



Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)

Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Master's Degree Examination – May 2025

II Semester

Class : I P.G.
Major : Biotextiles

Time : 3 Hours
Max. Marks : 100

23MBXC07 Functional Textiles

Course Outcomes:

CO1: Identify the different types of functional textiles and their applications in various fields.

CO2: Outline the types of home textiles and agro textiles.

CO3: Explain the geo and filtration textiles.

CO4: Develop medical textile products and understand the different types of dye textiles

CO5: Identify the role and use of textiles in automobiles

Part A

10 x 1 = 10

Choose the Correct Answer

1. The strongest fiber having highest tensile strength is
a. Nylon b. Jute c. Linen d. Glass CO1K1
2. The ----- fibre has high lustre equal to that of linen.
a. Jute b. Hemp c. Silk d. Viscose CO1K2
3. The outstanding air permeability is in ----- bags.
a. Leno b. Jute c. Tea d. FIBC CO2K2
4. In Sunscreen net the percentage of shadow varies according to the density of
a. Fiber b. Threads c. Diameter d. Fabric CO2K1
5. Geo textiles are used with ----- to provide long term protection of the application.
a. Geo membrane b. Geo grids c. Carbon d. Polyethylene CO3K1
6. The fiber used in wet filtration for better clarity is
a. Glass b. HPVA c. Cotton d. Nylon 6,6 CO3K2
7. The following is an inherently flame-retardant fibre
a. Nylon b. Aramid c. Polypropylene d. Mod- Acrylic CO4K2
8. Gauze is a ----- weave.
a. Twill b. Open c. Tach d. Basket CO4K1
9. Commonly High performance fiber used in sports textile are
a. Kevlar b. Glass c. lotus d. Spider silk CO5K1
10. The commonly used material for the construction of air bags is
a. Carbon b. Nylon 6 c. Rayon d. Viscose CO5K1

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 11.a. Write a note on 3D weaving and its functional applications. CO1K3
(or)
- 11.b. Describe about Algae based textile fibers in detail. CO1K2

- 12.a. Point out the functional properties needed for Home textiles products. CO2K4
(or)
- 12.b. Give a brief outline about testing standards of Agro textiles. CO2K4
- 13.a. Explain about high performance fibers used in geo textiles. CO3K3
(or)
- 13.b. Give a note on fibres used in filtration textiles. CO3K2
- 14.a. Explain about Medical textiles in Dermatology. CO4K3
(or)
- 14.b. Write a brief note on survival textiles and its applications. CO4K3
- 15.a. List out the applications of textile in cars in detail. CO5K3
(or)
- 15.b. Classify the special fibers used in sports textiles. CO5K3

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 16.a. Describe in brief about structures of functional textiles. CO1K3
(or)
- 16.b. Illustrate in detail about E- thread technology and its uses in textiles. CO1K3
- 17.a. Write a detailed note on applications of agro textiles. CO2K3
(or)
- 17.b. Explain in detail about textile reinforcement composites and its application. CO2K5
- 18.a. List out in brief about the essential properties and standards of geo textiles. CO3K3
(or)
- 18.b. Outline the applications of filtration textiles. CO3K5
- 19.a. Summarize about textiles in Ayurveda. CO4K5
(or)
- 19.b. Give a detailed account on defence textiles. CO4K3
- 20.a. Explain in detail about Space textiles. CO5K5
(or)
- 20.b. Write a detailed note on sustainability and ecological aspects of marine textiles. CO5K3
