

Team 250 FIRST Driver Qualification Test (FDQT)

February 2013

Name: _____

Desired Drive Team Position(s): _____

PART I - Short Answer:

1) Once a match begins, when may any member of the drive team step forward and cross the starting line <G20>?

2) List all possible ways to score points during a match and their point value, including penalties. Be specific <1.6 & 3.1.4>!

3) Discuss the differences and importance of each of the following (I.E. how it's calculated, etc..) <5.3.3. & 5.3.4>:

A) Match Score:

B) Qualification Score:

C) Ranking Score:

4) Game piece manipulation <G34 & G35>:

A) Who on the alliance may interact with the DISCS?

B) When and how are the DISCS introduced into the field?

B) When may a DISC be picked up in preparation for feeding it into the field?

5) Please identify, in chronological order, the two main periods that make up a match of Ultimate Ascent, and their duration <3.1.2>.

5) Rule <G31> outlines the pinning rule:

A) Explain what constitutes pinning

B) Describe what actions a driver may take to remove the risk of a pinning penalty

C) What penalty is assessed for pinning, and what is the point value deducted for this penalty (if any)?

7) **Danger Will Robinson!**** Tipped over robot!? <G32>:**

A) How long does a fallen robot get to right itself before it is allowed to be touched by an alliance partner?

B) How long does a fallen robot get to right itself before it is allowed to be touched by a member of the opposing alliance?

8) Climbing <3.1.5.2>:

A) What constitutes a VALID CLIMB?

B) If a climb is considered unacceptable by a referee, what field element will indicate this, what color will it use and what must a team do, at that time, to receive a valid climb? Be Specific!

10) In qualifying matches, one of your alliance partners has already received a yellow card in a previous match. Explain what happens if the referee determines their behavior in the current match is worthy of a yellow card again. Please specify what happens to them for that match. How does it affect our team? How about the carded team in their next match? Will that team ever lose that yellow card <5.5.4>?

11) List THREE criteria a robot must meet to be considered in the starting configuration prior to a match beginning. What could result from any of the robots competing in a particular match not meeting these aspects <G05>?

15) DISC Manipulation <G06 & G24>:

A) How many DISCS may a robot possess at any given time during a match (keep in mind the two periods of the game) without being assessed a penalty?

B) What are the differences between the actions of possessing and bulldozing?

C) What are some risks teams face should a DISC become stuck on their robot?

16) Explain what the PLAYER STATION LED colors are, and what they indicate.

17) Explain what the term PRELOAD means with relation to ULTIMATE ASCENT. Be specific!

Part II – Multiple Choice:

18) The base of the PYRAMID is _____ inches by _____ inches wide:

- A) 92", 92"**
- B) 92", 94"**
- C) 94", 92"**
- D) 94", 94"**

19) (True or False) The event staff and the drive team may both use the robot belay device after a match has finished?

- A) TRUE**
- B) FALSE**

20) **Double Jeopardy This is a field element that while your robot is in contact with, or part of your robot is within, your robot will be "protected" (meaning the opposing alliance will accrue a penalty). (Select all that apply)**

- A) What is the FEEDER ZONE?**
- B) What is the LOADING ZONE?**
- C) What is the FEEDER STATION?**
- D) What is the PYRAMID?**
- E) What is the HIGH GOAL?**

21) How many DISCS are located in each ALLIANCE STATION at the beginning of every match?

- A) 35
- B) 41
- C) 45
- D) 51

22) How many RED/BLUE disks does each corresponding alliance start with?

- A) 2
- B) 3
- C) 6
- D) 12

PART III – Scenarios

The following events took place during the 25th qualifying match at FLR. Use qualifying match 25 to answer questions 23 – 26.

AUTO:

Red Alliance #1: This robot was preloaded with 2 discs. During AUTO it was able to score both disks in the high goal. With the remaining time of AUTO, it managed to collect 2 more discs and store them in its' hopper.

Red Alliance#2: This robot was preloaded with 3 discs. During AUTO it made 2 of its' 3 shots in the middle goal.

Red Alliance #3: This robot was preloaded with 2 discs. During AUTO it fired both disks and missed. It then proceeded to drive completely over the centerline of the field.

Blue Alliance #1: This robot was preloaded with 3 discs. During AUTO it was able to score all three discs in the high goal.

Blue Alliance #2: This robot was preloaded with 2 discs. During AUTO it was able to score both discs in the high goal.

Blue Alliance #3: This robot was preloaded with 2 discs. During AUTO it was able to score both in the low goal.

TELEOP:

Red Alliance #1: Immediately at the start of TELEOP it scored the two discs it collected in AUTO into the high goal. During the rest of the match they ended up making 6 of the 8 shots they took in the high goal. They were also able to score 3 red discs in the pyramid goal. At the end of the match they were able to get a Level 2 climb.

Red Alliance #2: This robot made 12 shots in the middle goal and managed a level 1 climb.

Red Alliance #3: This robot was a hot mess. They missed three shots at the high goal, but actually managed to score a disc in the blue alliances pyramid goal. However, at the end of the match, they were able to get a level 3 climb.

Blue Alliance #1: This robot was able to score 16 discs in the high goal during TELEOP. They were also able to get a level 1 climb.

Blue Alliance #2: This robot scored 4 discs in the middle goal, and 2 discs in the high goal. Towards the end of the match they were able to get to the second rung of the pyramid, and when the match ended, their mechanism allowed part of their robot to drop below the first rung of the pyramid.

Blue Alliance #3: This robot scored 28 discs in the low goal and was able to get a level 1 climb.

23) Who won? What are the final match scores for both the Blue and Red Alliance? (Show your work)

24) Penalties

A) What penalties were assessed during Qualifying match 25 and what were the penalty point totals for both alliance?

B) How did those penalties affect the match outcome?

C) Were any of the penalties avoidable? Please Explain.

25) What qualification score, as a result of Qualifying Match 25, was awarded to each member of the Red and Blue alliance (if any)?

26) Which alliance's ranking score benefitted more as a result of Qualifying Match 25? Why?