

S.no	NOS	Question	Option 1	Option 2	Option 3	Option 4	Correct Answer	Difficulty level	Marks
1	ELE/N1424.Prepare detailed requirements and design specification documents	Which document formally captures the functional and non-functional needs of the stakeholders for the IoT system?	Detailed Design Document (DDD)	Test Plan Document (TPD)	Requirement Specification Document (RSD)	Bill of Materials (BoM)	C	Easy	7
2	ELE/N1424.Prepare detailed requirements and design specification documents	Which measure is mandatory to incorporate in the IoT hardware design stage to enhance system safety and security, as per the NOS?	Component Sourcing Plan	Cybersecurity measures and data encryption protocols	Post-Deployment Review	Marketing Strategy	B	Easy	7
3	ELE/N1424.Prepare detailed requirements and design specification documents	When preparing the design specification, which international concern must be considered for the technical specifications of the IoT hardware?	Local Language Requirements	Globally accepted regulatory standards	Software Licensing Cost	Office Location of the Designer	B	Easy	7
4	ELE/N1424.Prepare detailed requirements and design specification documents	What is a primary purpose of using advanced simulation and synthesis tools (e.g., MATLAB, Cadence) during the design document creation phase?	Automating stakeholder collaboration.	Analyzing electronic circuit designs and performance.	Calculating the final product cost.	Generating the firmware code.	B	Medium	9
5	ELE/N1424.Prepare detailed requirements and design specification documents	In an IoT design document, the list of all hardware components, along with their quantities, suppliers, and estimated costs, is typically documented in the:	Functional Requirements	System Block Diagram	Bill of Materials (BoM)	Interoperability Matrix	C	Hard	10
6	ELE/N1425.Develop the circuit schematic and PCB layout for the IoT system.	Which step must be completed before commencing the PCB layout design?	System Testing	Final Firmware Development	Creation of the complete circuit schematic	Manufacturing	C	Easy	6
7	ELE/N1425.Develop the circuit schematic and PCB layout for the IoT system.	What critical consideration during PCB layout design primarily mitigates signal degradation and crosstalk, especially in high-speed digital lines?	Component Cost	Trace impedance matching and proper routing	Solder Mask Color	Documentation Format	B	Easy	6
8	ELE/N1425.Develop the circuit schematic and PCB layout for the IoT system.	The footprint of a component, used in PCB layout, is a representation of its:	Electrical characteristics	Physical dimensions and land pattern	Software library file	Manufacturing date	B	Easy	6
9	ELE/N1425.Develop the circuit schematic and PCB layout for the IoT system.	What is the main purpose of adding decoupling capacitors close to Integrated Circuit (IC) power pins in a schematic design?	To increase the clock frequency.	To measure the circuit voltage.	To filter high-frequency noise and stabilize power supply.	To provide wireless connectivity.	C	Medium	7
10	ELE/N1425.Develop the circuit schematic and PCB layout for the IoT system.	Which specific file format is required by a PCB fabrication house for manufacturing the physical board?	.SCH (Schematic file)	.BOM (Bill of Materials)	Gerber Files	.ASM (Assembly Code)	C	Medium	7
11	ELE/N1425.Develop the circuit schematic and PCB layout for the IoT system.	In the context of IoT hardware, what is the primary factor that dictates the choice between a single-layer, double-layer, or multi-layer PCB?	Available CAD tool	Availability of components	Complexity, density, and performance requirements (e.g., high-speed/RF)	Project documentation style	C	Hard	8
12	ELE/N1426.Assemble and perform testing of the complete IoT solution	What is the most critical test to perform on a newly assembled PCB before connecting the main power source for the first time?	Functional Test	Continuity and Short Circuit Test	Environmental Test	Load Test	B	Easy	6
13	ELE/N1426.Assemble and perform testing of the complete IoT solution	Which type of testing specifically validates that the IoT device's sensors correctly transmit data to the cloud platform and receive commands back?	Unit Testing	Boundary Testing	End-to-End Testing	Stress Testing	C	Easy	6
14	ELE/N1426.Assemble and perform testing of the complete IoT solution	To verify the battery life and power efficiency against design specifications, an IoT Hardware Analyst primarily performs a:	Thermal Test	Power Consumption Analysis (Current Draw)	Vibration Test	Regulatory Compliance Test	B	Easy	6
15	ELE/N1426.Assemble and perform testing of the complete IoT solution	Which specialized instrument is essential for analyzing the signal integrity, timing, and protocol of high-speed digital communication lines (e.g., SPI, I2C) on the PCB?	Spectrum Analyzer	Function Generator	Digital Oscilloscope / Logic Analyzer	Digital Multimeter	C	Medium	7
16	ELE/N1426.Assemble and perform testing of the complete IoT solution	Testing an IoT product to ensure it does not interfere with other electronic devices and is not unduly susceptible to external noise is referred to as:	Safety Certification	Electromagnetic Compatibility (EMC) Testing	Thermal Shock Testing	Environmental Test	B	Medium	7
17	ELE/N1426.Assemble and perform testing of the complete IoT solution	After the physical assembly, which document acts as the mandatory checklist and reference for the final system validation process?	Bill of Materials (BoM)	Circuit Schematic	Test Plan Document	Hardware Datasheet	C	Hard	8
18	DGT/VSQ/N0102.Employability Skills	Which behavior demonstrates Professionalism when a technical problem causes a project delay?	Blaming the component supplier.	Ignoring the issue and continuing work.	Notifying the manager immediately and proposing a	Asking a colleague to solve it without supervision.	C	Easy	2
19	DGT/VSQ/N0102.Employability Skills	In a team meeting, the primary benefit of practicing active listening is:	To wait for your turn to speak.	To take minimal notes quickly.	To fully understand the speaker's technical input and requirements.	To judge the speaker's presentation style.	C	Easy	2
20	DGT/VSQ/N0102.Employability Skills	What is the immediate and most crucial action to take upon discovering an electrical hazard (e.g., exposed wire) in the IoT lab?	Attempt to fix it yourself immediately.	Take a picture of the hazard for documentation.	Report it to the supervisor and/or designated safety personnel.	Inform only the co-worker nearest to the hazard.	C	Easy	3

21	DGT/VSQ/N0102.Employability Skills	Why is awareness of Intellectual Property Rights (IPR) important for an IoT Hardware Analyst?	To ensure all team members get equal salary.	To ensure the company's hardware designs and proprietary	To avoid sharing your work on social media.	To speed up the PCB fabrication process.	B	Medium	4
22	DGT/VSQ/N0102.Employability Skills	Which non-verbal signal is a key indicator of confidence and respect during a professional presentation or discussion?	Speaking very loudly.	Avoiding eye contact with the audience.	Maintaining good eye contact and confident body language.	Talking continuously without pausing.	C	Medium	4
23	DGT/VSQ/N0102.Employability Skills	The annual assessment process that formally evaluates an employee's work performance, skills, and adherence to professional standards is called a/an:	Request for Proposal (RFP)	Bill of Materials (BoM)	Performance Appraisal	Client Contract Review	C	Hard	5