Roll No: _____

Time allowed: 2 Hrs
Max Marks: 40

Instruction: Students are required to write Roll No on the cover page of the Answer Sheet. All other instructions on the question paper / Admit card should be followed meticulously.

Sections	No. of Questions to attempt	Marks	Total Marks
A	Minimum 4 questions with internal choices and all COs (Course Intended Learning Outcomes) covered in the Question Paper	4* 5	20
B	Compulsory Case Study	2*10	20
			40

SECTION A – (5 marks * 4 questions) = 20 Marks

A1a An insurer is attempting to underwrite solar Insurance risks for an solar panel technology manufacturer for which it has little historical claims information. Explain why applying a predictive model to the technology may not be the best first step.

OR

A1b Traditionally, policy pricing followed a tiered approach where insurers would adjust the customer against specifications that they deemed them fit. However, as personalization takes the centre stage, one can no longer follow the one-size-fits-all model. Suggest a solution to an insurance company to customize the product by using predictive underwriting (CILO 1)

A2a an CEO of an insurance company is trying a to find a solution of fraud detection as because of the lack of analytical skills in the team, no of fraud and inflated claims are increasing day by day. As an Insurance analytic expert suggest the solution for Fraud detection using analytics and behavioural information.

OR

A2b A typical vehicle claims experience, would entails a customer calling his insurer's call centre for waiting a long time, assistance, and being transferred to multiple customer service personnel before receiving the assistance he requires. This is leading to dissatisfaction among customers. An expert is suggestion conversational Chabot as a solution to the problem. Do you agree or not? Comment on the suggestion. (CILO2)

A3a Amazon wants to develop a predictive model for locations and drivers that are most likely to be involved in accidents in order to develop accident-prevention solutions. The organization has employed several data scientists to assist with various business problems.

Explain whether another professional in the organization, in addition to the data scientists, should be involved in a team to develop a predictive model and solutions for the accident problem.

OR

A3b an insurer has determined from its analysis that it has a higher percentage of Complaints and higher call centre waiting time than the industry as a whole. The insurer wants to be able to determine reasons for raising complains and call centre waiting time Explain whether the insurer would use a descriptive or predictive data-driven approach for this problem (CILO 2)

A4a You likely produce and use data. For example, you may enter data into a report (produce) and then make decisions based on a report that another professional put together (use). Can you think of some consequences of producing or using data that does not meet the principles of quality discussed?

OR

A4b A hurricane severely damaged several buildings owned by a warehouse facility. The warehouse was insured by Blue Earth Insurance Company. Because of the height of the buildings and the damage to them, it would be difficult and potentially dangerous to send a claims representative to inspect them. Describe how Blue Earth could use emerging technologies to help with the warehouse 's claim (CILO 4)

SECTION B – CASE STUDY (Compulsory)

1. Here is the data from an insurance company. Calculate the following performance indicators. Show all your working and formulas for full marks. All answers rounded to 2 decimal places. (Total marks 20)

Data Table:	
Written Premium	63,45,712
Earned Premium	7,30,000
Outstanding Claim Amount	2,39,400
Paid Claim Amount	1,84,000
Ultimate Amount of Claims	6,07,020
Incurred Number of Claims	1,500
Ultimate Number of Claims	2,010
Written Exposure	5,000
Earned Exposure	3,000

1. [4 marks] Incurred Ratio
2. [4 marks] Loss Ratio
3. [4 marks] Frequency
4. [4 marks] Severity
5. [4 marks] Pure Premium