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Answer Key

**Duration: 30 Mins****Total Marks: 12****Q.ID: ITISKILL7500UI**

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

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

**Answer: D) Oscillator**

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

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

**Answer: B) Uses split capacitor**

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

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

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

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

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

**Answer: B) 0.864**

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

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

**Answer: B) Provide regenerative feedback**

6. 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

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

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

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

**Answer: B) Radio receivers**

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

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

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

9. How many time constant period is required to fully charge a capacitor?

- A) 7 time constants                      B) 10 time constants  
C) 5 time constants                      D) 3 time constants

**Answer: C) 5 time constants**

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

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

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

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

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

**Answer: A) Between 0.5 and 30 MhZ**

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

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

**Answer: A) One time constant**