17566

16117

3 Hours / 100 Marks Seat No. | | | | | | | | |

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.*

Marks

1. Solve **any 10** of the following : **20**

a) State types of setting.

b) List out any four parameters affecting the process of heat setting.

c) Write the significance of Iodine absorption value in heat setting.

d) Define following terms :
   a) Foam b) Blow ratio

e) State areas of application of foam processing.

f) 'Foam finishing is boon for textile processor'. Justify the above statement with appropriate reasons.

g) State any four finishes used for finishing of worsted fabrics.

h) Write the objectives of crabbing.

i) Write finishing process sequence for knitted goods.

j) Write the precautions to be taken during finishing of micro denier PET fabrics.

k) Write the objectives of compacting process used for finishing of knits.

l) Define the following term :
   a) Nanomaterials b) Microencapsulation

m) Write the application of micro encapsulation in textile finishing.

n) State advantages of nanoemulsion over conventional macroemulsion.

2. Solve **any 2** of the following : **16**

a) Describe the mechanism of heat setting. Explain stages of heat setting.

b) Explain the structural changes brought about by heat setting.

c) Write conditions of heat setting for 100% PET, P/C, P/V and P/W fabrics. Explain any one method for evaluation of efficiency of heat setting.

P.T.O.

Marks

3. Solve **any 2** of the following : **16**

a) Explain mechanism of pilling. State various factors affecting pilling tendency in fabrics.

b) Explain the effect of finishing processes on pilling. Write any two of each of the physical and chemical methods to minimize pilling in fabrics.

c) Explain the process of 'Weight reduction of polyester'. State and explain any 4 factors affecting the process.

4. Solve **any 2** of the following : **16**

a) Describe any 4 important properties of foam. Explain the factors affecting stability of foam.

b) What are the various methods of foam application ? Explain with neat, labelled sketch any one method of foam application.

c) Explain the advantages and limitations of foam finishing.

5. Solve **any 2** of the following : **16**

a) Define soil. Write the types of soils. Explain mechanism of soiling.

b) Explain factors affecting soiling of fabrics. Describe mechanism of soil release.

c) Enlist various soil release finishing agents. Write method to evaluate soil release finishing.

6. Solve **any 2** of the following : **16**

a) Describe mechanism of encapsulation. Explain how the characterization of microcapsules is carried out.

b) Explain the role of nanotechnology in textile finishing. State any four applications of nanotechnology in textile finishing.

c) Write advantages and limitations of

a) Microencapsulation technique b) Nanotechnology.
