

Use separate answer  
script for each group

# Bachelor of Design (B.Des.) Examination, 2018

Semester - V

Specialization in Textile & Clothing

Course – TC-V/04

( Textile Technology-I )

Time: Three Hours

Full Marks: 40

*Questions are of value as indicated in the margin.*

## Group-A

Weaving Mechanism, Fabric Structure & Calculation - I

Answer *any two* questions

1.
  - a) Write down the detailed classification of handlooms.
  - b) What is weaving plan? What are the components of it?
  - c) “Physical properties of a woven fabric depend on various parameters”. Mention those parameters.
  - d) What is the significance of yarn counting? What do you mean by  $2/20^s$  Ne cotton yarn?
  - e) Calculate E.P.I. of a loom-state fabric if warp is drawn through a  $48^s$  Stockport reed with 3 ends/dent. 5x2=10
  
2.
  - a) Show on the graph paper all the possible repeats of a 7-end sateen weave.
  - b) What are the various methods of weave representation?
  - c) Write down at least two commercial names each of a plain and a twill woven fabric.
  - d) “Ornamentation of plain woven fabrics can be made in numerous ways.” Explain comprehensively. 3+2+2+3=10
  
3.
  - a) Write the names of four (4) different types of drafts used in practice.
  - b) Show on the graph paper weaving plan of the following weaves:
    - i) 16 x 4 Horizontal Zig-Zag Twill using 4 healdshafts
    - ii) 10-end Irregular Sateen.
    - iii) 16 X 16 Diamond weave based on 2-up-2-down twill. 1+(3x3)=10

## Group-B

Preparatory and Allied Chemical Processing

1. **Answer any ten questions:** **2x10 = 20**
  - a) What are the advantages of hydrogen peroxide bleaching over hypochlorite bleaching?
  - b) What are the objectives of silk degumming?
  - c) What are the functions of different chemicals used in scouring of cotton?
  - d) What are the objectives of singeing? Mention different singeing processes.
  - e) How desizing, scouring and bleaching can be assessed?
  - f) What are the objectives of wool scouring and mention the function of sodium carbonate in this process.
  - g) In case of cotton fabric the objective of the pre-treatment process is to remove the non-cellulosic impurities to the maximum possible extent, but it is not so in the case of jute – Explain.
  - h) Why mercerization process is performed in cotton?
  - i) Explain how oils, fats and waxes are removed during scouring of cotton fabric?
  - j) Discuss in brief about the process of woolenisation of jute?
  - k) What is pin hole damaged and how it can be stopped?
  - l) What is resist salt? Discuss its function in processing of coloured woven goods.
  - m) Explain the advantages and drawbacks of sodium chlorite bleaching.
  - n) What are the differences between hard water and soft water?
  - o) Why chlorine containing bleaching agents are not preferred for protein fibres?