Pre-Employment
Irrigation Technician Exam

Point values for each question listed below. Answers are in red.

1. (1 point) Put the following list of basic components of a sprinkler system in order, beginning at the city main line:

- 5 Valve manifold
- 4 System main line
- 2 Stop and waste valve
- 6 Zone valve
- 7 Lateral line
- 1 Water meter
- 8 Spray head
- 3 Backflow preventer

2. (1 point) What are the 2 most common irrigation techniques for applying water to plant material on commercial and residential properties? (How is the water distributed?)
   a. Drip irrigation
   b. Spray irrigation

3. (2 points) Does sprinkler head spacing affect irrigation system uniformity? Circle one.
   a. Yes
   b. No

4. (2 points) Will poor uniformity of coverage affect irrigation operating efficiency? Circle one.
   a. Yes
   b. No

5. (2 points) What can be added to most irrigation heads to prevent low head drainage? Select one.
   a. Check valve at the base of head
   b. SAM head
   c. Check valve already installed in head
   d. All of the above

6. (2 points) How far should a spray head be set from a hard surface? Why?
   1"; to protect from edging

7. (1 point) What does GPM stand for?
   Gallons per minute
8. (1 point) Why should a head be straight and level?
   *It affects uniformity of the spray*

9. (1 point) On a spray head, what does each of the following stand for?
   a. 10F  **Ten foot full**
   b. U12H  **Undercut 12 foot half**
   c. 8F  **Eight foot full**
   d. 15SST  **15 foot side strip**
   e. 5Q  **5 foot quarter**

10. (1 point) After cutting PVC pipe, what do you do before gluing?
    *Clean pipe and apply primer*

11. (3 points) What causes water to mist and reduces the effective radius of coverage?
    *Too much water pressure*

12. (1 point) When repairing a poly line, where do you put the clamp on the fitting?
    *On the ridges of the coupler*

13. (1 point) When using 2 clamps on one side of a poly fitting, why do you stagger the head of the clamp?
    *To allow for easier removal during repairs*

14. (3 points) What is the most common voltage used to activate a solenoid?
    *24 volts*

15. (2 points) How can you tell if you have a seeping valve?
    *Water coming out of heads; valve making noise; wet areas in grass*

16. (2 points) What is the most common repair for a seeping valve?
    *Clean out the debris and replace the diaphragm*

17. (2 points) If your controller display is showing FUSE or FAULT, what is most likely the problem?
    *Zone valve has a bad solenoid, controller fuse is bad*

18. (2 points) If power to your controller is good but no zones come on, what should be the next thing to check?
    *See if the common wire is unhooked*

19. (3 points) If your backflow is discharging constantly, what is most likely the cause?
    *Debris in the backflow*

20. (2 points) Why do you open the water to a system slowly?
    *To prevent water hammer*
21. (3 points) Why do you place all ball valves on a backflow at a 45 degree angle when winterizing?
   To prevent water from settling in the ball valves and freezing

22. (3 points) When installing a zone what is the best location for the zone valve to be installed to distribute water through the lateral lines? Select one.
   a. Center of zone
   b. End of zone
   c. Front of zone

23. (3 points) What is the best operating pressure for pop up spray heads? Select one.
   a. 20PSI
   b. 50PSI
   c. 30PSI

24. (3 points) On a system with high pressure where should the pressure reducing valve be installed? Select one.
   a. Upstream of the zone valve
   b. Downstream of the zone valve

25. (2 points) What is the last thing you verify before leaving a property?
   Water is on; clock is on and programmed; all trash and debris is cleaned up

26. (1 point for each item) Please label the parts/tools in the following pictures:
   a. Wire toner
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>b.</td>
<td>Multi VOLT meter</td>
</tr>
<tr>
<td>c.</td>
<td>Backflow</td>
</tr>
<tr>
<td>d.</td>
<td>Poly coupler</td>
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<tr>
<td>e.</td>
<td>Micro jet assembly</td>
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<tr>
<td>f.</td>
<td>Rotor</td>
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<tr>
<td>g.</td>
<td>Spray head</td>
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<tr>
<td>h.</td>
<td>Zone valve</td>
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<tr>
<td>i.</td>
<td>Emitter</td>
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Scoring system:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score</th>
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<tbody>
<tr>
<td>A (90%+)</td>
<td>54+ points</td>
</tr>
<tr>
<td>B (80-90%)</td>
<td>48-53 points</td>
</tr>
<tr>
<td>C (70-79%)</td>
<td>47-42 points</td>
</tr>
<tr>
<td>D (60-69%)</td>
<td>41-36 points</td>
</tr>
<tr>
<td>F (68% or less)</td>
<td>35 or less</td>
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