Q.1. a. Define the followings
1. Orientation of molecules in fibre
2. Regenerated cellulosic fibre
3. Texturising
4. Blended yarns
5. Polymer

b. State true or false for followings
1. Man made fibres are tailor made
2. Orientation of molecules increases the breaking elongation of fibres
3. Viscose rayon is a synthetic fibre
4. Polyacrylonitrile fibre is manufactured using both dry and wet spinning
5. Crimp on the fibre improves its cohesion property.

Q.2. a. How the orientation of molecules improve the characteristics of fibres? Explain it
b. What is fibre forming polymer? State the requirements of fibre forming polymer.

Q.3. a. Describe the manufacturing process of viscose fibre along with flow chart
b. What is the difference between high wet modulus (HWM) and low wet modulus (LWM) viscose fibre?
c. Enlist all the physical characteristics of viscose fibre

Q.4. a. State the raw materials used in manufacturing of following fibres:
1. Polyester fibre 2. Acrylic fibre,
b. Explain the melt spinning process of polyester filament yarns

c. What are micro denier polyester fibres? And state their advantages

Q.5. a. Describe the wet spinning process of polyacrylonitrile fibres along with a neat diagram.
b. What are modacrylic fibres?
c. Explain the physical and chemical properties of polyacrylonitrile fibre
Q.6. a. What is false twist texturising?  
   b. Explain the draw texturising process of polyester filament yarns  
   c. Explain the principle of loop formation in air jet texturising process  
   d. Explain the testing of crimp rigidity or crimp contraction percentage draw textured yarns  

Q.7. a. Give the applications for textured yarns  
   b. What is the difference between a staple fibre and filament?  
   c. Give the details of commonly observed faults in false twist draw textured yarns  
   d. What is Air jet texturising? And explain the process with a line diagram.  

Q.8. a. Why polyester fibre is blended with cotton? And state their advantages  
   b. Compare the blowroom blending process with draw frame blending  
   c. What types of modifications are required to be made in carding machine to process polyester/cotton fibres?  

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