

S3 PL

TED (10) – 3087

Reg. No.

(REVISION — 2010)

Signature

THIRD SEMESTER DIPLOMA EXAMINATION IN POLYMER
TECHNOLOGY — MARCH, 2015

NATURAL RUBBER PRODUCTION

[Time : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

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

1. What is slaughter tapping ?
2. Write the properties of NR.
3. Define the colloidal nature of latex.
4. What is Pale latex crepe ?
5. Define oil extended natural rubber.

(5×2=10)

PART—B

(Maximum marks : 30)

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

1. Explain the purpose and method of rain guarding.
2. Explain the role of anticoagulants with examples.
3. Describe the recovery of skim rubber and write the characteristics of skim rubber.
4. What are the different grades of Technically specified block rubber ? Write their specification as per BIS.
5. What are the six grades of sheet rubbers ? Describe the relevant parameters of any two grades.
6. Describe the features of tyre rubber.
7. Explain the preparation of latex-carbon black master batches.

(5×6=30)

PART—C

(Maximum marks : 60)

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

UNIT—I

- III (a) Explain with one example each the methods of propagation of rubber by seeds and vegetative methods. 7
- (b) Write short notes on :
- (i) Clones (ii) Tapping systems 8

OR

- IV (a) Write the botanical names of three rubber yielding plants and explain their features. 7
- (b) Write short notes on :
- (i) Tapping knives (ii) Uniqueness of NR 8

UNIT—II

- V (a) Explain the working principle of centrifugal machine with a diagram. 7
- (b) Explain the efficiency of centrifuging and the factors affecting efficiency. 8

OR

- VI (a) State the requisites of preservatives and explain the system of preservation. 7
- (b) Write short notes on :
- (i) Creaming principle and efficiency of creaming
- (ii) Composition of NR latex. 8

UNIT—III

- VII (a) Explain the production of field coagulum crepe rubbers. 7
- (b) Explain the common defects and their causes in field coagulum crepe. 8

OR

- VIII (a) With a flow diagram explain the production of Technically specified block rubber from field coagulum. 7
- (b) What are the common defects and causes in pale latex crepe rubbers. 8

UNIT—IV

- IX (a) Explain the characteristics and production of Deproteinised NR. 7
- (b) Write short notes on :
- (i) CV and LV Natural rubber (ii) Grafting of NR 8

OR

- X (a) Explain the production of reclaim rubber by digester process. Mention three advantages of Reclaim rubber and examples of products manufactured. 7
- (b) Explain the production, properties and application of Thermoplastic natural rubber. 8