Q.1. Answer in short: (20)
   a. Explain the meaning of Wet processing and Chemical processing of textiles.
   b. Which chemicals are used for mercerization of cotton? Write the concentrations.
   c. Why antichlor treatment is given to material bleached with sodium hypochlorite?
   d. What is Reduction Clearing process for dyed polyester material?
   e. What is the method to check sodium hydroxide and sodium hydrosulphite in vat dyeing?
   f. Explain the function of Thickener in printing.
   g. What is the meaning of Transfer printing?
   h. Which impurities in cotton are removed in scouring?
   i. What are the objects of Finishing?
   j. Why heat setting of polyester fabric is necessary?

Q.2. Answer in brief: (04)
   a. Match the following:
      1. Singeing a. End use property
         2. Bleaching b. Decorative look
         3. Dyeing c. Luster
         4. Finishing d. No hairiness
         5. Scouring e. Dimensional stability
         6. Mercerization f. Attractiveness
         7. Printing g. Whiteness
         8. Heat setting h. Absorbency
   b. What are different methods of singeing?
      Why singeing of polyester/cotton blended fabric is done after dyeing? (04)
   c. Draw neat and labeled diagram of Pressure Kier for scouring process. (04)
   d. Give the difference between Dyeing and Printing. (04)
Q.3. Answer in brief:
   a. Why are woven fabrics subjected to desizing process and knitted fabrics not? (04)
   b. Explain bleaching of cotton with Hydrogen peroxide. (04)
   c. Give the complete classification of dyes and pigments. (04)
   d. What are different types of softeners? Write the properties of good softener. (04)

Q.4. Answer in brief:
   a. What is the purpose of Shearing? Explain about cutters and their action of shearing. (04)
   b. Write the recipe for scouring process of cotton. Explain function of each chemical used. (04)
   c. Describe meaning of chainless-padless mercerization. (04)
   d. Write short note on Ammonia mercerization. (04)

Q.5. Answer in brief:
   a. Write short note on Discharge style of printing. (04)
   b. Describe the process of scouring and Bleaching of polyester material. (04)
   c. Explain the function of salt, alkali, acetic acid and soap in reactive dyeing. (04)
   d. What is Calendering process? Describe any one calendering machine. (04)

Q.6. Answer in brief:
   a. Draw a neat and labeled diagram of Gas singeing machine. (04)
      Which precaution is necessary after gas singeing.
   b. Why degumming of raw silk is necessary? Describe any one process of degumming. (04)
   c. What are different classes of enzymes? (04)
      Write pH, Temperature & Time for enzymatic desizing.
   d. What is principle of water-Repellant finish? (04)
      Which are various fabrics for which water-repellant finish is required?

Q.7. Answer any two:
   a. Explain working of Rotary screen printing machine. (08)
   b. With a diagram explain continuous scouring-bleaching in J box. (08)
   c. Explain dyeing of polyester/cotton blended fabric (08)

Q.8. Answer in brief:
   a. Explain principle of Sanforising machine. (04)
   b. Explain steaming in Loop steamer OR Star steamer. (04)
   c. Explain a test to evaluate Washing Fastness of dyed material. (04)
   d. Write short notes on-
      1. Advantages and Disadvantages of Roller printing machine. (04)