

22368

22232

3 Hours / 70 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.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE :

10

- (a) Define degree of polymerisation.
- (b) Define :
 - (i) POY
 - (ii) FOY
- (c) State uses of Just fibres.
- (d) Explain the effect of acids on cotton fibres.
- (e) List down various regenerated fibres and write their name of manufacturing technique.
- (f) State chemical reaction of manufacturing polyester polymer from its raw materials.
- (g) Draw diagram of twisting element of friction disc texturising machine.



2. Attempt any THREE : 12

- (a) List down various essential and desirable properties of a fibrous material to be useful for any textile application. Elaborate their significance.
- (b) List down various varieties of silk. Describe sericulture and production of raw silk.
- (c) Describe manufacturing of polyacrylonitrile with the help of a flow chart.
- (d) List down various methods of texturising & state the importance of it. State its advantages.

3. Attempt any THREE : 12

- (a) Draw morphological structure of cotton fibre and label the parts.
- (b) Draw flow chart for manufacturing of viscose rayon.
- (c) Describe manufacturing of Nylon 66 with the help of a flow chart.
- (d) Draw schematic diagram of simultaneous friction disc texturising machine and explain its working.

4. Attempt any THREE : 12

- (a) Draw schematic diagram of dry spinning line. Explain working of the same.
- (b) Describe physical and chemical properties of viscose rayon.
- (c) Describe physical and chemical properties of tencel.
- (d) Describe manufacturing of polypropylene with the help of a flow chart.
- (e) Describe working of Air texturising machine with the help of a neat diagram. State advantages of air texturising over false twist texturising.

5. Attempt any TWO :**12**

- (a) Elaborate the concept of polymer. Describe polymerisation technique. Explain different types of polymerisation techniques with the help of an example of each type.
- (b) Describe the melt spinning technique with the help of a neat labelled diagram. Elaborate function of each part.
- (c) Elaborate concept of regenerated fibres. Describe dry spinning technique used for production of acetate fibres. State physical and chemical properties of the same.

6. Attempt any TWO :**12**

- (a) Draw morphological structure of wool. Describe physical and chemical properties of the same.
 - (b) Describe manufacturing of polyester with the help of flow chart. Describe physical and chemical properties of the same.
 - (c) Describe various factors influencing texturising process, and give their significance.
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