Num	Question	Correct answer	Source
1.	What is the primary communication method used by the Smart Tool Holder (STH)?	Wi-Fi (2.45 GHz 802.11 b/g/n)	PDF data
2.	What data can the Smart Tool Holder detect?	Fx (axial force), Fy (radial force), Mz (torque)	PDF data
3.	What is the Smart Tool Holder's waterproof and dustproof rating?	IP67	PDF data
4.	What is the maximum rotational speed of the Smart Tool Holder?	G1/15,000 rpm	PDF data
5.	How long can the Smart Tool Holder's battery operate continuously?	6 hours	PDF data
6.	What is the maximum standby time of the Smart Tool Holder?	10 days	PDF data
7.	What does a solid red light on the charging dock mean?	Charging	PDF data
8.	What does a solid green light on the charging dock mean?	Charging complete	PDF data
9.	What could cause the charging dock to show no indicator light?	Charging contacts not aligned, incompatible power adapter (DC 12 V, 2 A), or charging dock malfunction	PDF data
10.	How to check if the Smart Tool Holder's signal strength is sufficient?	RSSI > -50 dB (if RSSI < -50 dB, data may be incomplete)	PDF data
11.	How to record sensor data?	In Real-time Monitoring mode, press the START RECORD button	PDF data

12.	How to change tools?	On the Real-time Monitoring page, press TOOL CHANGE to perform the change	PDF data
13.	How to convert Smart Tool Holder data from TXT to CSV?	On the Save Settings page, check Save a Parsed File	PDF data
14.	What is the default root directory for VTR?	C:\VTR	PDF data
15.	Where is the raw data stored in the Virtual Tool Room (VTR)?	C:\VTR\RawData\Source\Data*.txt	PDF data
16.	How to add upper and lower control limits (UCL/LCL) in the Virtual Tool Room?	In the history view of the Virtual Tool Room, select a folder and file, then press ADD UCL LCL	PDF data
17.	Why does the Smart Tool Holder show no light when shaken?	It may be in sleep mode; connect it to the charging dock to wake it up	PDF data
18.	What does a red light on the Smart Tool Holder indicate?	Low battery	PDF data
19.	How to bind the Smart Tool Holder to a tool?	On the project settings page, select the MAC address and tool ID, then press the BIND button	PDF data
20.	How to wake up the Smart Tool Holder?	Shake it (exceeding the G-value threshold) to wake it up	PDF data
21.	What modes does the Smart Tool Holder have?	Idle mode, transmission mode, setup mode, sleep mode, sleep-wake mode	PDF data
22.	What is sleep-wake mode?	Allows the Smart Tool Holder to periodically wake from sleep mode and report status	PDF data
23.	What parameters can be set for the Smart Tool Holder?	Router SSID, password, IP, port, RF power level, G-value threshold, polling interval, sleep duration	PDF data
24.	What is the input voltage specification	DC 12V	PDF data

	of the charging dock?		
25.	What is the input current of the charging dock?	2A	PDF data
26.	What is the primary function of MQTT on the Smart Tool Holder?	Responsible for data communication between the Smart Tool Holder and the Virtual Tool Room	PDF data
27.	What is the default MQTT communication port?	Port 1883	PDF data
28.	How to set up MQTT communication?	Add an inbound rule in Windows Defender Firewall to allow Port 1883	PDF data
29.	What to do if the Smart Tool Holder cannot connect?	1. Ensure the Smart Tool Holder is in idle mode (green light flashing) 2. Check IP and router settings 3. Verify MQTT configuration	PDF data
30.	How to select a time range for data analysis?	On the History View page, use Start Time and End Time to set the range	PDF data
31.	How to view the tool's movement path?	On the Simulation Analysis page, observe the Coordinate X, Y, Z charts for simulation results	PDF data
32.	How to analyze the tool's maximum force conditions?	In History View, check CH1 Max, CH2 Max, CH3 Max, CH4 Max for the maximum values of each channel	PDF data
33.	How to compare simulation results with actual test results?	In History View, select the baseline test data and compare it with new test results	PDF data
34.	If the Smart Tool Holder's signal sending interval is too long, what could be the reason?	Low signal strength (RSSI) or incorrect MQTT configuration	PDF data
35.	How to check if the Smart Tool Holder is functioning properly?	In Auto Test mode, check the Power (battery level), RSSI (signal strength), and Active (status)	PDF data

		indicators	
36.	What data storage options can be set on the "Save Settings" page?	Whether to store raw data (TXT), parsed data (CSV), CSV write mode, and minimum force data recording threshold	PDF data
37.	How to change "Save Settings"?	Press the APPLY UPDATES button	PDF data
38.	When should you re-scan the Smart Tool Holder?	When it cannot be detected, or after changing communication settings	PDF data
39.	How to update an existing production plan?	In the Plan Settings of the Virtual Tool Room, use the UPDATE PLAN button	PDF data
40.	What does a blue light on the Smart Tool Holder indicate?	The tool holder is connected	PDF data
41.	What is the maximum voltage of the first-generation Smart Tool Holder?	8.45 V	CSV data
42.	What is the minimum voltage of the first-generation Smart Tool Holder?	7.0 V	CSV data
43.	What is the power consumption rate of the first-generation Smart Tool Holder?	From 8.45 to 7.5 V: 0.00458 V/min From 7.5 to 7.0 V: 0.00198 V/min	CSV data
44.	What is the maximum voltage of the second-generation Smart Tool Holder?	4.03 V	CSV data
45.	What is the minimum voltage of the second-generation Smart Tool Holder?	3.3 V	CSV data
46.	What is the power consumption rate of	0.00150 V/min	CSV data

	the second-generation Smart Tool Holder?		
47.	How often is a data packet sent?	Every 0.4 seconds	CSV data
48.	What is the normal TToLP value?	Less than 100 ms	CSV data
49.	What is the tool holder port range?	6500~6510	PDF data YAMLdata
50.	What is the NC code for 2024-06-10?	ad.nc	YAMLdata
51.	What was the workpiece material used on 2024-02-23?	FDAC/JIS SKD61	YAMLdata
52.	What was the machine name used on 2024-10-25?	TMV-720	YAMLdata
53.	What was the controller brand used on 2024-10-25?	Siemens-840D	YAMLdata
54.	What was the tool holder model used on 2024-10-25?	BT-40	YAMLdata
55.	What was the STH1 tool diameter used on 2024-06-10?	5 mm	YAMLdata
56.	What was the STH1 tool ID used on 2024-01-19?	T2023-0119-10	YAMLdata
57.	What was the STH1 flute count used on 2024-01-19?	4	YAMLdata
58.	What was the remaining STH1 voltage on 2024-10-25?	7.5V	CSV data YAMLdata
59.	How long did it take for the STH1 used on 2024-01-15 to reach	大約 6 小時	CSV data YAMLdata

	minimum voltage?		
60.	What was the STH1 MAC address used on 2024-01-19?	84f703cd5d92	CSV data YAMLdata
61.	When was tool holder d4w5 used?	Jun_10_2024_13 Feb_23_2024_13 Oct_25_2024_17	CSV data YAMLdata
62.	What NC code was used on 2024-01-19?	5-Slots.nc	YAMLdata
63.	What tools were used on 2024-01-15?	Side-101-R1 side-103-R0.5 side-104-R0.5	CSV data YAMLdata
64.	What was the machine used on 2024-02-28?	VP-8	YAMLdata
65.	What was the average RSSI on 2024-11-27?	-35 dBm	CSV data
66.	What was the tool holder temperature range on 2025-05-11?	26.9~34.2 ℃	CSV data
67.	Which tool holders has tool Side-101-R1 been used with?	d4w5 elh6r 7cdfa139d4d6	YAMLdata
68.	When was tool Side-101-R1 used?	Jun_10_2024_13 Jan_13_2024_16 Jan_15_2024_06	YAMLdata
69.	What was the average MQTT delay on 2024-09-13?	0.4 seconds	CSV data
70.	What was the connection time on 2024-09-13?	8 hours 26 minutes	CSV data