## THE TEXTILE ASSOCIATION (INDIA)
### G.M.T.A. (REVISED) EXAMINATION – 2015
#### SECTION – D PAPER (WCD)

### ENGINEERING DESIGN OF FABRIC STRUCTURE

**Date: 26.12.2015**  
**Marks: 100**  
**Time: 2 pm to 5 pm**

**Instructions:**
1. Attempt **six** questions out of which Q1 is compulsory
2. Answer each next question on new page
3. Figure to the right indicate full marks
4. Illustrate your answers with sketches and flow chart wherever necessary
5. Use of non programmable electronic pocket calculator permissible
6. Mobile and any other communication devices are not allowed in exam hall.
7. Assume suitable data wherever necessary

### Q1
**Answer the following questions (compulsory question)**

a. Discuss the classification of woven structures.  
   **10 marks**

b. What are the basic elements of a woven design? Describe them with an illustration of twill weave.  
   **10 marks**

### Q2
List the types of draft plans and describe them briefly with a diagram  
**16 marks**

### Q3
**a. Define the following (any four)**

i. Plain weave  
ii. Twill weaves  
iii. Satin weave  
iv. Bedford weaves  
v. Corkscrew weaves  
vi. Honeycomb weave  
vii. Diamond weave  

**16 marks**

### Q4
**a. Discuss IS specifications for plain weave polyester cotton blended shirting fabric**  
   **8 marks**

b. Discuss IS specifications for plain weave polyester cotton blended shirting Khaki fabric  
   **8 marks**

### Q5
**a. Describe the Light and pigment colour theory.**  
   **8 marks**

b. Write a note on classification of colours with reference to fabric design.  
   **8 marks**

### Q6
**a. Discuss briefly history of textile design.**  
   **8 marks**

b. Describe the extra warp and extra weft fabrics and their specific end use.  
   **8 marks**

### Q7
**a. Explain Gauze and leno structures.**  
   **8 marks**

b. State the principles of leno structure and discuss basic sheds in leno structure.  
   **8 marks**

### Q8
**a. Discuss the classification of multidirectional textile structure**  
   **8 marks**
b. Describe the geometry of knitted fabrics with special reference to warp knits.