B.Sc DEGREE EXAMINATION,APRIL 2019
III Year VI Semester
Actuarial Statistics

Time : 3 Hours   **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define discount value?

2. Define uniform annuity?

3. Define perpetuity?

4. What is principle of insurances?

5. What is temporary immediate life annuity?

6. What are natural premiums?

7. Mention two types of net premium for annuity plans.

8. Define pure Endowment assurance?

9. What is meant by policy value?

10. Define annuity certain?

11. Define office premium.

12. What is nominal rate of interest.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. State various types of annuities.

14. Distinguish between an annuity certain and a temporary life annuity.

15. What are the defects of natural premium?

16. Explain level annual premium and mention its advantages?

17. Find the office annual premium for a capital redemption assurance policy of Rs. 3000 redeemable at the end of 20 years assuming interest rate of 6% p.a and a loading of 8% of office premium.

18. Define varying rate of interest.

19. Find the value of $a_{n}\neg$ @ 7%

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Find $5 \, / \, S_n \neg$ @ 6%.

21. Show that $(1 \, + \, i \,)^{\,t} \, a_n \neg \; = \; \vee^{n\,-t} \, s_n \neg \; = \; s_t \neg \, + \, a_{n-t} \neg$.

22. Derive the present value of a deferred annuity certain.

23. Describe the sources of surplus and its distribution.

24. Derive an expression for increasing temporary life annuity and temporary life annuity due.

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