FIRST Technical Advisor

Certification Test

Important: All volunteers supporting regular season events in the United States and Canada must be screened and assigned using the Volunteer Management System and are required to complete their certification test using the online volunteer certification system.

This test is provided publicly for team use and volunteer certification as needed at events outside of the United States and Canada.

Revision History	
Revision	**Description**
V26-27.1	Initial 2026–27 Season Release

Questions

Q1. You are the *FIRST* Technical Advisor (FTA) at a small event with no Field Supervisor, Control System Advisor, or Technical Director staffed. Which of the following describes your top priority during qualification matches?

A. Assisting teams with technical challenges they face when preparing for and participating in matches.
B. Ensuring the efficient flow of matches while helping teams to participate in their matches.
C. Investigating reports of wireless connection issues by teams at the practice field.
D. Addressing issues with the interaction of the FTC-Live scoring system and A/V systems.

Q2. When the Field Supervisor role is staffed, which of the following best describes how the FTA should interact with that volunteer?

A. Delegate arena setup tasks to them.
B. Call upon them when a field needs repair or maintenance.
C. Empower them to manage the flow of matches while providing guidance.
D. These are unrelated roles with no formal relationship on event day.

Q3. When the Control System Advisor role is staffed, which of the following best describes how the FTA should interact with that volunteer?

A. Empower them to provide in-depth technical support to teams.
B. Call upon them when a team needs assistance during pre-match setup.
C. Delegate pre-match and post-match triage to them.
D. These are unrelated roles with no formal relationship on event day.

Q4. When the Technical Director role is staffed, which of the following best describes how the FTA should interact with that volunteer?

A. Call upon them when there is suspected wireless interference in the arena.
B. Empower them to manage scoring-related systems and the wireless environment.
C. Delegate scoring system setup tasks to them.
D. These are unrelated roles with no formal relationship on event day.

Q5. Upon arriving at a two-field event, you learn that only one field perimeter intended for use in the arena was delivered to the venue. Which of the following checklists might have helped to avoid this situation?

A. Wi-Fi Event Checklist
B. Event Technical Checklist
C. FTC-Live Setup Checklist
D. Field Acceptance Checklist

Q6. Assuming a mismatched collection of field perimeters, field tiles, and partial game sets are present during event setup, which of the following best describes the priority for arranging the available materials?

A. Keep related materials (for example, those owned by the same organization) together.
B. Use the materials that look the best in the arena.
C. Ensure a consistent experience between the competition fields and practice fields.
D. Ensure a consistent experience on all competition fields that exceeds the minimum acceptance criteria.

Q7. The Event Director, Technical Director, or other designated volunteer reports that setup of the FTC-Live scoring system was completed prior to the event. What should the FTA do?

A. Verify operation of the scoring system during event setup and on the morning of the event.
B. Reinstall and reconfigure FTC-Live, so they know the state of the system firsthand.
C. Accept the confirmation, because scoring system configuration belongs to the Technical Director.
D. Trust the report unless the Head Referee reports an issue with scoring.

Q8. Queuers report that a team missing from the next match is currently in a scheduled judging interview which was delayed. It will be more than five minutes before the team will be available to participate in the match. The three remaining teams are ready to play. What action should the FTA take?

A. Hold the three ready teams at the field until the fourth team arrives. Advise them to power off their robots to conserve battery.

B. Run the match with three teams but advise the Head Referee to count the missing team as "present".
C. Advise the Head Referee to assess a match delay violation because the team was absent at the required time.
D. Skip the match and replay it at the start of the next scheduled break. Inform all four teams of the new estimated match time.

Q9. During pre-match setup, a team has trouble connecting their Driver Station to the Robot Controller. While triaging the issue, you have exhausted basic troubleshooting steps except for fully rebooting the Driver Station device, which takes time. The event is currently running a few minutes behind schedule. What should you do?

A. Advise the team that they can remove their robot from the field and seek the help of a CSA as long as one representative from their team remains at the field.
B. Advise the team to reboot the Driver Station. This is a reasonable delay to maximize the chance that all teams can participate.
C. Inform the Head Referee that the team's robot will be non-functional for the match. Only the Head Referee can officially declare a robot to be disabled.
D. Allow the team to continue troubleshooting only as long as other teams are still setting up for the match. Once they complete, inform the team that they will be unable to participate.

Q10. While assisting a team with a technical issue during pre-match setup, students from another team in the same match open a toolbox and begin making significant changes to their robot. What should you do?

A. Ignore the actions of the other team until you are finished helping the first team. The other team cannot be penalized for a delay caused by someone else.
B. Advise the Head Referee that you are assisting the first team but have not instructed the other team to make changes. Work of this kind falls outside good-faith efforts to be ready for the match.
C. Issue the other team a verbal warning and log it in the FTA Notepad.
D. Ignore the actions of the other team because robot modifications are the Lead Robot Inspector's concern.

Q11. You have made the difficult decision to start a match with one team's robot non-functional, and the drive team is distressed. Which response best serves the team?

A. Name the steps you took, explain that the match must start for the other three teams, ask them to leave a representative at the field for match credit, and offer to connect them with a Control System Advisor.
B. Tell them the schedule requires the match to start and hand off the field to the Head Referee.

C. Tell them you will ask the Head Referee to declare their robot disabled so their alliance is not affected.
D. Apologize for the venue's wireless environment and tell them the next match should go better.

Q12. After transferring ownership of the field to the Head Referee, but before the start of the match, you notice that one team's Driver Station has dropped its connection to the robot. What is the correct action?

A. Step onto the field and check the robot's status.
B. Say nothing and let the match proceed, because ownership has transferred.
C. Ask the Head Referee to return field ownership so you can address the issue.
D. Signal the Scorekeeper to hold the match start while you work with the team.

Q13. During a match, a mechanism on one robot comes loose and extends over the field perimeter toward the alliance area where drive teams are standing. You believe the situation poses a safety risk to nearby drive team members. What should you do?

A. Ask the Scorekeeper to stop the match timer.
B. Tell the Head Referee what you see and wait for their decision.
C. Note the hazard and raise it with the team during post-match triage.
D. Instruct the team to stop their robot immediately.

Q14. During a match, one robot has not moved. Its Driver Station shows no connection to the Robot Controller. Nothing about the situation is unsafe. What should you do?

A. Declare the robot disabled so field staff and other teams are aware of the robot's status.
B. If it's possible to reach the robot without stepping into the field, cycle the robot's main power.
C. Advise the Head Referee as soon as possible that the robot appears non-functional and continue observing from outside the field.
D. Instruct the team to stop their robot and remove it from the field before the match ends.

Q15. During a match, a portion of the playing field malfunctions in a way that affects how teams score. Which of the following best describes the actions you should take?

A. Observe the field while match play continues. After the match, advise the Head Referee what happened and how it impacted team interaction with the field.
B. Instruct teams to stop match play immediately so that the field can be repaired.
C. Allow the match to continue. Inform teams that the match will be replayed and give your best estimate of the timing of the replay.
D. Assess a verbal warning against any teams that caused damage to the playing field.

Q16. After a match, you determine that damage to the playing field will take 10–15 minutes to repair. During that time, matches cannot be played on the damaged field but may continue on another competition field. Which course of action should the FTA take?

A. Play the queued match on the other competition field. Then ask the Emcee to announce a 10-minute break from match play for repairs to take place.
B. Stop all match play immediately until repairs are complete on the damaged field. Advise any queued teams to power down their robots to conserve battery.
C. Continue match play on the remaining competition field while repairs are made. If necessary, reconfigure displays and tablets to support matches scheduled on the damaged field.
D. Continue match play as normal, making progress on the repairs between matches.

Q17. During qualification matches, you find that the event is running approximately two matches behind the published schedule. Which of the following is an appropriate action for the FTA to take?

A. Shorten match duration for playoff matches to recover time.
B. Inform the Emcee of the timing issue and suggest delaying introduction of the teams until the autonomous portion of the match.
C. Move award presentations to the end of the day and run playoff matches back-to-back.
D. Ask the Head Referee to shorten post-match reviews, so the cycle speeds up.

Q18. You, the Head Referee, and the Event Director agree that an arena fault affected three qualification matches. Replaying all three will push the afternoon schedule. Which of the following is true when discussing the situation with teams in the affected matches?

A. A replay can be avoided if all four teams decline the opportunity, but only if prompted with a non-leading question about their preferences.
B. Teams on the winning alliance have priority in the decision of whether a match is replayed.
C. Teams on the losing alliance have priority in the decision of whether a match is replayed.
D. A replay is required if the Head Referee determines that the arena fault affected the outcome of the match or a ranking point assessment.

Q19. A drive team member has repeatedly ignored instructions from field staff, and you feel that they are escalating towards severe behavior. What should you do?

A. Give the drive team member a verbal warning and record it in the FTA Notepad.
B. Refer the issue to the Judge Advisor for consideration during award deliberations.
C. Ask the Lead Robot Inspector to note the behavior on the team's inspection record.
D. Refer the issue to the Head Referee and notify the Event Director or Program Delivery Partner.

Q20. A team member uses the question box to raise a complaint about the wireless environment at the event. They claim that it clearly affected their performance in an earlier match and demand a replay. How should the FTA approach this situation?

A. Refer the student to the Technical Director because their complaint relates to the wireless environment.
B. Inform the student that the match will not be replayed because there is no evidence of an arena fault.
C. Express empathy for the student's frustration, gather information from them, and report your own assessment of the wireless environment to the Head Referee for consideration.
D. Inform the student that the match will be replayed because the issue they described could be considered an arena fault.

Answer Key

Question	Correct Response	Explanation	Source
Q1	B	As an event leader, the FTA's primary focus is the efficient flow of matches at the competition field. Within the constraints of schedule awareness and other priorities, the FTA is encouraged to assist teams, when possible, to maximize participation in their matches.	*FTA Manual, Overview; Lesson 1.1*
Q2	C	Field Supervisors are well-equipped to manage the flow of matches and conduct as-needed repairs and maintenance. FTAs should empower them as leaders while supporting them with expertise as necessary.	*FTA Manual, Reporting Structure; Field Operations Guide, Field Supervisor; Lesson 1.2*
Q3	A	CSAs are well-equipped to provide in-depth technical support to teams. FTAs should empower them to support teams in a self-directed manner while also alerting them to teams who demonstrate a need for assistance at the field.	*FTA Manual, Reporting Structure; Lesson 1.2*
Q4	B	Technical Directors are well-equipped to manage scoring-related systems and the arena's wireless environment. FTAs should empower them to manage these systems while also alerting them to potential issues.	*FTA Manual, Reporting Structure; Lesson 1.2*

Q5	B	FTAs should work with the Event Director on the Event Technical Checklist to ensure that all required materials are present on event day.	*FTA Manual, Pre-Event Preparation Work; Field Operations Guide, Before the Event; Lesson 2.1*
Q6	D	A consistent experience across all competition fields is the highest priority. The FTA is responsible for ensuring that all competition fields meet minimum acceptance criteria described in the Field Acceptance Checklist. Practice fields, while helpful to teams, can be deprioritized to support the arena.	*Field Operations Guide, Field Consistency & Field Tolerance*
Q7	A	Regardless of who sets up the scoring system and the outcome of pre-event testing, the FTA should verify operation of the system during event setup and on the day of the event.	*FTA Manual, Event Management System; Lesson 2.2*
Q8	D	Teams are not subject to match delay violations when the event creates scheduling conflicts. The FTA is empowered and encouraged to skip a qualification match to support a team in this situation. This is often the best way to reduce impact to the event schedule while supporting teams.	*Field Operations Guide, Scheduling Conflicts; Lesson 3, Scenario 4*
Q9	B	FTAs should be schedule-aware, not schedule-driven. Rebooting a Driver Station device is a reasonable troubleshooting step and represents an acceptable delay to maximize the change that all teams can participate in the match.	*Field Operations Guide, Pre-Match Triage; Lesson 3, Scenario 1*
Q10	B	FTAs should remain vigilant for actions by any team that fall outside of 'good faith efforts' to prepare for a match (such as using tools to make significant changes to their robot). The Head Referee makes the final decision on rule violations, so the FTA should advise the Head Referee of the situation.	*Field Operations Guide, Pre-Match Triage*
Q11	A	Once pre-match triage is complete, the FTA can invite the team to continue work away from the field with the help of a CSA. They should be advised to have a representative remain at the field to receive credit for the match. Empathetic but confident communication is key for stressful interactions.	*Field Operations Guide, Pre-Match Triage; Lesson 3, Scenario 1*

Q12	C	If formal handoff of the field to the Head Referee has already occurred, but the FTA has identified a potential issue that may prevent one or more teams from participating in a match, the FTA may request return of field ownership from the Head Referee to address the issue.	*Field Operations Guide, FTA & Head Referee Workflow*
Q13	D	Safety concerns always override field ownership. If either the FTA or Head Referee see an unsafe condition, they should work to resolve it. The FTA may instruct a team to stop their robot if they determine that it poses a safety risk.	*Field Operations Guide, During a Match; Lesson 2.3*
Q14	C	The FTA should advise the Head Referee as soon as possible if a robot is non-functional. Only a Referee can declare a robot is disabled as this may impact match outcomes. Noone may enter or reach into the field during a match.	*Field Operations Guide, During a Match; Lesson 2.3*
Q15	A	Head Referees make the final decision whether a match will be replayed due to an arena fault. FTAs should inform the decision with their observations and expertise about the playing field.	*Field Operations Guide, Arena Faults; Lesson 3, Scenario 2*
Q16	C	FTAs should prioritize the efficient flow of matches, even if it requires playing them on fields other than where they were originally scheduled. Slower cycle times are preferred over a stop to match play.	*Field Operations Guide, Significant Field Damage; Lesson 3, Scenario 5*
Q17	B	Working with the Emcee to adjust match cycle times is appropriate. Match duration, awards timing, and post-match review are outside the FTA's purview.	*Field Operations Guide, Strategies for Timing Adjustment; Lesson 2.3*
Q18	A	For any given match, the FTA may ask participating teams if they would like to replay the match. It is important to avoid implying that they would prefer for a team to decline. If all four participating teams decline, then the original match results can be kept.	*Field Operations Guide, Arena Faults*

Q19	D	The only person at an event who can give an official warning or issue a yellow/red card is the Head Referee. Please refer more severe issues to the Head Referee and notify the Event Director or Program Delivery Partner. Volunteers should avoid discussing issues with judges or the Judge Advisor.	*FTA Manual, Team Interaction and Support; Lesson 1.3*
Q20	C	The Head Referee is responsible for decisions about match replays, but they rely on the advice of the FTA based on their independent observations of the arena and wireless environment. This is an opportunity to make the student feel heard and supported regardless of whether they achieve their desired outcome.	*FTA Manual, Team Interaction and Support; Lesson 3, Scenario 3*