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Question Paper Code: 58462

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

One Credit

Electronics and Communication Engineering

15UEC862 - PCB DESIGN

130Ee002 Teb Debioiv							
		(Regul	lation 2015)				
Dι	ration: 1.30 hour			Maximum: 50 Marks			
		Answer A	ALL Questions				
		PART A - (3	$0 \times 1 = 30 \text{ Marks})$				
1.	1. Component placed only on top side called						
	(a) Multilayer	(b) Single layer	(c) Double layer	(d) Three layer			
2.	Used for sol	dering					
	(a) Ferric chloride	(b) Sio2	(c) Ferrous chloride	e (d) Carbon			
3. Modern devices are used as							
	(a) Single layer	(b) Double layer	(c) Multi layer	(d) None of the above			
4.	I. The component which character is to oppose current flow						
	(a) Capacitor	(b) Resistor	(c) Diode	(d) Transistor			
5.	A resistor with colo	our bands Red, Violet	, Green and Black wi	ll have a value			
	(a) $27 \text{ K} \pm 10\% \text{ K}$	(b) $2.7 \text{ M} \pm 20\% \text{ K}$	(c) $270 \text{ K} \pm 5\% \text{ K}$	(d) $2.7 \text{ K} \pm 2\% \text{ K}$			
6.	Example of a Photo	o resistor					

(c) Diode

(d) CFL

(b) Photo diode

(a) LDR

7. If two resistor are connected in series, is the final resistance:							
	(a) Higher	(b) Lower	(c) Same	(d) Not determined			
8.	The diode used for	rectifier circuit	is				
	(a) 1N4001	(b) 1N5001	(c) 1N 8086	(d) none of these			
9.	Microfarad equival	ent to					
	(a) 10^-12	(b) 10^-4	(c) 10^-6	(d) 10^-812.			
10.	Which having the ability to generate extremely short pulses						
	(a) Step Recovery	Diode (SRD)	(b) Constant Current Di	odes			
	(c) Schottky Diode	e	(d) Shockley Diode				
11.	Thermocouple is a	type of	_				
	(a) switch	(b) Resistor	(c) Rectifier	(d) Diode			
12.	Example for semic	onductor					
	(a) Diode	(b) Resistor	(c) Capacitor	(d) Inductor			
13.	PCB stands for						
(a) printed circuit board		ooard	(b) printed copper board				
	(c) polymarised copper board		(d) none of these				
14.	Piezo-electric conv	vert					
	(a) Electrical into mechanical		(b) Mechanical into electrical				
	(c) Vibration into electrical		(d) Electrical into light				
15.	Identify the correc	t statement:					
	(a) The cathodo	e lead is longer.	it goes to negative rail				
	(b) The cathod	e lead is shorter.	it goes to negative rail				
	(c) The cathode	e lead is shorter.	it goes to positive rail				
	(d) The cathod	e lead is longer.	it goes to positive rail				

16.	What kind of paper	is used for PCB la	iyout					
	(a) Butter flim	(b) Normal paper	(c) A4	(d) Plastic coated paper			
17.	If we connect the ca	apacitor in parallel	it act as					
	(a) Storage device	(b) Switch	ch	(c) Filter	(d) Charging/Discharging			
18. Which convert light energy into electrical energy?								
	(a) LED	(b) Photo dio	ode	(c) Filter	(d) LVDT			
19.	Which IC give a de	sired output?						
	(a) IC 78XX	(b) IC 555	(c) IC	4017	(d) MAX 232			
20.	Which convert phys	sical energy into el	lectrical en	ergy Vice-V	Versa?			
	(a) Motor	(b) Transducer	(c) Pre	cipitations	(d) OP-AMP			
21.	The timer IC is							
	(a) 555	(b) 444	(c)	222	(d) 777			
22.	What factors influen	nce PCB fabrication	on cost					
	(a) PCB size	(b) Hole diamete	r (c) Lay	ver count	(d) All of the above			
23. The most popular form of IC package is								
	(a) DIL	(b) Flat pack	(c) TO	-5	(d) None of these			
24. The process of removing copper in the pcb designing board is called								
	(a) Eracing	(b) Enhancing	(c) Etc	hing	(d) Evoparating			
25.	Which chemical is	used for etching p	rocess?					
	(a) ferric chloride		(b) sul	phuric acid				
	(c) ferrous sulphate			(d) hydrochloric acid				
26.	The varactor diode	is usually						
((a) Forward biased	(b) Unbiased	(c) reverse	biased	(d) holes and electronics			
27.	Which of the follow	ving is most difficu	ult to fabric	cate in an IC	7?			
	(a) Diode	(b) Transistor	(c) FE	Т	(d) Transformer			

28.	SPST stands fo	r			
	(a) single pole s	single through	(b) single poly	morised single through	
	(c) systamatic j	pole single through	h (d) silicon pol	ymorised switch	
29.	In a ac house h	old appliance the	frequency is in	Hz	
	(a) 230	(b) 220	(c) 50	(d) 60	
30.	A rheostat is a	form of			
	(a) Variable cap	pacitor (b) Poter	ntiometer (c) Variable r	resistor (d) Thermocouple	
		PART	Γ - B (1 x 20 = 20 Marks))	
31.	(a) (i) Give ty	pes of diodes witl	h necessary diagrams.	(8)	
	(ii) Explain	(12	2)		
			Or		
	(b) (i) Explain example	-	s of PCB layout design in	n software with an	2
	(ii) Write s	some software nan	ne for design a PCB layo	ut and briefly explain about	
	any on	e.			8