

22584

24225

3 Hours / 70 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.
 - (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.
 - (8) Use of steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. Attempt any FIVE :

10

- (a) Enlist the components of a eco system.
- (b) Enlist any four advantages of natural dyes.
- (c) State any four factors affecting Eco labelling.
- (d) List the different types of solid waste observed in Textile industry.
- (e) Recite in brief on 'German ban'.
- (f) Enlist the different types of renewable energy sources used in textile industry.
- (g) State any four objectives of energy management in textiles.

2. Attempt any THREE :

12

- (a) Compare organic cotton with conventional cotton on any four points.
- (b) Elaborate the methods adopted for public awareness about eco labelling & Green marketing.
- (c) Demonstrate the solid waste minimization methods in weaving department.
- (d) Discuss the steps involved in secondary treatment of effluents for textile process.



- 3. Attempt any THREE :** **12**
- (a) Elaborate on the plant sources for preparation of natural dyes & comment on its feasibility.
 - (b) Illustrate the factors that are important from sustainability view point.
 - (c) Demonstrate the important components of a Material safety Data sheet of a chemical used in textile processing.
 - (d) Justify with two suitable examples, the need for opting renewable energy source for textile manufacturing.
- 4. Attempt any THREE :** **12**
- (a) Elaborate the essential requirements for sustainability of textiles.
 - (b) Elaborate the life cycle Assessment for P/C blended shirting fabric so as to make it sustainable.
 - (c) Identify the various stages of solid waste reduction in processing unit.
 - (d) Justify the significance of occupational safety & health hazard norms in a weaving unit.
 - (e) Demonstrate the energy consumption pattern observed in a P/C blended wet processing unit.
- 5. Attempt any TWO :** **12**
- (a) Set-up a plant for manufacturing of eco-friendly cellulosic fibres for shirting & dress materials from techno-commercial view point.
 - (b) Analyze the practices and innovations required for seeking 'OekoTex' certification for 100% cotton shirting fabrics.
 - (c) Set-up a hypothetical unit to demonstrate the implementation of energy policies so as to ensure resource sustainability.
- 6. Attempt any TWO :** **12**
- (a) Demonstrate the concept of recycling of used denim garments by converting it into new different products. Also justify its sustainability.
 - (b) Compute the ecofriendly methods of textile dyeing using vat & sulphur dyes so as to reduce the pollution. Also comment on the possible types of pollution in conventional dyeing processes of the above mentioned dyes.
 - (c) Set-up a P/C blend processing unit so as to ensure implementation of green energy policies to minimize carbon foot prints in textile technologies.
-