# B. A. DEGREE EXAMINATION, APRIL 2007 <br> BRANCH IV - ECONOMICS <br> SIXTH SEMESTER 

COURSE : MAJOR - OPTIONAL<br>PAPER : COMPUTER APPLICATIONS IN ECONOMICS<br>TIME : 3 HOURS. MAX. MARKS : 100

## ANSWER ALL QUESTIONS

1. Create a format for data base to maintain the details of consumers who have registered into a milk distribution agency for distribution of milk daily
a) at selling point
b) at the consumers hours.
(10 marks)
2. Assume that you are incharge of distribution and revenue collection of State Electricity Board of a small town consisting of 1000 households. How will you create a workbook and enter atleast 10 sample data for a) above poverty line households b) below poverty line households c) households do business. How do you set the formula for calculating the monthly bill with the subsidy of $10 \%$ for households below poverty line and tax of $15 \%$ for households do business. (poverty line Income $=$ Rs. 3000/month)
(10 marks)
3. Using the data base that you have created for Question. 1 edit the column contents as Name of the customers, insert a column for phone number, copy the entire file and make suitable changes for another agency.
(10 marks)
4. Using the workbook that you have created for Question.2, generate a sample one input table and two-input table and applying statistical functions, calculate descriptive statistics.
(10 marks)
5. Copy the data base crated for Question. 1 center the cell content of first to third column appropriately adjusting the column width and change the font used in the name column and also hide the column of your choice.
(10 marks)
6. Draw a pie chart for the data given below about Headquarters of Telecom companies.

| Country | Percentage |
| :--- | :---: |
| U.S. | 30 |
| Japan | 29 |
| Britain | 8 |
| Europe | 15 |
| India | 10 |
| Others | 8 |

Give suitable titles in different fonts.
7. Consider the following sample data of X and Y .

| X | 8 | 6 | 9 | 6 | 1 | 8 | 2 | 1 | 10 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Y | 22.3 | 16.71 | 25.21 | 15.84 | 2.75 | 21.22 | 5.27 | 2.32 | 27.39 | 19.35 |

Regress Y on X and estimate Y when $\mathrm{X}=10$.
(10 marks)
8. Given the following data calculate the sales of the year 2010 using
$\log$ (sales) $=\mathrm{a}+\mathrm{b}$ (time)

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sales | 52 | 45 | 98 | 92 | 110 | 185 | 175 | 220 |

Show the trend in a line graph:
9. The demand for roses. Table gives quarterly data on these variables: (20 marks)
$Y=$ quantity of roses sold, dozens
$X_{2}=$ average wholesale price of roses, $\$ /$ dozen
$X_{3}=$ average wholesale price of carnations, \$/dozen
$X_{4}=$ average weekly family disposable income, $\$ /$ week
$X_{5}=$ the trend variable taking values of 1,2 , and so on, for the period 1971-III to 1975-II in the Detroit metropolitan area.
You are asked to consider the following demand functions:

$$
\begin{aligned}
Y_{1} & =\alpha_{1}+\alpha_{2} X_{2 t}+\alpha_{3} X_{3 t}+\alpha_{4} X_{4 t}+\alpha_{5} X_{5 t}+u_{t} \\
\operatorname{In~} Y_{1} & =\beta_{1}+\beta_{2} \operatorname{In} X_{2 t}+\beta_{3} \operatorname{In} X_{3 t}+\beta_{4} \operatorname{In} X_{4 t}+\beta_{5} X_{5 t}+u_{t}
\end{aligned}
$$

a. Estimate the parameters of the linear model and interpret the results.
b. Estimate the parameters of the log-linear model and interpret the results.
c. $\beta_{2}, \beta_{3}$ and $\beta_{4}$ give, respectively, the own-price, cross-price and income elasticities of demand. What are their a priori signs? Do the results concur with the a priori expectations?

| 1971-III | 11.484 | 2.26 | 3.49 | 158.11 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -IV | 9.348 | 2.54 | 2.85 | 173.36 | 2 |
| 1972-I | 8.429 | 3.07 | 4.06 | 165.26 | 3 |
| -II | 10.079 | 2.91 | 3.64 | 172.92 | 4 |
| -III | 9.240 | 2.73 | 3.21 | 178.46 | 5 |
| -IV | 8.862 | 2.77 | 3.66 | 198.62 | 6 |
| 1973-I | 6.216 | 3.59 | 3.76 | 186.28 | 7 |
| -II | 8.253 | 3.23 | 3.49 | 188.98 | 8 |
| -III | 8.038 | 2.60 | 3.13 | 180.49 | 9 |
| -IV | 7.476 | 2.89 | 3.20 | 183.33 | 10 |
| 1974-I | 5.911 | 3.77 | 3.65 | 181.87 | 11 |
| -II | 7.950 | 3.64 | 3.60 | 185.00 | 12 |
| -III | 6.134 | 2.82 | 2.94 | 184.00 | 13 |
| -IV | 5.868 | 2.96 | 3.12 | 188.20 | 14 |
| 1975-I | 3.160 | 4.24 | 3.58 | 175.67 | 15 |
| -II | 5.872 | 3.69 | 3.53 | 188.00 | 16 |

d. How would you compute the own-price, cross-price, and income elasticities for the linear model?
e. On the basis of your analysis, which model, if either, would you choose and why?
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