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**Question Paper Code: 58042**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

ONE CREDIT COURSE

Electronics and Communication Engineering

15UEC862 - PCB DESIGN

(Regulation 2015)

Duration: One hour

Maximum: 50 Marks

Answer ALL Questions

PART A - (30 x 1 = 30 Marks)

- PCB stands for
  - printed circuit board
  - printed copper board
  - polymerised copper board
  - none of these
- What are the precautions are made using pcb designing?
  - wearing gloves
  - check the current
  - check the voltages
  - all of these
- Which chemical is used for etching process?
  - ferric chloride
  - sulphuric acid
  - ferrous sulphate
  - hydrochloric acid
- The Selection of resistors depends up on
  - voltage
  - current
  - both a & b
  - none of these
- Voltage is an \_\_\_\_\_ force.
  - electromotive
  - electro static
  - electrolytic
  - electrolysis
- RED led wavelength
  - $620 < \lambda < 645$
  - $610 < \lambda < 620$
  - $520 < \lambda < 550$
  - $490 < \lambda < 520$

7. Who discovered the lcd
- (a) Friedrich Reinitzer (b) willismith  
(c) williyam Marconi (d) jeorgeH.hailmier
8. The diode is used for
- (a) switching (b) drop voltage (c) act as filter (d) none of these
9. In transistor amplifiers, we generally use \_\_\_\_\_ capacitors.
- (a) Electrolytic (b) Mica (c) Paper (d) Air
10. The diode used for rectifier circuit is
- (a) 1N4001 (b) 1N5001 (c) 1N 8086 (d) none of these
11. IC stands for
- (a) integrated circuit (b) intelligence circuit  
(c) intensive circuit (d) internal component
12. The transistor is act as a
- (a) switch (b) on a device (b) off a device (d) none of these
13. Transformer used for 230 to 12 volt conversion is
- (a) step up (b) step down (c) both a & b (d) none of these
14. Voltage regulator is used for
- (a) constant voltage (b) constant current (c) both a & b (d) none of these
15. The timer IC is
- (a) 555 (b) 444 (c) 222 (d) 777
16. The 555 timer is used for
- (a) pulse generation (b) pulse modulation  
(c) pulse demodulation (d) pulse width modulation
17. Which switch made an electromagnet?
- (a) Transistor (b) MOSFET (c) SCR (d) Relay
18. LED stands for
- (a) light emitting diode (b) light emitted display  
(c)liquid emitted display (d) none of these

19. LDR stands for
- (a) light dependent resistor (b) light dependent resonator  
(c) long delay resistor (d) light delay resistor
20. In power supply unit the capacitor is used for
- (a) filter (b) drop down noise voltage  
(c) both a & b (d) none of these
21. Sensor which is used to sense human
- (a) IR (b) PIR (c) Precipitations (d) Accelerometer
22. The purpose of transducer is
- (a) converting one form of energy to another form  
(b) converting voltage to current  
(c) converting voltage to current  
(d) all of these
23. Which IC give a desired output?
- (a) IC 78XX (b) IC 555 (c) IC 4017 (d) MAX 232
24. The most popular form of IC package is
- (a) DIL (b) Flat pack (c) TO-5 (d) None of these
25. The process of removing copper in the pcb designing board is called
- (a) eracing (b) enhancing (c) etching (d) evoparating
26. Which chemical is used for etching process?
- (a) ferric chloride (b) sulphuric acid  
(c) ferrous sulphate (d) hydrochloric acid
27. Which of the following is most difficult to fabricate in an IC?
- (a) Diode (b) Transistor (c) FET (d) Transformer
28. SPST stands for
- (a) single pole single through (b) single polymorised single through  
(c) systamatic pole single through (d) silicon polymorised switch
29. In a ac house hold appliance the frequency is in \_\_\_\_\_ Hz
- (a) 230 (b) 220 (c) 50 (d) 60

30. A relay is \_\_\_\_\_ switch.

- (a) A mechanical
- (b) An electronic
- (c) An electromechanical
- (d) None of these

PART - B (1 x 20 = 20 Marks)

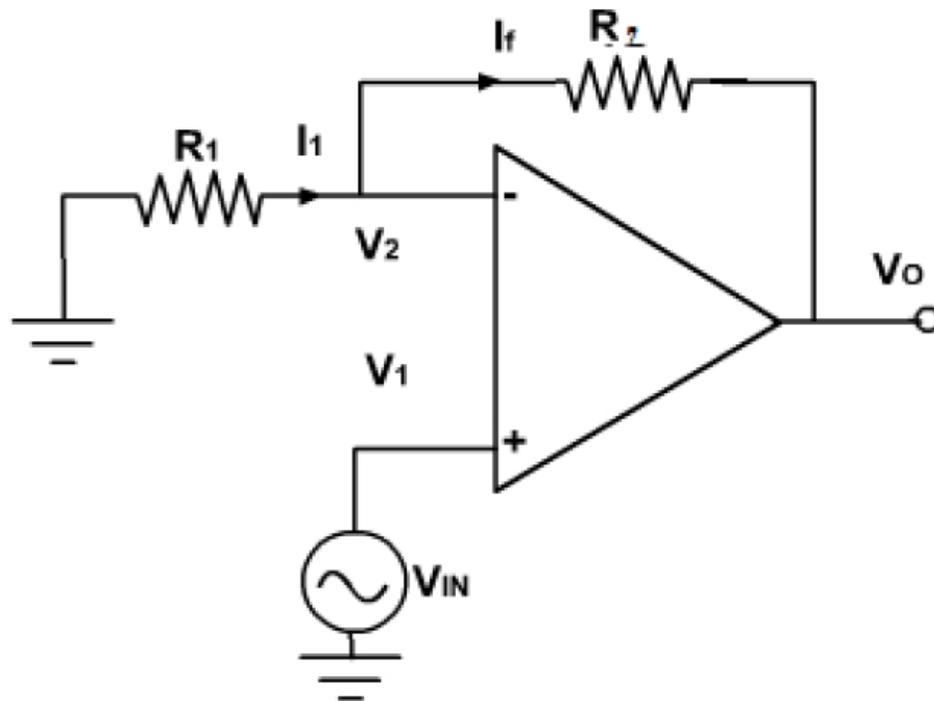
31. (a) (i) Explain the types of electronics components and explain about it. (10)

(ii) Explain about the process of PCB layout design in software with an example. (10)

Or

(b) (i) Write some software name for design a PCB layout and briefly explain about any one. (10)

(ii) Explain the working function of the following circuits.



Non inverting Amplifier

(10)