

17566

**11920**

**3 Hours / 100 Marks**

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.

**1. Attempt any FIVE :**

**Marks**

**20**

- (a) State the types of setting and objects of heat setting.
- (b) Explain the mechanism of heat setting of synthetic fabrics.
- (c) State and explain stages of heat setting.
- (d) What is pilling ? State the factors affecting pilling.
- (e) Explain the mechanism of pilling.
- (f) State the terms :
  - (i) Foam and
  - (ii) Blow ratio
- (g) Explain the importance of foam finishing in textiles.

**2. Attempt any TWO :**

**16**

- (a) Define soil. State the types of soils. Explain the mechanism of soiling.
- (b) Describe finishing process sequence for knitted goods with precautions in each stage.
- (c) Describe the concept of macro, micro and nano emulsions in Textile finishing.

- 3. Attempt any TWO :** **16**
- (a) (i) Explain the structural changes brought about by heat setting.
  - (a) (ii) State the importance of stenter machine for heat setting.
  - (b) Describe any two physical & chemical methods used to minimize pilling.
  - (c) Describe any four properties of foam. Also explain the factors affecting stability of foam.
- 4. Attempt any TWO :** **16**
- (a) Write heat setting conditions for 100% PET, P/C, P/V and P/W fabrics. Explain any one method for evaluation of heat setting efficiency.
  - (b) What are the various methods of foam application ? With a neat labelled sketch explain any one method of foam application.
  - (c) State various types of soil release finishing agents. Also explain the factors affecting soiling of fabrics.
- 5. Attempt any TWO :** **16**
- (a) Explain the advantages and limitations of foam finishing.
  - (b) Describe the method for evaluating efficiency of soil release finish.
  - (c) Explain the process of 'weight reduction of polyester'. State and explain any four factors affecting the process.
- 6. Attempt any TWO :** **16**
- (a) Explain the role of nanotechnology in textile finishing. State any four applications of nanotechnology in textile finishing.
  - (b) Write the mechanism of encapsulation. Explain how the characterization of microcapsules is carried out.
  - (c) Explain the advantages and limitations of
    - (i) Microencapsulation technique and
    - (ii) Nanotechnology
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