

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc.Statistics - END SEMESTER EXAMINATIONS APRIL - 2024

SEMESTER -VI

23USTCT6014- Demography And Acturial Statistics

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Explain the logistics curve in detail.
2. Explain force and central morality rate.
3. Write a short note on increasing and decreasing annuities.
4. Describe the concept of premium adequacy.
5. Describe the different measures of Fertility.
6. Classify a life table against an abridged life table.
7. Find the compound amount of:
 - a) Rs. 750 for 6 years at 4% compounded semiannually.
 - b) Rs. 1750 for 6 years at 4% compounded quarterly
8. Examine the general principles of Premiums in insurance.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Describe the sources of demographic data in detail.
10. What are the different measures of mortality?
11. Examine the different columns in a life table.
12. a) A man invests a building for Rs. 100000 every 3 months payable in advance. He immediately invests Rs. 75000 of each payment in a fund paying 5% compounded quarterly. How much is in the fund at the end of 6 years?
b) Find the necessary annual deposit into a sinking fund earning $4\frac{1}{2}\%$ effective to retire a debt of Rs. 25000 due in 10 years.
13. Examine loading for expenses with and without profit premiums.
