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Score: 21/25 (84.00%)

Code: 3525

1. What is the unit of electric charge?

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

2. Which material contains eight electrons in valency layer?

- A) Insulators (Correct)**
B) Conductors
C) Semiconductors
D) Intrinsic semiconductors

3. Which material is used as electrical insulator?

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

4. How the single strand wire is called?

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

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

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

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

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

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

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

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

- A) Test the dimensional accuracy
C) Measure the rated output voltage
B) Verify the rated power delivery (Incorrect)
D) Test I²R power loss in the battery cell

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) Oscillator (Correct)**
B) Amplifier
C) Multiplexed
D) Demodulator

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- A) DIAC
- B) Diode
- C) TRIAC (Incorrect)
- D) Capacitor**

25. Which parameter is maintained constant in zener diode?

- A) Power
- B) Current
- C) Voltage (Correct)**
- D) Resistance