KUMARAGURU college of technology
character is life

Register Number:……..…

M.TECH. DEGREE EXAMINATIONS: JAN 2015

(Regulation 2014)

First Semester

APPAREL TECHNOLOGY

P14FTT101**:** Automation in Apparel Manufacture

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Important components of pneumatic system are [K_1]

   1. Compressor
   2. Air tank
   3. Prime mover
   4. Fluid conditioner

   a) 1 and 2 b) 2, 3, 4

   c) 1, 2, 3 d) 1, 2, 3, 4

2. The part of SNLS machine which produces loop from the top thread is [K_2]

   a) Bobbin Hook b) Needle

   c) Bobbin d) Looper

3. Match the following [K_2]

   (a) Laser cutting - (i) ionized gas

   (b) Water jet cutting - (ii) wear and tear of tool

   (c) Plasma cutting - (iii)produces sound in cutting

   (d) Knife cutting - (iv)CO_2

   a) (a)- (i), (b)- (ii), (c)-(iii), (d)-(iv) b) (a)- (ii), (b)- (i), (c)-(iii), (d)-(iv)

   c) (a)- (iv), (b)- (iii), (c)-(i), (d)-(ii) d) (a)- (iii), (b)- (ii), (c)-(i), (d)-(iv)

4. The edge neatening is done in over lock machine [K_2]

(a) before stitching

(b) After stitching

(c) At the time of stitching

(d) In the middle of stitching

a) (a) is correct b) (b) is correct

c) (c) is correct d) (d) is correct

5. Match the following [K_2]

1. Reinforcement stitch - (a) bar tacking
2. Over lock machine - (b) 500 class stitches
3. Button holing machine - (c) cradle feed system
4. Spreading - (d) 4200 stitches/min

a) 1-b, 2- d, 3- c, 4-b b) 1-a, 2-b, 3- d, 4- c

c) 1-d, 2- b, 3- a, 4-c d) 1-c, 2- a, 3- b, 4-b

6. The number stitches in bar tacking varies between [K_1]

a) 14-28 stitches b) 28-32 stitches

c) 100-200 stitches d) 32-42 stitches

7. The following one is correct flow process route in fusing [K_2]

1. loading area → fusing → cooling area → take-off area
2. loading area → cooling area → fusing area → take-off area
3. loading area → fusing → take off area → cooling area
4. cooling area → fusing → loading area → take-off area

a) 2 is correct b) 3 is correct

c) 1 is correct d) 4 is correct

8. An overhead transport system that moves individual units from work station to work station for assembly is known as [K_2]

a) CTS b) UPS

c) WTS d) ORD

9. The part which is used to grasp and hold an object and place it at a desired location in a robot is [K_2]

a) Gripper b) Wrist

c) Sensor d) End effector

10. Robots in apparel industry are used in _____ [K_3]

a) Marker planning b) Pattern making

c) Material handling d) Costing

PART B (10 x 2 = 20 Marks)

11. Define servo valves [K_1]
12. Demonstrate the advantages of Pneumatic system [K_2]
13. Identify the different feed mechanisms in sewing machines [K_1]
14. Describe the special features of pocket making machine [K_2]
15. Demonstrate the importance of carousel opener in apparel industry [K_3]
16. Illustrate the advantages of vacuum ironing table [K_3]
17. Name few types of conveyor systems [K_1]
18. Illustrate machine vision system [K_3]
19. Give examples of role of robots in tufting [K_2]
20. Recognize return on investment in automation [K_1]

PART C (6 x 5 = 30 Marks)

21. In electrical drives, define group drive, individual drive and multitude drive, list their advantages and disadvantages [K_1]

22. Construct two main types of fluid power systems [K_4]

23. Appraise on automation and special features of bar tack machine [K_5]

24. Analyze the working principle and specifications of laser cutting machine [K_4]

25. Demonstrate electronic stream ironing and jacket finisher [K_3]

26. Appraise on automated storage and retrieval systems [K_5]

PART D (4 x 10 = 40 Marks)

27. Compose and explain with necessary sketches the stitch cycle of overlock machine [K_6]

28. Appraise on features and functions of Unit Production System [K_5]

29. Construct in detail the application of robotics in spreading, cutting and sewing [K_6]

30. Asses on robotics for material handling [K_5]

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