

22583

12425

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following :

10

- (a) Define “Technical Textiles”.
- (b) State the functions of Geo-textiles.
- (c) Define “Non-wovens”.
- (d) State any four applications of Medical textiles.
- (e) State the various types of web formation methods for production of non-wovens.
- (f) State any four applications of Agro textiles.
- (g) State the stages of manufacturing of non-wovens.

2. Attempt any THREE of the following :

12

- (a) Sketch and explain the process for any one method of web preparation of non-woven fabrics.



- (b) Classify Technical textiles in details with an example of each.
- (c) State the characteristics of Non-wovens.
- (d) Describe the reinforcement function of Geo-textiles with an example.

3. Attempt any THREE of the following :

12

- (a) Sketch and explain any one chemical bonding method of non-wovens with its advantages.
- (b) Give the detailed classification of “Medical textiles.
- (c) List the various types of mechanical bonding of non-wovens and explain any one of them with a neat diagram.
- (d) Classify “Non-woven” fabrics into various categories.

4. Attempt any THREE of the following :

12

- (a) Describe the “Seperation” function of the Geo-textiles with an appropriate example.
- (b) Give the historical background of non-wovens.
- (c) Describe the application of Medical textiles in Health care & Hygiene sectors.
- (d) Explain yarns used, manufacturing process and advantages of following agro textile applications.
 - (i) Wind protectors, (ii) Root ball net (iii) Packing material
- (e) List down various methods used for manufacturing of thermal bonded non-wovens. Explain any one method in detail with the help of an example.

5. Attempt any TWO of the following :

12

- (a) Describe in details, the various types and applications of Geo-grids & Geo-composites.

- (b) Select appropriate characteristics of fibres and fabric used for implantable materials in Medical textiles.
- (c) Describe in detail, types of yarn used, construction particulars and manufacturing techniques for the production of Agro textiles used in :
 - (i) Horticulture (ii) Floriculture.

6. Attempt any TWO of the following :

12

- (a) State the yarns used, manufacturing process and advantages of Agro textiles used for the following applications :
 - (i) sun screen (ii) Bird & Insect nets (iii) Ground cover.
 - (b) Describe the characteristics and properties of any three synthetic fibre used for Technical textiles.
 - (c) Sketch and explain, the needle punching method of bonding of non-wovens with a neat diagram.
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