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 × 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 .

(e) 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 progms 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

UNIT – III

7. Define Phase velocity and group velocity. Obtain expression for both and derive relation between them . 6.5

8. State uncertailinty principle and illustrate it with *one* experiment. 6.5