

G. H. Raison College of Engineering, Nagpur
(An Autonomous Institution)
2020-2021 EVEN TERM
CAE-1 EXAMINATION SUMMER-2021 (ONLINE MODE)
Fourth Semester B.Tech. Artificial Intelligence
Machine Learning Algorithms

Time: 1 hr.]**[Max. Marks : 15**

- 1) [CO1/CO2/CO...] indicates the question related to specific course outcome.
- 2) All questions carry marks as indicated
- 3) Assume suitable data wherever necessary.
- 4) Due credit will be given to neatness and adequate dimensions.
- 5) Illustrate your answer wherever necessary with the help of neat sketches.
- 6) Use of non-programmable calculator is permitted.

CO.1 a) Using KNN algorithm find the **Rain Condition**, Let **K=3**
When **Temp: 29.6 C and Humidity: 78 %**

5M

Temp(X) in C	Humidity (Y) %	Rain Condition
27.8	76	Yes
28.2	76	Yes
28.7	80	No
28.6	81.6	Yes
27.7	89.4	Yes
30.5	89.9	No
26.7	81.4	Yes
25.9	85	No
36	90	No
31.8	88	Yes
35.7	70	No

b) Differentiate between Over-fitting and Under-fitting with an example.

5 M

CO.2 a)

Height (in cms)	Weight (in kgs)	T Shirt Size
158	58	M
158	59	M
158	63	M
160	59	M
160	60	M
163	60	M
163	61	M
160	64	L
163	64	L
165	61	L
165	62	L
165	65	L
168	62	L
168	63	L
168	66	L
170	63	L
170	64	L
170	68	L

Now, let us consider new customer named 'Mahesh' has height 161cm and weight 61kg. 5 M
Find his T shirt type.

OR

CO.2 b) How do you differentiate between supervise and unsupervised learning algorithm? 5 M

***** Stay Home Stay Safe *****