Note: - Pl. start your question paper from next page

Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM & ENERGY STUDIES
DEHRADUN
End-Semester Examination 2019

Program/course	**: MA Economics (EE)**	**Semester**	**: IV**
Subject	**: Model Building and Simulation**	**Max. Marks**	**: 100**
Code	**: ECON 8005**	**Duration**	**: 3 Hrs**
No. of page/s	**: 4**		

Section A (attempt all)

Q1. Define the following in **one** sentence.

i.	Predictive Relationships	**[2]**	**CO1**
ii.	Causal Relationships	**[2]**	**CO1**
iii.	Grounded Theory	**[2]**	**CO1**
iv.	Theory Construction	**[2]**	**CO1**
v.	Outcome Variable	**[2]**	**CO1**
vi.	Complete Mediation	**[2]**	**CO1**
vii.	Partial Mediation	**[2]**	**CO1**
viii.	Direct Effects	**[2]**	**CO1**
ix.	Indirect Effects	**[2]**	**CO1**
x.	Reciprocal Causality	**[2]**	**CO1**

	SECTION B **Answer any four questions**		
Q2.	What is the difference between a categorical and a quantitative variable?	**[5]**	**CO3, CO4**
Q3.	Describe the hypothetical scatterplot heuristic for focusing a relationship between quantitative variables.	**[5]**	**CO3, CO4**
Q4.	Draw a scatterplot that shows a positive direct linear relationship; draw one that shows an inverse linear relationship.	**[5]**	**CO3, CO4**
Q5.	Draw a graph with two linear relationships on it, but one with a stronger effect as reflected by the slopes.	**[5]**	**CO3, CO4**
Q6.	Distinguish between causal and predictive relationships.	**[5]**	**CO3, CO4**
	SECTION C **Answer any two questions** 2 X 15 = 30		
Q7.	What are some of the reasons why a theorist might prefer working with linear rather than nonlinear relationships?	**[15]**	**CO1, CO4**
Q8.	Describe the hypothetical contingency table approach to focusing the relationship between two categorical variables. Include in your discussion how you would derive theoretical propositions from the table.	**[15]**	**CO3, CO4**
Q9.	Identify and define the six basic types of relationships in causal models and give an example of each.	**[15]**	**CO3, CO4**

	Section D **Answer the question** 1 X 30 = 30		
Q10.	Construct a causal theory. Include a path diagram of it and an accompanying narrative describing it. Give precise and clear conceptual definitions of each variable.	**[30]**	**CO1, CO3, CO4**

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Section A (attempt all)

Q1. Define the following in **one** sentence.

i.	Model	**[2]**	**CO1**
ii.	Simulation	**[2]**	**CO1**
iii.	Partial Mediation	**[2]**	**CO1**
iv.	Theory Construction	**[2]**	**CO1**
v.	Outcome Variable	**[2]**	**CO1**
vi.	Complete Mediation	**[2]**	**CO1**
vii.	Predictive Relationships	**[2]**	**CO1**
viii.	Direct Effects	**[2]**	**CO1**
ix.	Indirect Effects	**[2]**	**CO1**
x.	Reciprocal Causality	**[2]**	**CO1**

	SECTION B **Answer any four questions**		
Q2.	Distinguish between causal and predictive relationships. Describe with example.	**[5]**	**CO3, CO4**
Q3.	Describe the hypothetical scatterplot heuristic for focusing a relationship between quantitative variables.	**[5]**	**CO3, CO4**
Q4.	Draw a scatterplot that shows a positive direct linear relationship; draw one that shows an inverse linear relationship.	**[5]**	**CO3, CO4**
Q5.	Draw a graph with two linear relationships on it, but one with a stronger effect as reflected by the slopes.	**[5]**	**CO3, CO4**
Q6.	What is the difference between a categorical and a quantitative variable? Describe with example.	**[5]**	**CO3, CO4**
	SECTION C **Answer any two questions** 2 X 15 = 30		
Q7.	Identify and define the six basic types of relationships in causal models and give an example of each.	**[15]**	**CO1, CO4**
Q8.	Describe the hypothetical contingency table approach to focusing the relationship between two categorical variables. Include in your discussion how you would derive theoretical propositions from the table.	**[15]**	**CO3, CO4**
Q9.	What are some of the reasons why a theorist might prefer working with linear rather than nonlinear relationships?	**[15]**	**CO3, CO4**
	Section D **Answer the question** 1 X 30 = 30		

Q10.	Using variables from energy sector, construct a causal theory. Include a path diagram of it and an accompanying narrative describing it. Give precise and clear conceptual definitions of each energy variable.	**[30]**	**CO1, CO3, CO4**