

TED (10) – 3086

Reg. No.

(REVISION—2010)

Signature

**THIRD SEMESTER DIPLOMA EXAMINATION IN POLYMER
TECHNOLOGY — MARCH, 2015**

SYNTHETIC RUBBER

[Time : 3 hours]

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. Define Tg of a polymer.
2. Define Hot and Cold NBR.
3. Butyl rubber has high air impermeability. Why ?
4. Define HSR.
5. Name the polymers under trade name Thiokol and CO.

(5x2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Describe about Hydrogels.
2. Compare plastics, rubber and fibres.
3. Describe the production of Acrylonitrile Monomer.
4. Describe the production of Halobutyl Rubber.
5. Explain the production of Polypropylene oxide rubber.
6. Describe the Thermoplastic Polyurethane.
7. Describe the types Ionomers.

(5x6=30)

PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT – I

- III (a) Explain the production of Isoprene and Isobutylene monomer. 7
- (b) Describe the production, applications, vulcanizing system and properties of IIR. 8

OR

	Marks
IV (a) Explain the production of Ethylene Propylene Rubber and its properties.	8
(b) Describe the production of Isoprene rubber and compare with NR.	7

UNIT – II

V (a) Describe the process, vulcanization, properties and application of Silicone rubber.	7
(b) Describe the production of NBR, its properties and applications.	8

OR

VI (a) Explain the production of Polysulphide rubber and advantages and applications.	7
(b) Describe the production of Poly Chloroprene rubber.	8

UNIT – III

VII (a) Describe the production of butadiene polymers.	7
(b) Describe the production of chlorinated poly ethylene.	8

OR

VIII (a) Explain the production steps of Epichlorohydrin.	8
(b) Describe the Carboxylated SBR.	7

UNIT – IV

IX (a) Explain the production of Styrene Butadiene Thermoplastic polymer.	8
(b) Explain the production of Ethyl Vinyl Acetate.	7

OR

X (a) Explain the Urethane based Thermoplastic.	8
(b) Describe the properties of NBR-SBR and other blends.	7
