

SECOND TERM UNIT 3 QN BK

QNS of 5 marks each :

- i) What is trend component in time series?
- ii) What is the seasonal component in time series?
- iii) What is the cyclical component in time series?
- iv) What is the irregular component in time series?
- v) Describe the additive model of time series.
- vi) Describe the multiplicative model of time series.
- vii)

QNS. of 7/8 marks each :

- i) What are interviewer's skills and abilities?
- ii) Write a note on scatter diagram method.
- iii) Write a note on coefficient of determination.
- iv) Bring out the relation between r , b_{yx} and b_x
- v) Estimate the regression equation of the Exports (X) on advertising expenditure (Y) and also estimate the sales for the advertising expenditure of Rs. 50 lakhs from the following data.

Exports Rs. crores	24	26	28	30	34	40	42
Advertising expenditure Rs. lakhs	12	22	25	30	36	40	38

- vi) Fit a straight line trend for the following series and estimate the value for 2008.

Year	1999	2000	2001	2002	2003	2004	2005	2006
Production of machines in 000 units	100	110	120	132	141	150	162	174

- viii) Estimate the regression equation of Y (Profits in 000 Rs.) on X (sales in 000Rs.) and estimate Y when X is 70.

Profits	21	22	23	24	25	27	28	30
Sales	58	57	56	55	53	52	51	60

ix) Fit a straight line trend for the following series and estimate the value for 2011.

Year	2002	2003	2004	2005	2006	2007	2008	2009
Production of washing machines in 000 units	12	25	36	48	54	65	78	89

x) Calculate three yearly moving averages for the following.

year	1991	1992	1993	1994	1995	1996	1997	1998
Consumption	35	42	51	61	74	81	93	100

xi) Calculate the trend using the method of least squares estimate the value for 2008

Year	2000	2001	2002	2003	2004	2005	2006
Production	25	36	47	59	68	79	84

xii) Estimate the regression equation of Y (Consumption in 000 Rs.) on X (income in 000Rs.) and estimate Y when X is 50.

Consumption	21	22	23	24	25	27	28	30
Income	38	37	36	35	33	32	31	40

xiii) Calculate five yearly moving averages for the following.

year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Production	45	56	64	52	58	72	64	70	76	84
