B.Sc. DEGREE EXAMINATION,NOVEMBER 2018
I Year II Semester
Allied - paper II
ALLIED PHYSICS - II

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

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

Answer any **TEN** questions

1. Define Angular dispersion.
2. What is meant by Interference?
3. State paulis exclusion principle.
4. Define ionization.
5. Define the term binding energy.
6. What type of charge does an alpha particle have?
7. What is the joule Thomson effect?
8. Define porous plug.
9. What is a Logic gate?
10. Draw the symbol of AND gate and give its Truth table.
11. Which are basic logic gates?
12. What are quantam numbers?

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

Answer any **FIVE** questions

13. Explain Deviation without dispersion.
14. State and explain the general features of Vector atom model.
15. Give any five properties of alpha rays.
16. Explain liquefaction of gases by linde's method.
17. State and prove Demorgans first theorem.
18. Explain truth table, Logic circuit diagram and Boolean expression of OR and AND gates.
19. Explain XOR gate truth table and circuit diagram.

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

Answer any **THREE** questions

20. Determine the diameter of a wire by measuring the width of the interference band formed by air wedge experiment.
21. Explain experimental determination of Franck and hertz method.
22. Explain liquid drop model of nucleus.
23. Briefly explain the theory of Joule Thomson porous plug experiment.
24. Show that NAND gate is a universal building block.

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