

Drone Service Technician_ELE/Q7003_V3.0_NSQF Level: 4- Theory

NOS	Sr No	Type of Question	Difficulty Level (Easy/Medium/Difficult)	Question Text	Option - 1	Option - 2	Option - 3	Option - 4	Correct Answer
ELE/N7005.Troubleshoot and Repair Drone Malfunctions	1	SCB	Hard	You receive a drone that reportedly flies erratically. During the preliminary check-up, you notice one propeller spins less freely than others. What should you do?	Assume it is normal	Check for visible damage, foreign material, or bent motor shaft; note it as a potential defect	Replace all propellers immediately	Ignore and proceed to test flight	2
	2	DCB	Easy	A drone has a cracked motor arm (plastic frame) but all electronics are functional. The repair requires plastic welding or frame replacement. The customer is at a remote location with no workshop. What is the best decision?	Perform plastic welding on-site using a portable kit	Advise that the repair requires workshop facilities; offer to take the drone or schedule a workshop visit	Use superglue and tape as a temporary fix	Replace the entire drone	2
	3	LCB	Medium	An ESC (Electronic Speed Controller) is suspected of intermittent failure. Which tool and method would give the most reliable diagnosis?	Visual inspection only	Use an oscilloscope to monitor the PWM input and motor output signals while running the motor at varying throttle	Check resistance with a multimeter in off state	Replace the ESC and test fly	2
	4	DCB	Easy	A drone fails to connect to the remote controller. Both units power on. After checking, you find that the receiver module has no LED activity. What is the most likely malfunction?	Transmitter antenna broken	Receiver module faulty or disconnected	Flight controller firmware corrupted	Battery low	2
	5	LCB	Medium	After replacing a motor, you reassemble the drone. Which step is critical before final closing?	Apply glue to all joints	Check that all wires are routed away from moving parts and are not pinched, then perform a continuity test	Tighten all screws randomly	Replace all screws with longer ones	2
	6	DCB	Easy	You replace a damaged lithium-polymer (LiPo) battery. What is the correct disposal method?	Throw it in the regular trash	Dispose of it at an authorized e-waste or battery recycling facility following local regulations	Burn it	Bury it in the ground	2
	7	LCB	Medium	Before handing over a repaired drone, you perform a final safety check. Which of the following is NOT	Propeller security and condition	Motor rotation direction	Firmware version (only if relevant)	Paint color match	4
	8	DCB	Easy	A customer asks, "How often should I calibrate the compass?" What is the correct advice?	After every flight	Calibrate after any firmware update, when flying in a new location far from home, or if the drone behaves strangely	Never calibrate	Once a year	2
	9	LCB	Medium	After completing a repair, why is it important to document the steps, parts used, and any challenges faced?	For billing only	To create a knowledge base, improve future troubleshooting, and support	To share on social media	To increase paperwork	2

	10	DCB	Easy	You encounter a drone with a flight controller issue that requires proprietary software not available to you. After exhausting all allowed troubleshooting, what should you do?	Attempt to hack the software	Escalate the issue to your supervisor or the manufacturer's support, explaining the constraint (lack of access)	Tell the customer the drone is beyond repair	Replace the flight controller with a non-proprietary one	2
ELE/N7010.Calibrate, Optimize, and Test Drone Performance	11	LCB	Medium	During a fast forward flight, the gimbal tilts slightly to one side causing horizon drift. What adjustment is most appropriate?	Increase the gimbal's PID gains for roll axis	Reduce the gimbal motor power	Disable the gimbal during flight	Use a heavier camera	1
	12	SCB	Hard	A LiPo battery shows a cell voltage difference of 0.3V between the highest and lowest cell after a full charge. What action should be taken?	It is within normal limits	Balance charge the battery; if imbalance persists after balancing, retire the battery	Use the battery only for short flights	Increase the charging current	2
	13	DCB	Easy	During a simulation of a single motor failure on a hexacopter, what should the flight controller do?	Immediately crash	Attempt to maintain control using the remaining five motors and land safely	Disarm all motors	Switch to manual mode only	2
	14	DCB	Easy	You add a spraying system weighing 2 kg to a drone rated for 1.5 kg payload. What is the most critical risk?	Reduced flight time	Structural failure or inability to take off	GPS interference	Gimbal malfunction	2
	15	LCB	Medium	After a firmware update, the drone's ESCs do not respond. What is the first step?	Roll back to the previous firmware version	Check that the firmware is compatible with the ESC hardware version	Replace the ESCs	Recalibrate the compass	2
	16	LCB	Medium	In the flight log, you see a sudden current spike of 80A for 0.5 seconds followed by a voltage drop. What is the most likely cause?	A motor seized briefly or propeller strike	GPS glitch	Accelerometer noise	Compass error	1
	17	DCB	Easy	During a waypoint mission, the drone overshoots each waypoint by 5 meters. What tuning parameter should be adjusted?	Increase waypoint radius acceptance	Decrease the maximum speed or adjust the navigation PID	Increase the altitude	Reduce the number of waypoints	2
	18	SCB	Hard	You test geofencing by flying towards a virtual boundary. The drone stops but then drifts past the boundary by 10 meters. What does this indicate?	The geofence radius is too small	The braking response is too slow; adjust geofence action parameters	GPS accuracy is poor	The drone is too heavy	2
	19	DCB	Easy	Why is it important to use a standardized checklist during final inspection?	To increase paperwork	To ensure no step is missed and to provide traceability for quality assurance	To impress the customer	To avoid using software	2
	20	DCB	Easy	A drone crashes six months after a repair. The customer claims the repair was faulty. How does a	It proves the customer is lying	It provides evidence of the work done, parts used,	It is not useful	It only records dates	2
DGT/VSQ/N0102.Employability Skills (60 Hours)	21	SCB	Hard	A customer offers you a cash reward to falsify a repair report so they can claim insurance. Which constitutional and ethical value should guide you?	Accept the reward – no one will know	Refuse politely; honesty and integrity are core values; report the incident if required	Negotiate for a higher amount	Ignore and do it secretly	2
	22	LCB	Medium	As a drone service technician, which of the	Become CEO of a	Complete a certified drone	Retire in 30 years	Learn nothing new	2

			following is an example of a short-term career goal?	drone company in one year	repair course within 6 months			
23	DCB	Easy	A customer who uses a wheelchair asks you to explain the drone repair process. How should you behave?	Speak only to the person accompanying them	Sit or kneel to be at eye level, speak directly to the customer, and explain patiently	Rush through the explanation	Say "it's too technical for you"	2
24	DCB	Easy	You need to pay online for a drone spare part. Which practice is safest?	Click on a link sent in an unknown SMS	Use a secure payment gateway on the official website, check for "https", and never share OTP	Give your debit card PIN to the seller	Use public Wi-Fi without VPN	2
25	LCB	Medium	Your drone repair team uses Slack for daily updates. What is an effective way to use this tool?	Send random messages to everyone	Post clear, concise work updates in the designated channel, reply to relevant	Use it only for personal chats	Ignore all notifications	2
26	DCB	Easy	You are considering starting your own drone repair business. Which of the following is a correct step to assess opportunities?	Open a shop immediately without any research	Research local demand, competition, customer pain points, and required	Copy a competitor's exact model	Only ask friends for advice	2
27	DCB	Medium	Which section is essential in a professional CV for a drone service technician?	Favourite movies list	Contact information, work experience, technical skills (e.g., soldering, PID tuning), certifications, and education	List of all tools owned	Family members' names	2