

Roll No. _____

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SVIS-N 307 A -16
B.Sc. Vith Semester Degree Examination
CHEMISTRY
Paper - 6.1
(New)

Time : 3 Hours

Maximum Marks : 80

Instructions to candidates:

Answer all the sections.

Section -A

I. Answer all the following questions

(15×1=15)

1. Define error
2. What is post-precipitation?
3. What is standard deviation?
4. What is Accuracy?
5. What are significant figures?
6. Define Isoprene rule.
7. What are peptides?
8. What are coenzymes?
9. Write the structure of Atropine
10. What are hormones?

11. What is Raman effect?
12. What are anti stokes lines?
13. State Born-Oppenheimer approximation
14. What is Radiolysis?
15. Which of the following molecules will show pure rotational spectra Co, N₂ and O₂?

Section -B

II. Answer any five of the following questions. **(5×5=25)**

16. Discuss the three terms used to describe the precision.
17. Write a note on Co-precipitation
18. Explain the synthesis of vitamin-C.
19. Give the characteristics properties of enzymes.
20. Write a note on Hofmann exhaustive methylation.
21. Discuss the isotopic effect in a rotational spectrum.
22. Discuss the mechanism of radiolysis of water.

Section -C

III Answer any four of the following **(4×10=40)**

23. a) Give the differences between determinate and indeterminate errors. **(06)**
b) Write a note on whatman filter paper **(04)**
24. a) What are general precautions involved in gravimetric analysis. **(06)**
b) Discuss the conditions of precipitation **(04)**

25. a) Elucidate the structure of citral (06)
b) Give the biological importance of Insulin and oxytocin. (04)
26. a) What are proteins? Discuss the classification of proteins based on composition and molecular shape. (06)
b) Write the structural formula and uses of menthol and camphor. (04)
27. a) Give the qualitative description of Non-rigid rotator (06)
b) Write a note on concept of polarizability (04)
28. a) Explain I.R.spectrum, its energy levels and selection rule of simple Harmonic oscillator. (06)
b) Write a note on ceric sulphate dosimeter (04)
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