

Roll No. ....

41264

B. Sc. (Hons.) Chemistry 4th Semester Examination – May, 2019

PHYSICS - I

Paper : CH(H) -404 Opt - i

Time : Three hours ] [ Maximum Marks : 40

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions in all, selecting at least one question from each Unit. Question No. 1 is compulsory. Marks are indicated against each question.

1. Answer the following in brief : 7 x 2 = 14

- (a) Define algorithm.
(b) Write the names and symbols of flow chart.
(c) Write the type and purpose of "READ" statement.
(d) What are Constraint ? Give examples .

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- (c) Define probability and entropy. Write relation between them.
(f) What is physical significance of a wave function ?
(g) What is the conceptual difference between classical mechanism and quantum mechanics ?

UNIT - I

- 2. Write an algorithm to find H. C. F. and L.C.M. of two numbers. 6.5
3. (a) Draw a flow chart to find sum of ten numbers using "Condition" Symbol. 3.5
(b) What do you understand by IMPLICIT statement in FORTRAN ? Explain with examples. 3
4. (a) Explain GO TO statement along with its types. 3
(b) Write progs to attain addition and subtraction.3.5

UNIT - II

- 5. Find the number of microstates, macrostates and thermodynamic probability when 4 particles are distributed in two compartment of equal size. 6.5
6. Derive Boltzmann distribution law. Also determine the values of A and B. 6.5

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**UNIT – III**

7. Define Phase velocity and group velocity. Obtain expression for both and derive relation between them . 6.5
8. State uncertainty principle and illustrate it with *one* experiment. 6.5

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