

P.G. DIPLOMA (C.S.S) EXAMINATION, NOVEMBER 2024
2023 ADMISSIONS REGULAR
SEMESTER III - CORE COURSE BUSINESS ANALYTICS
BA3C14TM20 - Time Series Econometrics

Time : 3 Hours

Maximum Weight : 30

Part A

I. Answer any Eight questions. Each question carries 1 weight**(8x1=8)**

1. Define forecasting.
2. Give the de-seasonalized value of Holt - Winters Procedure (3 parameter) for both additive and multiplicative case.
3. Give MA(1) model.
4. Define autocovariance.
5. Write ARMA(1,1) model.
6. Explain impulse response analysis.
7. Define multivariate time series.
8. Define asset returns.
9. Explain downside deviation.
10. Give any two properties of GARCH.

Part B

II. Answer any Six questions. Each question carries 2 weight**(6x2=12)**

11. Explain free hand method.
12. Explain qualitative methods of forecasting.
13. Explain autocovariance.
14. Give an autoregressive moving average model with parameters 1,2.
15. Explain flat tails.
16. Give Black-Scholes pricing formula.
17. Define portfolio return.
18. Write a note on volatility patterns in time series.

Part C

III. Answer any Two questions. Each question carries 5 weight**(2x5=10)**

19. Table given below provides the sales of a manufacturing company in all the 12 months of 2006. Compute a three-month moving average for this time series.

Months	Sales(in million rupees)
Jan	20
Feb	19
Mar	20
Apr	24

May	25
Jun	21
Jul	22
Aug	23
Sep	29
Oct	30
Nov	32
Dec	28

20. Discuss ARMA and ARIMA models.
21. Explain volatility models.
22. Explain ARCH GARCH models.