

17650

15162

2 Hours / 50 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 SEVEN :** **14**
- (a) Describe the scope of technical textiles.
 - (b) What are the different types of coating polymer used in coating ?
 - (c) How Technical Textiles are different from apparel textiles ?
 - (d) What is meant by laminated Textiles ?
 - (e) Explain diffusion principle used for filtration.
 - (f) Write down the requirement of filter fabric made from woven fabric.
 - (g) Which important properties are required for medical textiles ?
 - (h) Classify the application area of medical textiles.
 - (i) What are the different types of fibres used in defence textiles ? Why ?
 - (j) What are the different applications of protective clothing used in defence ?
- 2. Attempt any FOUR :** **12**
- (a) Give the detail classification of technical textiles.
 - (b) Why technical textiles are used in civil construction application area ?
 - (c) Write down the various applications of technical textile in agriculture sector.

- (d) Explain any two coating polymers used for manufacturing coated textiles with its specific properties.
- (e) With diagram, explain the manufacturing method of laminated fabric.
- (f) Write the application of technical textiles in protective and safety clothing.

3. Attempt any FOUR :**12**

- (a) With neat diagram explain any one method to produce coated technical textiles.
- (b) Explain the requirements of filter fabric based on yarn types.
- (c) Explain finishing treatments required for filter fabric.
- (d) Explain the application of technical textiles as a camouflage medium in defence.
- (e) Write down the various Health-care and hygiene applications of medical textiles.
- (f) Describe the role of textiles as ballistic protective material in defence. Also write about the various fiber uses for such application.
- (g) Explain the different types of dressings used in medical application.

4. Attempt any FOUR :**12**

- (a) Write the application of technical textiles in defence area :
 - (i) Environmental Protection
 - (ii) Biological and chemical warfare protection
 - (b) What is Non-implantable medical textiels ? Explain different fibres, types of fabrics use for such applications.
 - (c) Write down the physical requirements of textile materials for defence textiles.
 - (d) Differentiate between wet and dry filtrations.
 - (e) Describe the application of technical textiles in thermal insulation protection and heat protective military textiles.
 - (f) Explain various applications of laminated textiles
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