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TED (10)-3092

Reg. No. ....

(REVISION—2010)

Signature .....

FOURTH SEMESTER DIPLOMA EXAMINATION IN POLYMER  
TECHNOLOGY — MARCH, 2015

LATEX TECHNOLOGY

[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. How can natural rubber latex be stabilized ?
2. What is an emulsifier ? Give an example.
3. What is jazzing ?
4. What are the major constituents of fibre foam ?
5. Define fabric proofing.

(5x2=10)

PART—B

(Maximum marks : 30)

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

1. What is the chemical composition of Natural Rubber latex ? Explain.
2. What is the essential difference between latex compounding and dry rubber compounding ?
3. Explain the process of dipping with porous moulds.
4. Explain the process of making finger caps.
5. Give a typical formula for carpet backing and explain the process.
6. How is coir foam produced ? What are the steps involved ?
7. Describe the process of coating fabric with latex.

(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 general principles of latex compounding and list the process and equipment used. 8
- (b) Explain the methods of agglomeration by solvent addition and electrolytic addition. 7

OR

- IV (a) Describe the following characteristics of synthetic latices : 8
- (i) Particle shape (iii) Wet gel strength
- (ii) Size and distribution (iv) Mechanical stability 7
- (b) How is synthetic latex concentrated by creaming ? Explain. 7

## UNIT – II

- V (a) What is halogenations and leaching ? Explain. 8
- (b) How are latex articles produced by casting ? What are the various methods ? 7

OR

- VI (a) What are the different methods of dipping ? Compare between them. 8
- (b) Describe how examination gloves are manufactured with respect to the process and machinery used. 7

## UNIT – III

- VII (a) What is Tallalay process ? Explain briefly. 8
- (b) Give the composition of a latex cement flooring mixture and explain how it is applied. 7

OR

- VIII (a) Define gelation of latex and compare the various gelling agents. 8
- (b) Give a typical formulation for latex foam and justify the function of each ingredient. 7

## UNIT – IV

- IX (a) How are latex adhesives different from solvent based adhesives ? Explain. 8
- (b) What are the characteristics of a spreading compound ? Describe the process. 7

OR

- X (a) What are the adhesives used for type cord fabric gives the formulation and explain the mechanism of adhesion ? 8
- (b) Compare the properties of latex thread to that of dry rubber thread. Mention the applications of latex thread in textile industries. 7