

**Duration: 30 Mins**

**Total Marks: 25**

**Q.ID: ITISKILL0082JL**

1. What is the percentage of charge accumulated by the capacitor at the end of 2 time constant limit?

- A) 0.864                      B) 0.4  
C) 0.632                      D) 0.5

**Answer: A) 0.864**

2. How many time constants required to change a capacitor to 63.2% of its full charge voltage?

- A) Four time constant              B) One time constant  
C) Three time constant              D) Two time constant

**Answer: B) One time constant**

3. What is the percentage of sulphuric acid in electrolyte used for lead-acid batteries?

- A) 27%                          B) 25%  
C) 12%                          D) 40%

**Answer: A) 27%**

4. What is the natural shape of a quartz crystal?

- A) Hexagonal prism with pyramid at ends              B) Pentagonal prism with pyramid at ends  
C) Cylindrical shape with pyramid at ends              D) Cube shape with pyramid at ends

**Answer: A) Hexagonal prism with pyramid at ends**

5. How to improve the frequency stability in oscillator circuits?

- A) Increase the supply voltage              B) Improve the property of circuits  
C) By using quartz crystal              D) Using L and C

**Answer: C) By using quartz crystal**

6. What is the difference of Colpitts oscillator compare to Hartley oscillator?

- A) Uses SCR combination              B) Uses crystal oscillator  
C) Uses split inductor              D) Uses split capacitor

**Answer: D) Uses split capacitor**

7. What is the resonant frequency range of a crystal?

- A) Between 0.5 and 25 MHz              B) Between 0.1 and 10 MHz  
C) Between 0.5 and 30 MHz              D) Between 0.1 and 1MHz

**Answer: C) Between 0.5 and 30 MHz**

8. Why the load testing is done on the lead-acid battery?

- A) Measure the rated output voltage              B) Test the dimensional accuracy  
C) Verify the rated power delivery              D) Test I<sup>2</sup>R power loss in the battery cell

**Answer: A) Measure the rated output voltage**

9. Which parameter is maintained constant in zener diode?

- A) Resistance                      B) Current  
C) Power                              D) Voltage

**Answer: D) Voltage**

10. Which component filter the ripples in the rectifier circuit?

- A) DIAC                              B) TRIAC  
C) Capacitor                          D) Diode

**Answer: C) Capacitor**

11. Which material contains eight electrons in valency layer?

- A) Intrinsic semiconductors              B) Insulators  
C) Conductors                          D) Semiconductors

**Answer: B) Insulators**

12. What is the expansion of PRF related to frequency?

- A) Pulse repetition frequency              B) Pulse repetition frequency  
C) Pulse probability frequency              D) Power regulated frequency

**Answer: A) Pulse repetition frequency**

13. Which method is adopted to charge a car battery with voltage rating of 2.3 V per cell?

- A) Constant voltage charging method              B) Constant current charging method  
C) Float charging method              D) Trickle charging method

**Answer: A) Constant voltage charging method**

14. Which is the 3 terminal, negative voltage regulator IC?

- A) IC 7812                              B) LM 320  
C) LM 340                              D) IC 7905

**Answer: D) IC 7905**

15. What is the unit of electric charge?

- A) Coulomb                              B) Ampere  
C) Volts                                  D) Hertz

**Answer: A) Coulomb**

16. Which circuit is determined by the frequency of LC tank circuit?

- A) Oscillator
- B) Amplifier
- C) Multiplexed
- D) Demodulator

**Answer: A) Oscillator**

17. How to overcome the problem of frequency drift in LC oscillators?

- A) Using high Q coils and good quality capacitors
- B) Provide negative feedback
- C) Apply opposite polarity of signal
- D) Increase the supply voltage

**Answer: A) Using high Q coils and good quality capacitors**

18. What is the name of the ratio of ON-time pulse to the OFF-time pulse of multivibrator?

- A) Control voltage
- B) Threshold comparator
- C) Pulse repetition
- D) Pulse repetition

**Answer: C) Pulse repetition**

19. What type of feed back is used by the Wein-bridge oscillator to oscillate the signal?

- A) Negative feedback
- B) Positive feedback
- C) Both positive and negative feedback
- D) No feedback

**Answer: C) Both positive and negative feedback**

20. What type of arrangement is required to sustain the oscillations of the oscillator circuit?

- A) Provide negative feedback
- B) Increase the bias voltage
- C) Provide regenerative feedback
- D) Increase the value of inductor

**Answer: C) Provide regenerative feedback**

21. Which material is used as electrical insulator?

- A) Gallium
- B) Germanium
- C) Porcelain
- D) Aluminium

**Answer: C) Porcelain**

22. Which energy is converted by the battery to produce electricity?

- A) Chemical energy into electrical energy
- B) Electrical energy into mechanical energy
- C) Mechanical energy into electrical energy
- D) Electrical energy into light energy

**Answer: A) Chemical energy into electrical energy**

23. Why LC tuned circuits are not used in audio frequency oscillators?

- A) LC values required is too large
- B) LC tank circuit does not produce AF signals
- C) LC tank circuit operation requires high voltage
- D) LC components are not available

**Answer: A) LC values required is too large**

24. Which circuits commonly use parallel-fed Hartley oscillators?

- A) Stereo amplifiers
- B) Automatic voltage stabilizers
- C) Radio receivers
- D) Television receivers

**Answer: C) Radio receivers**

25. How the single strand wire is called?

- A) Flexible wire
- B) Twisted wire
- C) Multi strand wire
- D) Hook up wire

**Answer: D) Hook up wire**