

M.TECH DEGREE EXAMINATIONS: JUNE/JULY 2013

Second Semester

APPAREL TECHNOLOGY AND MANAGEMENT

FTY507: Apparel Systems Engineering

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1. Differentiate between partial and total productivity.
2. Define work study.
3. Enlist the various types of process flow chart.
4. Mention the significance of multiple activity chart.
5. Write the significance of using nomogram in work sampling.
6. List out the steps involved in conducting a work sampling study.
7. State the basic equipments used for conducting time study in apparel unit.
8. Compute basic time from the following particulars: Observed time – 0.16 min; Observed rating – 125; standard rating – 100.
9. List out the various steps involved in balancing a sewing line.
10. Write the purpose of developing learning curve chart for a process.

PART B (5 x 16 = 80 Marks)

11. a) Discuss in detail the various productivity measurement methods used for assessing productivity in an apparel unit with suitable examples.

(OR)

- b) (i) Explain the various factors to be considered while selecting a work to be studied. (6)
(ii) Discuss in detail the various strategies used for improving productivity in sewing department. (10)

12. a) Explain the application of flow process chart – material type in garment manufacture with suitable example.

(OR)

- b) Explain the principles of motion economy with example from garment manufacturing.

13. a) Explain in detail the procedure involved in the work sampling process

(OR)

b) Perform operation analysis for the straight knife cutting process in the cutting department of garment industry, towards improving the productivity.

14. a) Enumerate the various types of allowances applicable in conducting time study for an operation in apparel manufacturing process, and also explain how these allowances are calculated.

(OR)

b) What do you mean by PTS ? Discuss the application of PTS system in apparel manufacture. State its merits and demerits.

15. a) Discuss the principles for improving the process - pressing and sewing in garment manufacturing with illustrated examples.

(OR)

b) Perform line balancing for the sewing line with the following particulars.
Target – 48 garments / hour. Operator absenteeism – 10%. Utilisation – 85%,
Efficiency of operator – 95%.

S.No	Operation	SMV	M/c
1.	Join Shoulder	0.7	Lock Stitch
2.	Fit collar	1.0	Lock Stitch
3.	Close Collar	1.2	Over Lock
4.	Fit Sleeves	1.0	Over Lock
5.	Close sides	1.0	Over Lock
6.	Hem Bottom	1.1	Flat Lock
7.	Hem Sleeves	0.7	Flat Lock
8.	Button hole front	1.4	Button Hole
9.	Sew button	0.9	Button sewing
10.	Stitch pocket	1.0	Lock Stitch

Assume skill matrix and any relevant data required.
