

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

B.Sc.(Physics) END SEMESTER EXAMINATIONS APRIL-2023
SEMESTER - II

22UPHAT2002 - CHEMISTRY FOR PHYSICS - II

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Illustrate the van-Arkel process and zone refining process for the purification of metals.
2. Describe corrosion control by cathodic and anodic protection methods.
3. Classify thermoplastics and thermosetting plastics.
4. Describe the properties and structures of sucrose and lactose.
5. What are intensive and extensive properties? Give examples. (3)
Relate the spontaneous process with ∇G and ∇S of a reaction. (2)
6. Classify different kinds of corrosion.
7. Describe the synthesis and applications of conducting polymers.
8. Distinguish between reducing and non-reducing sugars.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Describe the extraction and purification of titanium from its ores with a neat sketch of flow diagram.
10. Apply Hess's law to determine enthalpy for the following changes
i) sulphur (rhombic) \rightarrow to sulphur (monoclinic)
ii) $C(s) \rightarrow CO(g)$
11. Discriminate internal and external corrosion prevention methods.
12. Write anyone method of preparation for the following polymers
i) Buna-S rubber ii) Phenol formaldehyde resin
iii) Nylon 66 iv) Polyester v) Polypropylene
13. How does glucose reacts with the following:
(i) $Con.HI$ (ii) $C_6H_5NHNH_2$ (iii) Br_2/H_2O .
Differentiate between DNA and RNA.
