17223

14115

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory*.

(2) Answer each next main Question on a new page.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Answer any <u>TEN</u> of the following: **20**

a) Define:

(i) fibre

(ii) filament

b) Define degree of polymerisation.

c) Draw structure of cellobiose unit.

d) Why is Viscose Rayon called re-generated fibre?

e) How is damage to cotton fibre be ascertained by chemical test?

f) Explain the function of carbon disulphide in manufacturing of Viscose Rayon.

g) Which additives are used in co-agulating bath of wet spinning process of viscose rayon manufacturing? State their functions.

h) State physical properties of cellulose triacetate.

i) Name two chemical properties of cellulose triacetate.

Marks

j) Name varieties of silk.

k) Explain degumming of silk.

l) How is grading of wool done?

m) State uses of banana fibre.

n) State uses of coir fibres.

o) Classify bass fibres.

2. Answer any <u>FOUR</u> of the following: **16**

a) Classify fibres, according to their chemical natural.

b) State essential properties of fibres.

c) Describe desirable properties of fibre to be useful for textile application.

d) Name varieties of cotton. Explain any one variety.

e) Draw morphological structure of cotton.

f) Describe chemical method of detector of oxycellulose.

3. Answer any <u>TWO</u> of the following: **16**

a) Describe the concept of mesomorphous and amophous region in fibre and explain their importance.

b) Describe essential requirements of wet spinning.

c) Describe physical and chemical properties of cotton fibres.

4. Answer any <u>TWO</u> of the following: **16**

a) (i) State essential requirements of dry spinning.

(ii) Describe the concept of chemical bonding in cotton fibre.

b) Describe manufacturing of viscose rayon with the help of a flow chart.

c) (i) Outline the manufacturing process of lyocell fibre.

(ii) State uses of polynosic fibre.

Marks

5. Answer any TWO of the following: **16**

a) (i) Describe the process of manufacturing cellulose triacetate.

(ii) How do cellulose acetate and cellulose triacetate differ?

b) (i) Describe the concept of homogeneous and heterogeneous acetylation.

(ii) State any two physical and chemical properties of silk filament.

c) (i) Draw diagram of morphological structure of silk. Label the parts. 6

(ii) Explain meaning of raw silk. 2

6. Answer any FOUR of the following: **16**

a) Explain chemical composition of wool.

b) Describe reeling of silk.

c) Why are wool and silk called natural polyamides?

d) Draw morphological structure of flax fibre.

e) Describe on cultivation of jute and flax fibre.

f) Describe method of cultivation of cotton.
