

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: 3/14 (21.43%)

Code: 0139

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

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

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

2. 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**

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 (Incorrect)
D) **Both positive and negative feedback**

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

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

10. 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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. 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

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