

Total No. of Questions – [3]

Total No. of Printed Pages:

G.R. No.

PAPER CODE

**May 2023 (ENDSEM) EXAM**

**T.Y. (Open Elective All Branches) (AY 2022-23 SEMESTER - II)**

**COURSE NAME: Explainable Artificial intelligence**

**(XAI) for Engineering Applications**

**COURSE CODE: IOEUA32205F**

**(PATTERN 2020)**

[Max. Marks: 30]

Time: [1Hr]

**(\*) Instructions to candidates:**

- 1) Use of scientific calculator is allowed
- 2) Use suitable data where ever required
- 3) All questions are compulsory

Question No.	Marking Scheme	Max. Marks	CO Mapped	BT
Q.1	a) Explanation of importance of the SHAP Values. Any Suitable example.	[4]	CO3,4,5,6	Analyse
	b) Explanation of ensemble learning . Explanation of final results are calculation process of Classification problem using ensemble learning	[6]	CO,4,5	Evaluate
	<b>OR</b>			
	c) Explanation of Keras Text Classification Models using SHAP Values.	[6]	CO,4,5,6	Analyse
Q.2	a) Discussion of the models handled by the What-If Tool	[4]	CO,4,5	Analyse
	b) Explanation of counterfactual explanations. Reasons to use counterfactual explanations.	[6]	CO,4,5	Analyse
	<b>OR</b>			
	c) Discussion of counterfactual in XAI	[6]	CO,4,5	Analyse
Q.3	a) four technically suitable Differences between counterfactual and contrastive explanations	[4]	CO,4,5	Analyse
	b) Explanation of Layerwise relevance propagation (LRP) with example	[6]	CO,4,5	Analyse
	<b>OR</b>			
	c) Reasons for usefulness of contrastive explanations with example.	[6]	CO,4,5	Analyse