OLABISI ONABANJO UNIVERSITY, AGO-IWOYE
FACULTY OF SOCIAL AND MANAGEMENT SCIENCES,
DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING
CENTRE FOR TRANSPORT STUDIES
HARMATTAN SEMESTER EXAMINATION SEMESTER 2010/2011 SESSION
POSTGRADUATE DIPLOMA EXAMINATION

COURSE CODE: DPT 701
COURSE TITLE: BASIC QUANTITATIVE METHODS IN TRANSPORT
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO
TIME ALLOWED: THREE HOURS

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1. The regional manager of a transport company is interested in the relationship between the number of vehicles in the fleet and the revenue of company's subsidies. He has collected data concerning ten randomly selected subsidiaries as shown in table 1.

Table 1:

No of vehicles in the fleet (X)	10	15	12	30	25	15	14	28	12	22
Revenue in N'000 (Y)	200	280	250	550	500	300	310	540	260	450

(a) Calculate the Pearson's product moment correlation coefficient between number of vehicles and revenue

(b) Find the estimating equation that best describes the relationship between number of vehicles and revenue

(c) Predict the revenue for a subsidiary with a fleet of 35 vehicles

(d) Test the hypothesis that there is a relationship between number of vehicles in a fleet and revenue

2. Given a correlation matrix showing the zoro-order correlations of one dependent variable (Y) and two independent variables (X1) and (X2)

	Y	X1	X2
Y	1.00	0.76	0.81
X1		1.00	0.59
X2			1.00

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