

Monthly test for month of February-2026

February 2026

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Answer Key

Duration: 30 Mins

Total Marks: 25

Q.ID: ITISKILL9966RT

1. How many transistors are built inside the Very Large Scale Integration (VLSI) IC package?

- A) 1000 and above B) 1 to 10 transistors
C) 10 to 100 transistors D) 100 to 1000 transistors

Answer: A) 1000 and above

2. What is the value of $\tan \theta$ if $\sin \theta = 4/5$?

- A) $(4/3)$ B) $(5/3)$
C) $(4/5)$ D) $(3/4)$

Answer: A) $(4/3)$

3. How many degrees is equal to one radian?

- A) $(\pi)/(180)$ B) $(180)/(\pi)$
C) $(\pi)/(360)$ D) $(360)/(\pi)$

Answer: B) $(180)/(\pi)$

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

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

Answer: D) BF 194B

5. Which is equal to $\sin \theta$?

- A) Hypotenuse/Opposite side B) Hypotenuse/Adjacent side
C) Opposite Side/Hypotenuse D) Adjacent Side/Hypotenuse

Answer: C) Opposite Side/Hypotenuse

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

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

Answer: B) Hexagonal prism with pyramid at ends

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

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

Answer: A) By using quartz crystal

8. Which method is followed to troubleshoot the problem causing section by the symptom?

- A) Sensory test method B) Logical approach method
C) Step by step method D) Trial and error method

Answer: B) Logical approach method

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

- A) IC 7905 B) LM 340
C) LM 320 D) IC 7812

Answer: A) IC 7905

10. Which three terminal voltage regulator IC has adjustable output?

- A) LM 305 B) LM 317
C) LM 105 D) LM 100

Answer: B) LM 317

11. What is the range of output voltage of regulator IC LM 317?

- A) 0 to 32 V B) 0 to 25 V
C) 0 to 30 V D) 1.2 V to 32 V

Answer: D) 1.2 V to 32 V

12. What is equal to $\tan \theta$?

- A) Opposite Side/Hypotenuse B) Opposite Side/Adjacent Side
C) Adjacent side/Opposite side D) Adjacent Side/Hypotenuse

Answer: B) Opposite Side/Adjacent Side

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

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

Answer: A) Both positive and negative feedback

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

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

Answer: B) Using high Q coils and good quality capacitors

15. Which IC package consist of 100 to 1000 transistors?

- A) Medium scale integration (MSI) B) Small scale integration (SSI)
C) Large scale integration (LSI) D) Very large scale integration (VLSI)

Answer: C) Large scale integration (LSI)

16. What is the current rating of voltage regulator IC LM338K?

- A) 2A B) 3A
C) 4A D) 5A

Answer: D) 5A

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

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

Answer: C) LC values required is too large

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

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

Answer: B) 0.864

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

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

Answer: A) Provide regenerative feedback

20. How much is the maximum load current of the negative

voltage regulator IC 7912?

- A) 2.0 A B) 1.5 A
C) 1.0 A D) 0.55 A

Answer: A) 2.0 A

21. What is the current rating of voltage regulator IC LM317L?

- A) 0.4 A B) 0.3 A
C) 0.1 A D) 0.2 A

Answer: C) 0.1 A

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

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

Answer: B) Uses split capacitor

23. Which type of voltage regulator is IC 723?

- A) Three pin negative voltage regulator B) Three pin adjustable voltage regulator
C) Three pin positive voltage regulator D) Multipin variable voltage regulator

Answer: B) Three pin adjustable voltage regulator

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

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

Answer: A) One time constant

25. What is equal to $\cos \theta$?

- A) Hypotenuse/Adjacent Side B) Adjacent Side/Hypotenuse
C) Hypotenuse/Opposite Side D) Opposite side/Hypotenuse

Answer: B) Adjacent Side/Hypotenuse