

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 164667

Roll No.

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B. TECH.

Theory Examination (Semester-VI) 2015-16

CHEMICAL PROCESSING OF CARPET

Time : 3 Hours

Max. Marks : 100

Section-A

- 1. Attempt all parts. All parts carry equal marks. Write answers of each part in short.** (10×2 = 20)

- (a) What are objectives of wool fibre scouring?
- (b) State diameter range of carpet wool.
- (c) “Nylon is added to wool for making carpet”- Justify the statement.
- (d) State the norms of Tuft withdrawal force of woollen floor coverings as per IWS standard.
- (e) What are pre metallised dyes?
- (f) What are mordanting salts?
- (g) Differentiate between SBR and natural latex.

(1)

PT.O.

- (h) What is suint?
- (i) State reasons of wool felting.
- (j) What is kemp?

Section-B

2. Attempt any five questions from this part. (5×10 = 50)

- (a) Describe the advantages and disadvantages of solvent scouring of wool fibre. Describe the aqueous scouring of wool fiber in modern wool scouring machine with process parameters.
- (b) What are the sequences of operations in grease recovery from wool scour liquor? Describe it in detail.
- (c) Describe how heat is recovered from steam condensate and flue gas and dryer exhaust.
- (d) What are metal complex dyes? Which type of dye is most suitable for Hand knotted woolen carpets? Give reasons. Discuss the fixation of 1:1 metal complex dyes onto wool.
- (e) How Chrome dyes are dyed in after chrome process? Give advantages and disadvantages of this process. Discuss fastness properties of chrome dyes.
- (f) Give comparison among acid dyes with respect to dyeing properties and chemical constitution. Which type of acid dye is suitable for producing bright and level shades?

(2)

- (g) Why natural latex is being replaced by synthetic latex gradually? How quality of latex backed carpet is ascertained?
- (h) Describe the ingredients of coating solution based on natural latex and also the function of each ingredient.

Section-C

Attempt any two questions from this section (2×15=30)

3. What are wool reactive dyes? Describe the reactions taken place between these dyes and wool fibre. How are these applied on to protein fibres?
4. What type of backing is suitable for bath mats? Describe one non aqueous method of backing onto tufted carpets. How antique washing of woolen carpets are carried out?
5. Describe the mechanized washing of carpet with the sketch.