**ARDHI UNIVERSITY**



**SCHOOL OF EARTH SCIENCES, REAL ESTATE, BUSINESS STUDIES AND INFORMATICS**

**BACHELOR OF SCIENCE IN INFORMATION SYSTEM MANAGEMENT**

**(BSc. ISM)**

COURSE: **DATA STRUCTURE AND ALGORITHMS**

COURSE CODE: **IS 122**

INSTRUCTOR: **MR. NKOTAGU**

TITLE: **TREES ASSIGNMENT**

GROUP: 14

|  |  |  |
| --- | --- | --- |
| S/N | NAME | REGISTRATION NUMBER |
| 1. | TARIMO FAUSTIN GRACIANA | 30565/T.2023 |
| 2. | MSHANA NICOLAS SEVERINE | 32047/T.2023 |
| 3. | ABBAKARI AMALI MUROKOZI | 30917/T.2023 |
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| 5. | MUSSA RAMADHAN MANYUNGUI | 32019/T.2023 |
| 6. | JOSEPH MAXIMILLIAN MAZIGO | 30918/T.2023 |

ANSWERS

1.

1. In-order Traversal

H, D, I, B, J, E, L, A, F, C, G, K

1. Pre-order Traversal

A, B, D, H, I, E, J, L, C, F, G, K

1. Post-order Traversal

H, I, D, J, L, E, B, F, K, G, C, A

2.

1. In-order Traversal

3,3, 4 ,6, 7, 8, 10

1. Pre-order Traversal

8, 3, 3, 6, 4, 7,10

1. Post-order Traversal
2. 3, 4, 7, 6, 3, 10, 8

3. A, B, C, E, D

4.

1. In-order Traversal

5, 15, 20, 25, 27, 30, 35, 50, 55, 60, 68, 75, 85, 90, 100

Pre-order Traversal

50, 25, 15, 5, 20, 30, 27, 35, 75, 60, 55, 68, 90, 85, 100

Post-order Traversal

5, 20, 15, 27, 35, 30, 25, 55, 68, 60, 85, 100, 90, 75, 50

1. 55
2. 30
3. 75
4. 27