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Score: 20/25 (80.00%)

Code: 3995

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%  
B) 25% (Incorrect)  
C) **27%**  
D) 40%

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  
B) Verify the rated power delivery (Incorrect)  
C) **Measure the rated output voltage**  
D) Test I<sup>2</sup>R power loss in the battery cell

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

- A) LM 320  
B) LM 340  
C) **IC 7905 (Correct)**  
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 (Incorrect)  
B) **Pulse repetition**  
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 (Incorrect)  
B) Between 0.1 and 10 MHz  
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  
B) 0.5 (Incorrect)  
C) 0.632  
D) **0.864**

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

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

25. Which parameter is maintained constant in zener diode?

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