

ITI Quiz - 24-Mar-2026 11:11 AM

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Oscillator module QP
14MCQ

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Question Paper

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Score: 4/14 (28.57%)

Code: 6754

1. 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)**

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

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

3. 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

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

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

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

- A) 0.4 (Incorrect)
B) 0.5
C) 0.632
D) **0.864**

6. 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 (Incorrect)
C) Two time constant
D) **One time constant**

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

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

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

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

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

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

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

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

11. Which is the transistor used to operate the Colpitts oscillator?

- A) AC 127
B) **BF 194B (Correct)**
C) BC 148B
D) AC 188

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

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

13. 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**
D) Increase the supply voltage (Incorrect)

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

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