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

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

Program/course	**: MA Economics (EE)**	**Semester**	**: II**
Subject	**: Econometrics Lab**	**Max. Marks**	**: 100**
Code	**: ECON 7109**	**Duration**	**: 3 Hrs**
No. of page/s	**: 1**		

Attempt all questions

Consider the following data base given in excel sheet, answer the questions using any econometric software.

Database for Lab test

Variables	Indicator Name
Dependent	CO2 emissions from manufacturing industries and construction (% of total fuel combustion)
Independent	Energy use (kg of oil equivalent per capita)
Independent	GDP per capita, PPP (constant 2011 international $)

Q1.	Run regression and test the problem of • Multicollinearity • Autocorrelation • Heteroscedasticity	**[60]**	**CO2** **CO3** **CO4**
Q2.	Prepare a report on the regression results.	**[40]**	**CO1** **CO2** **CO3**

Data Set

Year	CO2 emissions from manufacturing industries and construction (% of total fuel combustion)	Energy use (kg of oil equivalent per capita)	GDP per capita, PPP (constant 2011 international $)
1990	25.08267495	3555.656	29550.01
1991	24.30227606	3579.986	30437.74
1992	23.23690074	3652.071	30610.95
1993	22.82855199	3669.586	30587.73
1994	21.86696962	3855.051	30746.95
1995	21.7970999	3941.584	31224.72
1996	21.8556338	4014.457	31958.68
1997	21.92616969	4048.982	32391.35
1998	20.62248321	3963.251	31656.37
1999	20.4281367	4018.057	31535.63
2000	20.63807712	4092.714	32193.65
2001	20.09315169	4018.456	32230.33
2002	19.69354114	4005.944	32248.58
2003	19.23873684	3964.804	32721.91
2004	19.78733785	4090.644	33483.12
2005	19.89549806	4073.872	33916.12
2006	20.52456744	4065.634	34468.44
2007	19.50246556	4024.998	35183.6
2008	18.98568313	3868.176	34800.26
2009	19.20750685	3688.62	32880.97
2010	19.462378	3895.683	34423.93
2011	18.72500828	3614.385	34335.3
2012	17.82571905	3543.274	35003.54
2013	18.0363707	3570.437	35540.54

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Q1.	Run the regression, identify the following statistics and interpret. a) Intercept b) Slope coefficients c) R^2	**[60]**	**CO2** **CO3** **CO4**
Q2.	Using R2, t-ratio, VIF, TOL, Correlation coefficient and scattered plot prepare a report on the presence of multicollinearity in the data.	**[40]**	**CO1** **CO2** **CO3**

Data Set

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