

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 172906****Date: 29-11-2014****Subject Name: Knitting and Garment Technology****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) State the value of  $K_c$ ,  $K_w$ ,  $K_s$  and loop shape factor ( $R$ ) for the plain knitted fabric in different conditions and calculate GSM of a fully relaxed plain knitted fabric if the stitch length is 6 mm. **07**
- (b) Discuss shortly the use of CAD in apparel making process. Write in detail on cutting process using computers. **07**

- Q.2** (a) Write a short note on band knife as used for garment production. **07**
- (b) Explain the following terms related to warp knitting. **07**
1. Open Loop
  2. Close Loop
  3. Overlap
  4. Under lap
  5. Swing motion
  6. Shog Motion

**OR**

- (b) Calculate production of a circular weft knitting machine producing plain fabric in m/hr and kg/hr. from following data: **07**
1. Diameter – 24 inches
  2. Machine gauge – 18
  3. No. of courses/inch – 28
  4. Count of yarn – 30s Ne
  5. Cylinder speed – 20 RPM
  6. No. of feeders - 42

- Q.3** Describe large diameter circular weft knitting machine and write in detail on basic knitting elements. **14**

**OR**

- Q.3** Explain following terms and establish relations among them: **14**
1. Machine Gauge
  2. Stitch Length
  3. Courses
  4. Wales
  5. Stitch density
  6. Tightness Factor
  7. Count of the yarn

- Q.4** (a) Draw diagram of technical back and technical front of a plain weft knitted fabric with different methods of representing it on paper. **06**
- (b) With reference to garment making process, define interloping, intralooping and interlacement. Compare and contrast lock and chain stitches. **08**

**OR**

- Q.4** (a) Explain warp knitting and weft knitting highlighting basic differences between them. **06**
- (b) With sketch explain working of differential feed system for garment making. How the same can be used to either stretch or provide fullness in to lower ply? **08**

- Q.5** (a) Give the name of the seams used in making following garment joints and also draw diagram of the same. **05**
1. Button hole band of shirt
  2. Inner and outer leg seam of jeans
  3. Belt and belt loops
  4. Arm hole
  5. Hemming
- (b) Write in detail on sewing threads. **09**

**OR**

- Q.5** (a) Write a short note on feed dogs. **05**
- (b) Draw the sketch of sewing needle and show various parts thereof. What are called cutting points and cloth points? What are different damages occurring due to needle? **09**

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