B.Sc. DEGREE EXAMINATION,APRIL 2019
I Year II Semester
General Chemistry – IV

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. What is achiral molecule?
2. Define specific rotation.
3. What is thermal conductivity?
4. Define coefficient of compressibility.
5. What is mesomorphic state.
6. What is the effect of temperature on surface tension?
7. Write the reaction of alkali metals with halogens.
8. What is the reason for the exceptional behaviour of beryllium?
9. What is degree of ionisation?
10. What is common ion effect. Give example.
11. What is pH scale?
12. Define optical activity.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. List out the various conditions to be fulfilled by a compound to be optically active.
14. State the postulates of kinetic theory of gases.
15. State the law of equipartition of energy. Give its applications.
16. How is viscosity determined using Ostwald viscometer.
17. Explain the stability of oxides and carbonates of alkali metals.
18. How the degree of ionisation is affected?
19. Explain D and L notations with examples.

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

Answer any **THREE** questions

20. How geometrical isomerism is determined? Explain any one method.
21. Derive Van der waals equation from ideal gas equation and give its limitations.
22. Describe the determination of surface tension by capillary rise method.
23. Discuss the exceptional properties of lithium over other alkali metals.
24. Mention the impacts on the mode of dissociation of weak acids and weak bases.

B.Sc. DEGREE EXAMINATION,APRIL 2019
I Year II Semester
General Chemistry – IV

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. What is achiral molecule?
2. Define specific rotation.
3. What is thermal conductivity?
4. Define coefficient of compressibility.
5. What is mesomorphic state.
6. What is the effect of temperature on surface tension?
7. Write the reaction of alkali metals with halogens.
8. What is the reason for the exceptional behaviour of beryllium?
9. What is degree of ionisation?
10. What is common ion effect. Give example.
11. What is pH scale?
12. Define optical activity.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. List out the various conditions to be fulfilled by a compound to be optically active.
14. State the postulates of kinetic theory of gases.
15. State the law of equipartition of energy. Give its applications.
16. How is viscosity determined using Ostwald viscometer.
17. Explain the stability of oxides and carbonates of alkali metals.
18. How the degree of ionisation is affected?
19. Explain D and L notations with examples.

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

Answer any **THREE** questions

20. How geometrical isomerism is determined? Explain any one method.
21. Derive Van der waals equation from ideal gas equation and give its limitations.
22. Describe the determination of surface tension by capillary rise method.
23. Discuss the exceptional properties of lithium over other alkali metals.
24. Mention the impacts on the mode of dissociation of weak acids and weak bases.