KUMARAGURU college of technology
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Register Number:……..

M.TECH DEGREE EXAMINATIONS: JAN 2015

(Regulation 2014)

First Semester

APPAREL TECHNOLOGY

P14FT*E*103**:** Computer Integrated Apparel Manufacture

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

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. CCD camera is an apparatus which is designed to convert _____ into _____ using a plurality of CCDs and then reproduce the image of a subject using electric signals without tie restriction [K_3]

   a) Optical brightness, electrical amplitude signals
   b) Electrical amplitude signals, optical image
   c) 3D image, electrical amplitude signals
   d) Scanned images, electrical signals

2. Match the following: [K_3]

   (i) turn table a)marker plan
   (ii) plotter b) laser cutting
   (iii)beam of light c) embroidery
   (iv)frame pattern d) Spreading

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

3. The following is the size break sequence for the Up-down incremental method of grading with 5 sizes namely 8, 10, 12, 14 & 16, where 12 is the base size: [K_3]

   a) 10 to 8, 12 to 10, 12 to 14, 14 to 16
   b) 8 to 10, 10 to 12, 12 to 14, 14 to 16
   c) 12 to 8, 12 to 10, 12 to 14, 12 to 16
   d) 10 to 8, 10 to 12, 14 to 12, 16 to 14

4. The UV Mapping process at its simplest requires three steps in the following order: [K_3]

   a) Creating the texture, applying the texture and unwrapping the mesh
   b) Unwrapping the mesh, creating the texture and applying the texture
   c) Unwrapping the mesh, creating the texture and applying the texture and
   d) Screen authoring, application of the mesh, application of texture

5. The following are possible in a digitizer: [K_3]

I. Digitize parts directly from a nest
II. Copy a part using rules from an existing piece
III. Mirror a part along a horizontal line to ensure symmetry
IV. Digitize large parts in sections and join them together in the CAD system

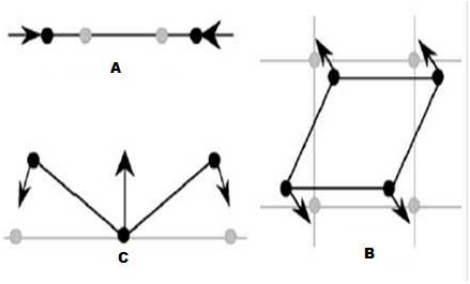
a) I,II
b) I,III,IV
c) I,II,III
d) I,II,III,IV

6. The process in which the behavior of the garment can be analyzed on a moving body is called as_____ [K_2]

a) Animation
b) Garment defect checking
c) Virtual fit prediction
d) 3D modelling

7. Match the following: [K_3]

i) Stretching ii)Trellising iii) Bending



a) A- i), B-ii) & C-iii)
b) A- ii), B-i) & C-iii)
c) A- iii), B-ii) & C-i)
d) A- ii), B-iii) & C-i)

8. _____ is the wastage of fabric per ply, given the following: [K_4]

Marker length = 10 meters
Cuttable width = 1 meter
Marker efficiency = 80%
Number of plies = 15

a) 30 square meters
b) 15 square meters
c) 2 square meters
d) 20 square meters

9. In UV mapping, increasing your "V" on a sphere might move you along a _____, while increasing your "U" might move you along a _____ [K_2]

I) Longitude line
II) Latitude Line
III) east or west
IV) north or south

a) I, II
b) II, I
c) I/ IV & II/ III
d) I/ III & II/ IV

10. In_____, received goods are sent directly to the shipping area and the concept is called _____ [K_2]

a) Cross docking, LIFO
b) Cycle counting, FIFO
c) Kitting, LIFO
d) Short picking, FIFO

PART B (10 x 2 = 20 Marks)

11.	Define fuzzy logic and list 2 of its applications	[K_1]
12.	A photo has to be converted to a printed design. Choose the modules to be used in print software?	[K_3]
13.	Identify the applications of the data extracted from the 3D body scanning system?	[K_2]
14.	Outline an example for a made to measure system	[K_3]
15.	Compare and contrast between the features of gradient mesh and diffusion curve	[K_5]
16.	Enlist the preprogrammed options in a single needle lock stitch sewing machine	[K_4]
17.	Appraise the features of a automations in a cutting machine	[K_3]
18.	Write short notes on the various technologies involved in the picking process of a warehouse	[K_3]
19.	Categorize the modules found in an SCM system	[K_4]
20.	Outline the principle behind the working of an RFID	[K_3]

PART C (6 x 5 = 30 Marks)

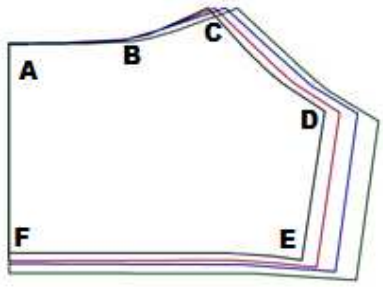
21.	Compile the various hardware and software requirements for a garment unit which involves in fabric production, garment designing and construction.	[K_5]
22.	Explain how fabric defects are identified through a computer controlled fabric defect checking system? Quote an example	[K_3]
23.	Appraise on the various features found in a good embroidery punching software	[K_3]
24.	Analyze the various features of E-Fit analysis system	[K_4]
25.	On comparing the color of Flower A to Flower C the following CIE Lab and CIE LCh values are obtained from a CCM system. How do you interpret the results? CIE Lab values : L* = +11.10 a* = –6.10 b* = –5.25 CIE LCh values:	[K_4]

L* = +11.10
C* = –5.88
h* = 5.49
E*=13.71

26. Appraise on any 5 computer integration features involved in automatic material handling systems [K_6]

PART D (4 x 10 = 40 Marks)

27. Prepare 3 grade rule tables, one each for all the three grading methods, for the following nested graded patterns. [K_5]
Sizes: S, M, L, XL
Base pattern: M
Increase between patterns: BC = 0.25, CD = 0.5, DE = 0.75, EF – 0.5



28. Describe the various systems involved in E-prototyping [K_5]

29. Summarize the following cut order planning data [K_6]

CASE 1											
	Plies	XS	S	M	L	XL	XXL	Marker Length	Marker length X plies	Marked efficiency	Marker efficiency X pieces
Lay 1	12			1	1			2.40	28.80	77.32	1855.68
Lay 2	5		1			1		2.45	12.25	76.91	769.10
Lay 3	1	1						1.09	1.09	76.51	76.51
Lay 4	3		1					1.20	3.60	72.16	216.48
Lay 5	1			1				1.22	1.22	73.05	73.05
Lay 6	1						1	1.40	1.40	75.94	75.94
Total	**23**	**1**	**8**	**13**	**12**	**5**	**1**	9.76	**48.36**		**3066.76**
								Lay Consumption	**1.209**	Weighted Efficiency	**76.67%**

30. Analyze the features of computer integration in a Unit production system [K_3]

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