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March 2026

Sri Mahalingeswara ITI

Question Paper

Duration: 30 Mins

Total Marks: 14

ID: ITISKILL8178HX

Student Name: _____ Roll No: _____

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

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

2. 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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 0.5 and 25 MHz D) Between 0.1 and 1MHz

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

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

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

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

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

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