**COMSATS University Islamabad, ISLAMABAD Campus**

**Terminal Examination (Fall 2020)**

Department of Computer Science

**Long Question**

**Class:** BCS-VI & BSE- VII SEMESTER **Dated:** 06 January *2021*

**Subject:** Machine Learning **Time Allowed:** 50 mins

**Instructors**: Dr. Usman Yaseen, Umar Nauman **Maximum Marks**: 10

Create decision tree using ID3 algorithm on the following data set: **(10)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Hair** | **Height** | **Weight** | **Lotion** | **Result** |
| Sarah | Blonde | Average | Light | No | **Sunburned** |
| Dana | Blonde | Tall | Average | Yes | **None** |
| Alex | Brown | Short | Average | Yes | **None** |
| Annie | Blonde | Short | Average | No | **Sunburned** |
| Emily | Red | Average | Heavy | No | **Sunburned** |
| Pete | Brown | Tall | Heavy | No | **None** |
| John | Brown | Average | Heavy | No | **None** |

Due Date: 6th January 2021 (before the announced time)

NOTE: do the example on paper with pen. Take and attach snapshots in the report in proper sequence before turning it in on MS Teams Turn it in time on MS Teams, after saving your document with your registration number e.g “FA21-BSE-007.docx” DO NOT FORGET TO LABEL DIAGRAMS WITH PROPER SEQUENCE, if the sequence is not correct or pictures are not readable then you will be awarded ZERO CREDIT