

## INTERMEDIATE-1st YEAR CHEMISTRY

### Model Paper\_1

Time-3hours

Maximum marks:60

#### SECTION\_A

(10x2=20M)

NOTE: Answer all questions.

- 1)How many moles OF GLUCOSE are present in 540 gms of glucose ?
- 2)which of the gases diffuses faster among  $N_2, O_2$  and  $CH_4$  . Why?
- 3)What is conjugate acid-base pair? Give example.
- 4)Describe the importance of plaster of paris.
- 5)Give the formula of borazine.what is its common name?
- 6)Diamond has high melting point .Explain
- 7)How is water gas prepared? give its composition.
- 8)whic oxides cause Acid rain? Give the  $P^H$  of acid rain.
- 9)Give the chemical equations involved in the Ozone depletion by  $CF_2Cl_2$
- 10)write the IUPAC names of the following compounds .



#### SECTION-B

NOTE: ANSWER any Six of the following

(6x4m=24marks)

- 11)State and explain Graham's law of diffusion.
- 12)Chemical analysis of a carbon compound gave 10.06% carbon,89.1% chlorine and 0.84%Hydrogen.Calculate the emperical formula of the compound.

13) Define and explain the following with one example each

i) Standard enthalpy of formation ii) Enthalpy of combustion.

14) Which salts are responsible for temporary hardness? Explain the removal of temporary hardness by Clark's method.

15) Discuss the structure of Boric acid. Give its uses

16) What are homogeneous and heterogeneous equilibria? Give examples.

17) Explain functional group isomerism and position isomerism with one example each

18) How does acetylene react with the following

a) Acetic acid b) Water c) Hydrogen halide d) Ammonical  $AgNO_3$  solution.

### SECTION-C

NOTE: answer any two questions (2X8=16M)

19) What are quantum numbers? Give their significance.

20) What is meant by hybridisation? Explain  $sp$ ,  $sp^2$  and  $sp^3$  hybridisation by taking organic compounds as examples.

21) What is a periodic property? How do the following properties vary in a group and in a period?

a) Atomic radius

b) Ionisation enthalpy

c) Electronegativity

d) Electron gain enthalpy.