**Low Impact Development Technical Workshop Series Certificate**

Site Planning, Temporary Erosion and Sediment Control, and Inspection Test

Organization: Date:

1) Fill in the blank

Trees typically have deeper anchor roots for structural support (often \_\_\_\_\_\_\_\_\_\_\_feet or deeper in the soil profile); however, depending on hydrology, geology and species, the absorption or feeder roots of a tree are concentrated in the upper most \_\_\_\_\_\_\_\_\_\_\_ inches of the soil.

2) ( ) True ( ) False

To determine a tree root protection area, the species tolerance, vigor, and age are used to determine the distance from the trunk per inch of trunk diameter.

3) List three methods to minimize tree damage when stripping organic matter from parts of a site, clearing unwanted vegetation or demolishing existing buildings:

4) Douglas fir is considered to have poor to good tolerance of disturbance/construction activity. List three activities that Douglas fir do or do not tolerate.

5) Assessing trees on a site is divided into 9 elements. List five of those elements:

6) Short answer (one or two sentences)

Total impervious area can increase in large lot settings (e.g. 1 acre) compared to smaller lot (e.g. 1/4 to 1/8 acre). What is a primary cause for that impervious area increase?

7) List five primary site characteristics to consider and analyze for an LID project.

1.

2.

3.

4.

5.

8) Soil type and infiltration capability are important site characteristics to assess for designing an LID project. Which test is considered the most accurate for determining infiltration rates?

( ) EPA Falling Head test

( ) Grain size analysis

( ) Pit infiltration test (PIT)

9) ( ) True ( ) False

Native vegetation and soils are effective and cost efficient stormwater management controls.

10) Short answer (e. g. two or three sentences)

65\10 is a dispersion technique within BMP T5.30 (Full Dispersion). What do the numbers in 65\10 describe and how is water managed/directed to meet full dispersion?

11) Select the correct statements

LID techniques are integrated into the project design and:

( ) can be aesthetic elements;

( ) manage stormwater from small contributing areas;

( ) do not need to be considered until the final stages of the design process.

12) ( ) True ( ) False

Construction sequencing is a primary tool for erosion control and minimizing sediment input to LID facilities.

13) List three factors influencing erosion.

1.

2.

3.

14) ( ) True ( ) False

Doubling slope length increases erosion potential by 4X and doubling slope gradient increases erosion potential by 5X.

15) List three TESC BMP objectives or techniques.

1.

2.

3.

16) The 2013 – 2018 Municipal Stormwater Permits require all municipal governments regulated by the permits to:

1. Update their stormwater codes, rules, and standards to incorporate LID requirements as indicated by revised Minimum Requirements, #1, #2, and  #5 as published by the Wash. Dept. of Ecology
2. Update their site development-related codes, rules, and standards to incorporate and require LID principles and BMPs
3. Conduct Watershed Planning to project cumulative impacts of land development on water quality
4. a and b
5. a, b, and c