

M.Com. 3rd Semester Examination, 2018

COMMERCE

(Research Methodology)

(Practical)

PAPER – COM-302

Full Marks : 25

Time : 1 hour

Answer any two questions

The figures in the right-hand margin indicate marks

UNIT – II

- 1. Import the data set from MS-Excel to Eviews statistical package and check the stationary properties of data series using Phillips-Perron test(PP) and determine the long-run co-movement between Foreign Direct Investment (FDI) to India and Index of Industrial Production (IIP) using Johansen cointegration test.**

(Turn Over)

(2)

Months	IIP	FDI
2018:08(AUG)	127.4	2,432
2018:07(JUL)	125.7	3,035
2018:06(JUN)	127.5	2,974
2018:05(MAY)	129.6	4,596
2018:04(APR)	122.6	5,432
2018:03(MAR)	140.3	3,214
2018:02(FEB)	127.4	3,077
2018:01(JAN)	132.3	2,314
2017:12(DEC)	130.6	3,285
2017:11(NOV)	125.8	1,553
2017:10(OCT)	122.5	1,148
2017:09(SEP)	123.1	2,031
2017:08(AUG)	122.1	7,919
2017:07(JUL)	118.0	4,742
2017:06(JUN)	119.3	3,032
2017:05(MAY)	124.8	3,974

(3)

Months	IIP	FDI
2017:04(APR)	117.3	3,142
2017:03(MAR)	133.2	2,950
2017:02:(FEB)	119.2	1,712
2017:01(JAN)	123.1	4,478
2016:12(DEC)	121.7	3,006
2016:11(NOV)	115.9	4,336
2016:10(OCT)	120.3	5,854
2016:09(SEP)	118.2	5,133

4 + 6

2. The following data gives the results of study of 10 workers in a factory :

Output :	23	11	26	39	10	35	34	30	15	32
Test Score :	150	115	140	170	90	152	185	112	80	160
Experience in years :	11	10	15	19	13	18	15	20	16	14

Calculate the descriptive statistics of the data series. Determine the multiple regression equation, multiple correlation, co-efficient of determination.

Adjusted R^2 and std. error. Also check the multicollinearity. 10

3. Two types of drugs were used on 10 and 8 patients for reducing their weights. Drug A was imported and Drug B was indigenous. The decrease in the weights after using the drugs for 4 months was as follows :

Drug A: 6 8 5 7 9 8 11 6 4 10

Drug B: 14 12 13 10 12 11 15 13 8 12

Is there any significant difference in the efficiency of two drugs ? (Use any software) 10

4. Following are the data sets of Sensex, Index of Industrial Production(IIP), Foreign Institutional Investment(FII) and Exchange Rate (EXR) relating to the Indian economy

Months	Sensex	IIP	FII	EXR
Mar-17	29620.5	192.3	14919.4	54.4046
Feb-17	28743.32	176.0	28440.5	53.7737
Jan-17	27655.96	181.8	25006.3	54.3168

(5)

Month	Sensex	IIP	FII	EXR
Dec-16	26626.46	179.3	26792.2	54.6478
Nov-16	26652.81	166.1	9869.3	54.7758
Oct-16	27930.21	171.5	19215.9	53.0239
Sep-16	27865.96	163.1	19884	54.6055
Aug-16	28452.17	164.7	11069.1	55.5598
Jul-16	28051.86	167.1	13664.4	55.4948
Jun-16	26999.72	168.0	1180.5	56.0302
May-16	26667.96	170.3	3222	54.4735
Apr-16	25606.62	164.1	-4896.6	51.8121
Mar-16	25341.86	187.6	1792.5	50.3213
Feb-16	23002	175.2	35227.9	49.1671
Jan-16	24870.69	177.6	26328.9	51.3392
Dec-15	26117.54	180.3	21872.5	52.6769
Nov-15	26145.67	167.5	-3263.2	50.8564
Oct-15	26656.83	158.3	3078.8	49.2579
Sep-15	26154.83	164.3	-1865.7	47.6335
Aug-15	26283.09	161.4	-7902.5	45.2788

10

(6)

5. Graphically represent all the data series (in a single graph using line chart).
- (a) Calculate the bivariate correlation coefficients and its statistical significance and present it in a matrix form.
- (b) Check the auto-correlation property of data series using Durbin-Watson test. 3 + 4 + 3

[Viva-voce : 05 Marks]
