B.Sc. DEGREE EXAMINATION,APRIL 2020
I Year II Semester
Allied Physics - II

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

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

Answer any **TEN** questions

1. What is interference?
2. Explain dispersion of light.
3. State Pauli's exclusion principle.
4. Define spatial quantisation.
5. What do you understand by mass defect?
6. State exponential law.
7. Define Joule Thomson effect.
8. Give applications of porous plug experiment.
9. Write DeMongan's theorem.
10. Give the Symbol and truth table of NAND gate.
11. Define Mean life of a radio active substance.
12. Define Radioactivity.

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

Answer any **FIVE** questions

13. Describe the method for determining the diameter of a wire.
14. Discuss in detail the different coupling schemes.
15. Write the Properties of α - rays.
16. Discuss the working of porous plug experiment.
17. State and prove De Morgan's theorems.
18. Give some practical application of low temperature.
19. Derive an expression for Half life period.

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

Answer any **THREE** questions

20. Derive an expression for dispersion without deviation produced in combination of two prisms.
21. Describe the vector model of the atom and explain the different quantum numbers associated with it.
22. Explain the liquid drop model of a nucleus.
23. With a neat diagram explain the Linde's process of liquefying air.
24. Describe how NAND gate can be used to realize the basic logic gates OR, AND and NOT.

B.Sc. DEGREE EXAMINATION,APRIL 2020
I Year II Semester
Allied Physics - II

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

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

Answer any **TEN** questions

1. What is interference?
2. Explain dispersion of light.
3. State Pauli's exclusion principle.
4. Define spatial quantisation.
5. What do you understand by mass defect?
6. State exponential law.
7. Define Joule Thomson effect.
8. Give applications of porous plug experiment.
9. Write DeMongan's theorem.
10. Give the Symbol and truth table of NAND gate.
11. Define Mean life of a radio active substance.
12. Define Radioactivity.

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

Answer any **FIVE** questions

13. Describe the method for determining the diameter of a wire.
14. Discuss in detail the different coupling schemes.
15. Write the Properties of α - rays.
16. Discuss the working of porous plug experiment.
17. State and prove De Morgan's theorems.
18. Give some practical application of low temperature.
19. Derive an expression for Half life period.

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

Answer any **THREE** questions

20. Derive an expression for dispersion without deviation produced in combination of two prisms.
21. Describe the vector model of the atom and explain the different quantum numbers associated with it.
22. Explain the liquid drop model of a nucleus.
23. With a neat diagram explain the Linde's process of liquefying air.
24. Describe how NAND gate can be used to realize the basic logic gates OR, AND and NOT.