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

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

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

Answer any **TEN** questions

1. What is prism?
2. Define interference.
3. State Pauli's exclusion principle.
4. What is the maximum number of electrons occupied by K - shell.
5. Define binding energy.
6. What are alpha rays?
7. Stare Joule Thomson effect.
8. Write any two practical applications of low temperature.
9. Draw the symbol and give the truth table of AND gate.
10. What are the universal gates?
11. Define j-j coupling.
12. Define: Nuclear fission.

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

Answer any **FIVE** questions

13. Explain how to combine two prisms to produce deviation without dispersion.
14. Explain L-S coupling.
15. Derive an expression for half time period.
16. Explain the Linde's method in liquefaction of air?
17. State and prove Demorgans theorem.
18. Discuss the liquid drop model.
19. Write any four laws of Boolean algebra.

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

Answer any **THREE** questions

20. How will you determine the diameter of a thin wire can be determined using Air wedge.
21. Describe vector atom model.
22. Define mean life and deduce the expression for it.
23. Briefly explain Porous Plug experiment.
24. Explain how NAND and NOR gates act as universal building blocks.

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