for household appliances, while the battery stores extra power for later use. Which option correctly explains the working of the solar power system?	PV cells convert sunlight into electrical energy, the inverter converts DC into AC, and the battery stores backup energy.	The inverter directly produces electricity from sunlight and the battery increases panel efficiency.	Solar panels only store electricity, while PV cells work as cooling devices in the system.	Batteries convert sunlight into electricity and the inverter stores excess energy for nighttime use.	5	1	H
		2	DC	Which type of mounting arrangement is most suitable when installing solar panels on the top surface of a building with limited available area?	Open field mounting	Pole mounting	Roof-top mounting	Floating mounting	2	3	E
	Assessing site conditions	3	LC	During a rooftop inspection, the technician notices that the roof surface is weak and may not safely support the mounting structure. What should the technician do before starting the installation work?	Ignore the issue and continue mounting the panels	Install fewer panels without informing anyone	Paint the roof before installation	Inform the customer about the required civil strengthening work	4	4	M
		4	FIB	Before starting the rooftop setup work, the technician should confirm the customer's preferred mounting _____ for the solar panel structure.	location	invoice	battery	warranty	2	1	E
		5	DC	Why is it important to match the voltage and power output of a solar system with the customer's requirement and expected losses?	To improve the colour of the solar panel	To ensure proper performance and sufficient power	To reduce the size of the mounting structure only	To increase the weight of the battery	2	2	E
	Identify the installation requirement	6	FIB	Before starting the installation work, the technician should inform the customer about the approximate _____ required to complete the setup process.	budget	voltage	time	warranty	2	3	E
		7	AR	Assertion (A): Before purchasing installation materials, the technician should obtain approval from the customer for the selected material package.  Reason (R): Customer concurrence helps ensure that the materials match the agreed system design, budget, and installation requirements.	Both A and R are true, and R is the correct explanation of A.	Both A and R are true, but R is not the correct explanation of A.	A is true, but R is false.	A is false, but R is true.	4	1	M
		8	SCB	During the installation of a rooftop solar setup, a technician notices that the total voltage required by the inverter is 48V. Each available solar panel has an output of 12V. Before starting the installation, the technician checks whether the selected number of panels is suitable for the system requirement. What should the technician do?	Use 2 panels because lower voltage improves safety	Use 3 panels because it reduces power loss	Use 4 panels to match the required system voltage	Use 5 panels because extra voltage increases efficiency	5	3	H
		9	CB	During the inspection of solar equipment at a work site, a technician notices that one solar module has a cracked outer glass surface even though the packaging seal is intact. What should the technician do before installation?	Install the module carefully to avoid further damage	Use the module only in low-voltage connections	Cover the crack with tape and continue the work	Reject or replace the damaged module after quality verification	4	4	M
	Collecting recommended material for installation	10	MC	During solar panel handling before installation, why should the glass surface of the module be covered with an opaque material while stored at the site?	To improve the appearance of the module	To prevent electricity generation from sunlight exposure	To reduce the weight of the module	To increase the panel temperature	5	2	H
Ensure proper handling and storage of material											
<b>NOS Total</b>									<b>35</b>		
ELE/N5902: Install the Solar Panel	Understanding installation and material usage procedure	11	LC	Before starting the mounting and wiring process of a solar energy setup, why should the technician verify the availability of all required items and tools at the work site?	To reduce the need for safety equipment	To avoid interruption and complete the installation smoothly	To increase the weight of the structure	To change the panel capacity during installation	4	2	M
		12	DC	Which accessory is mainly used to provide proper electrical grounding between the solar module and mounting structure during installation?	Module spacer	Grounding clip	Anodized aluminum mounting foot	Steel mounting bolt	2	2	E
	Assessing mounting using smart accessories	13	FIB	To absorb maximum solar energy, the PV module should be installed so that sunlight falls _____ to the panel surface.	diagonally	parallel	perpendicular	randomly	2	3	E
		14	DC	Why should the support structure for a rooftop energy module be firmly secured during installation?	To withstand wind, rain, and external weather conditions	To improve the color of the panel	To reduce the size of the module	To increase cable length	2	1	E
		15	FIB	During the mounting process, technicians should use only _____ tools to ensure safe and proper installation of solar panels.	damaged	temporary	untested	approved	2	4	E
	Identify the installation requirement	16	CB	While fixing a solar energy unit on a rooftop, a technician notices that one section of the panel cover is slightly loose. What should the technician do during installation?	Open the panel section and tighten internal parts manually	Continue installation without touching the panel structure	Remove the panel cover to inspect internal wiring	Disassemble the panel to check for hidden damage	4	2	M
		17	AR	Assertion (A): Installing a spare fuse in the solar power circuit helps protect the system from damage during short circuits. Reason (R): A fuse automatically breaks the electrical connection when excess current flows in the circuit.	Both A and R are true, and R is the correct explanation of A	Both A and R are true, but R is not the correct explanation of A	A is true, but R is false	A is false, but R is true	4	1	M
	Installing the panel	18	CS	During the installation of a rooftop solar power setup, a technician observes that the total voltage produced by the connected PV modules is higher than the maximum voltage supported by the inverter. To ensure safe operation and achieve the required output, what should the technician do first?	Increase the current rating of the inverter without changing the connections	Disconnect all safety devices from the circuit	Recheck the system voltage and modify the module connection arrangement as required	Add extra batteries directly to the PV array	5	3	H
		19	SCB	A technician explained to a customer that dust and bird droppings on rooftop panels can reduce electricity generation. He also advised using soft water and a non-abrasive cloth while cleaning the panels. Why is this guidance important for proper system performance?	To increase the weight of the panel structure	To change the panel voltage automatically	To reduce the need for electrical wiring	To maintain efficiency and avoid surface damage during cleaning	5	4	H
	Connecting the system and check for functioning	20	MC	While completing rooftop installation work, some damaged cable pieces, packing materials, and broken mounting items are left behind. What should the technician do to follow safe working practices?	Throw all waste materials near the work area	Mix electrical and plastic waste together for easy disposal	Dispose of waste materials according to approved safety and environmental procedures	Leave the waste on the rooftop for the next team	5	3	H
Completing the work											
Following quality and safety procedures	20	MC	While completing rooftop installation work, some damaged cable pieces, packing materials, and broken mounting items are left behind. What should the technician do to follow safe working practices?	Throw all waste materials near the work area	Mix electrical and plastic waste together for easy disposal	Dispose of waste materials according to approved safety and environmental procedures	Leave the waste on the rooftop for the next team	5	3	H	
	Following quality and safety procedures										
<b>NOS Total</b>									<b>35</b>		

DGT/VSQ/N0101: Employability Skills (30 Hours)	Introduction to Employability Skills	21	DC	Why is it important for a technician to improve communication and teamwork skills while working on solar power projects?	To avoid using safety equipment	To complete tasks effectively and meet workplace requirements	To increase the weight of solar panels	To reduce the use of electrical tools	2	2	E
	Becoming a Professional in the 21st Century	22	LC	While installing a rooftop system, a technician wants to ask his teammate in English to pass the wire cutter. Which sentence is the most suitable for clear workplace communication?	Please pass me the wire cutter	Give wire cutter now fastly	Wire cutter where keeping you	You pass cutter yesterday	4	1	M
	Basic English Skills										
	Diversity & Inclusion	23	FIB	While working at a rooftop installation site, the technician should _____ respectfully with team members of all genders and Persons with Disabilities to maintain a safe and professional work environment.	argue	communicate	ignore	complain	2	2	E
	Financial and Legal Literacy	24	DC	While planning monthly household finances after receiving payment for installing solar panels, which activity helps in increasing future financial security?	Spending all income on entertainment	Keeping a part of income as savings	Ignoring monthly expenses	Borrowing money every month	2	2	E
	Essential Digital Skills	25	CB	While configuring a mobile application to monitor the performance of a rooftop energy system, a technician receives a link asking for login details and OTP. What should the technician do first to ensure safe and secure use of the digital platform?	Share the OTP only with trusted coworkers	Ignore security warnings and continue login	Verify the authenticity of the link before entering details	Save the password in a public document for backup	4	3	M
	Entrepreneurship	26	MC	While planning to start a small rooftop energy system service business, a technician wants to purchase tools and safety equipment. Which option correctly identifies both a suitable source of finance and a possible legal or financial challenge?	Taking a bank loan and facing repayment obligations with interest	Borrowing from friends and getting a guaranteed government subsidy without documents	Using personal savings and avoiding all business registration requirements	Taking an informal cash loan and receiving automatic tax exemption	4	1	M
	Customer Service	27	FIB	While visiting a customer site for solar panel installation, the technician should maintain proper hygiene and wear a clean _____ to create a professional impression.	toolkit	wire	battery	uniform	2	4	E
	Getting ready for apprenticeship & Jobs										
<b>Nos Total</b>									<b>20</b>		
<b>Total</b>									<b>90</b>		