

**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. END SEMESTER EXAMINATIONS APRIL-2022

SEMESTER - VI

13USTCE6001 & UST/CE/6001- Actuarial Statistics

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. Distinguish between nominal and effective rates of interest.
2. Find the accumulated values of variable annuities.
3. Find the office annual premium for a capital redemption assurance policy of Rs.3000 at the end of 20 years assuming interest pay 6% p.a. and loading of 8% office premium.
4. Describe the redemption of loans by sinking funds.
5. What is adequacy of premiums? How does it differ from consistency of premiums?
6. Explain two kinds of policy values.
7. Find to 4 decimal places the nominal rate p.a. convertible quarterly corresponding to an effect rate of 6% p.a.
8. Find the value of $(1.03)^{58.4}$

Section B

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

9. The amounts for a certain sum with compound interest at a certain rate in two years and in three years are Rs.8820 and Rs.9261 respectively find the rate and the sum.
10. A sinking fund policy is effected to provide Rs. 10,000 at the end of 15 years. The instalment premium for the first 10 years is double that for the subsequent 5 years. Calculate the annual premium payable during the first 10 years at 7% p.a. rate of interest. Ignore expenses.
11. Discuss the average yield on the life fund of an assurance office.
12. Discuss the general principles of premiums.
13. Describes various sources of surplus.
