

## Internal Assessment of B. Sc. SEM-VI, Chemistry (Hons.)

### CORE-XIII

Candidates are requested to give their answers in their own words as far as practicable.

Answer any three questions of each of the CORE and DSE paper.

Q 1. Discuss the basic principle involved in analysis of cations and anions.

Q 2. How is Borazine synthesized ? How does it react with followings:

- i. H<sub>2</sub>O
- ii. HCl

Q 3. i. What is sodium potassium pump ?

- ii. What are the toxic effect of Hg and Cd on biological system ?

Q 4. What is wacker process. Discuss with catalytic cycle.

### CORE XIV

Q. 1. What is the effect of hydrogen bonding on IR absorption position ?

Q. 2. What is mutarotation ? Discuss with suitable examples.

Q. 3. How can you transform

- i. Arabinose to glucose
- ii. Glucose to Arabinose

Q. 4. Write short notes on :

- a. Fingerprint region
- b. Isoprene rule

Q. 5. How is ring size of glucose determined ? Discuss the open chain structure of D-(+)-Glucose.

### DSE III

Q 1. Discuss green synthesis of any two of the following

- i. Paracetamol
- ii. Furfural

Q 2. Green chemistry is sustainable chemistry- Explain.

Q 3. What is green chemistry and what are the goals of green chemistry ?

Q 4. What are the obstacles in the pursuit of the goals of green chemistry ?

### DSE IV

Q 1. Outline analysis of air pollutants SO<sub>2</sub> and NO<sub>x</sub> in a given sample.

Q 2. Define ecosystem. Explain classification of ecosystem.

Q 3. What is nuclear disaster ? How can we prevent nuclear disaster ?