MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL
(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (IT/CCE)

END SEM EXAMINATIONS, DECEMBER 2021

SUBJECT: AVANCED DATA SCIENCE [CRA 4062]

REVISED CREDIT SYSTEM
(27/12/2021)
PART B

Time: 75 Minutes   MAX. MARKS: 20

Instructions to Candidates:

❖ Answer **ALL** the questions.
❖ Missing data, if any, may be suitably assumed.

1A.	Demonstrate the use of model-based prediction approach and the models that leverage the same approach with suitable R commands.	**5**
1B.	Consider the following graph in which positive symbol indicates correct classification and negative indicates wrong classification. Calculate misclassification error, gini index and information gain. $\begin{array}{cccc} + & + & + & - \\ + & + & + & + \\ + & + & + & + \\ + & + & + & + \end{array}$	**3**
1C.	Write the equation to compute penalized residual sum of squares term for LASSO regression.	**2**
2A.	Develop a shiny web application which creates the slider and display the slider values in the UI. The slider must accepts the user inputs and the server must return the values.	**5**
2B.	What is swirl? Explain how it is used for creating a course and a new lesson. List the files that are produced while generating the new course.	**3**
2C.	Explain the benefit of using leaflet? Construct a map and insert markers into the map using leaflet.	**2**