Q.1
a. Describe the physical and chemical properties of silk and cotton fibres. (10)
b. Explain hydrophobic and hydrophilic properties of different natural and manmade fibres. (10)

Q.2
a. Explain the manufacture of regenerated cellulosic fibres with a neat diagram (10)
b. Discuss the raw material used for manufacture of polyester fibres. (06)

Q.3
a. Give an account of modification of polyester fibres. (08)
b. Explain with a schematic diagram the manufacturing of polyamide fibres (08)

Q.4
a. Explain the terms Crystalline and amorphous phases in fibres with a neat diagram (08)
b. Describe two phase model of semicrystalline fibre forming polymers (08)

Q.5
a. Describe the physical structure of cotton and silk (10)
b. Explain the crystallinity and degree of orientation in textile fibres. (06)

Q.6 Explain the following: (16)

i. Moisture Regain
ii. Swelling of fibres
iii. Heat of absorption
iv. Moisture Hysteresis

Q.7
a. Explain structure and tensile property correlation (08)
b. Explain Flexural and torsional properties of textiles (08)

Q.8 Explain the following: (15)

i. Amonton's law of friction
ii. Birefringence
iii. Electrical resistance and static electricity
iv. Thermal conductivity