

MANIPAL ACADEMY OF HIGHER EDUCATION
EIGHTH SEMESTER B. DES. (FD) DEGREE EXAMINATION – APRIL 2018
SUBJECT: ELECTIVE – TECHNICAL TEXTILES (BFD 404.3)

Tuesday, April 17, 2018

Time: 14:00 – 17:00 Hrs.

Max. Marks: 50

- ✍ **Answer any FIVE complete questions.**
- ✍ **Support your answers with neat sketches**

1. Define the following terms:

- 1A. Agrotech
- 1B. Dyneema
- 1C. Smart materials
- 1D. Proban
- 1E. Chitosan
- 1F. Sports wear
- 1G. Oekotech
- 1H. Geo grids
- 1I. Hollow fibres
- 1J. Mulch-mats

(1 mark × 10 = 10 marks)

2. Answer the following questions:

- 2A. Briefly describe about any three special finishes applied to technical textiles.
- 2B. With the help of a neat flow chart explain the steps involved in designing a functional clothing.
- 2C. Name any eight major fibers used to produce technical textiles.

(3+5+2 = 10 marks)

3. Briefly explain the following questions:

- 3A. What are the components present in smart materials? Briefly explain their functions.
- 3B. Point out the properties that are used to measure the heat transfer through clothing.
- 3C. What are the advantages of smart textiles?

(4+4+2 = 10 marks)

4. Explain the following:

- 4A. Write short notes on multilayer sweater with thermo insulation.
- 4B. Point out the aesthetic and comfort properties of viscose lycra knits for fashion.
- 4C. Define Down filling. Mention the advantages and disadvantages of filling down in thermal clothing.

(4+3+3 = 10 marks)

5. **Describe briefly on the following:**

- 5A. Liquid insulated garments
- 5B. High tech cooling vest
- 5C. Define moisture wicking fabrics and point out the category of clothing where they are chiefly used.

(4+4+2 = 10 marks)

6. **Answer the following:**

- 6A. Define medical Textiles. What are the essential characteristics required for textile materials that are intended to be used as medical textiles?
- 6B. Briefly describe about futuristic jogging suit.
- 6C. Differentiate between hydrophobic and hydrophilic fibers.

(5+3+2 = 10 marks)

