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Total Number of Pages : 02

B.Tech.  
PTX4D001

4<sup>th</sup> Semester Regular Examination 2017-18  
**PROCESSING OF MAN-MADE FIBRE & BLENDED TEXTILE**  
**BRANCH : TEXTILE**

Time : 3 Hours

Max Marks : 100

Q.CODE : C1170

Answer Part-A which is compulsory and any four from Part-B.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

**Part – A (Answer all the questions)**

**Q1 Answer the following questions: *multiple type or dash fill up type:* (2 x 10)**

- a) Viscose fibre is produced by \_\_\_\_\_ spinning technique.
- b) Drawing of filament yarn improves molecular \_\_\_\_\_.
- c) Thermoplastic fibre softens on \_\_\_\_\_.
- d) Breaking elongation of cotton fibre is \_\_\_\_\_ than polyester fibre.
- e) Texturising process \_\_\_\_\_ bulkiness of filament yarn.
- f) Increase in amorphous content in fibre \_\_\_\_\_ breaking elongation.
- g) Extruder converts solid polymer into \_\_\_\_\_ polymer.

**State True or False:**

- h) Poly-acrylonitrile (PAN) fibre is manufactured using both dry and wet spinning
- i) Crimp on the fibre improves its cohesion property.
- j) Manmade fibres are tailor made.

**Q2 Answer the following questions: *Short answer type* (2 x 10)**

- a) What are the differences between a Staple fibre and filament?
- b) What types of modifications are required to be made in carding and draw frame to process 100% polyester fibres?
- c) Explain the principle of False Texturising?
- d) When and why optical whitening chemical is used?
- e) State the differences between high wet modulus and low wet modulus viscose fibres.
- f) What is the effect of molecular orientation on the characteristic of manmade fibre?
- g) Write down the factors influencing blending of Polyester with woollen fibre.
- h) Justify whether Anti-pilling finish desired for fabrics made up of viscose and its blends with natural fibres?
- i) What are the objectives of Pressing and Decatising?
- j) What do you mean by FOY and POY ?

**Part – B (Answer any four questions)**

**Q3 a) Describe the manufacturing process of high wet modulus viscose fibres. (10)**

**b) Discuss about the various types of commercially available fibres. (5)**

**Q4 a) Describe the wet spinning process of poly acrylonitrile fibre manufacturing. (10)**

**b) Explain the physical characteristics of polyacrylonitrile fibre. (5)**

**Q5 a) Explain in details about the factors which influence perfect blend of Cotton with polyester. (10)**

**b) Enlist the characteristics of fibres which can be spinable. (5)**

- Q6** a) Explain in details about the Warp and Weft winding machines used for synthetic blends. (10)  
b) Indicate the precautions to be taken in operation of warp & weft winding machines. (5)
- Q7** a) Discuss in details with process sequences of dyeing of 55 : 45 Polyester / Cotton blended fabrics. (10)  
b) What are the factors influencing on stability when Polyester / wool blended fabric is dyed? (5)
- Q8** a) Justify whether Flame retardant finishes are necessary for fabrics made up of Manmade fibres and their blends. (10)  
b) What are the objectives of Durable Press Finishes? (5)
- Q9** a) What are blended yarns? Explain the manufacturing of polyester / cotton blended yarn with a neat flow chart. (10)  
b) Explain fleece blending technique? (5)