

March 2026

Sri Mahalingeswara ITI

Question Paper

Duration: 30 Mins

Total Marks: 36

ID: ITISKILL63790B

Student Name: _____	Roll No: _____
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1. Which is the drain current (I_d) in JFET?

A) Electron from source to drain	B) Electron from drain to gate
C) Electron from gate to source	D) Electron from drain to source

2. Which current flows in TRIAC between MT1 and MT2?

A) Principal current	B) Conventional current
C) Reverse current	D) Leakage current

3. Which parameter controls the current flow in a BI-polar transistor?

A) Current	B) Resistance
C) Voltage	D) Frequency

4. What is the package type for BF 245B?

A) TO-72	B) TO-102
C) TO-92	D) TO-82

5. How gate is biased in JFET?

A) Reverse biased	B) AC supply function
C) Dual supply function	D) Forward biased

6. What is the maximum drain- source voltage, V_{DS} for the JFET BF 245B?

A) 30 V	B) 10 V
C) 40 V	D) 20 V

7. What is the gate current (I_g) of the JFET, when reverse biased?

A) Practically unity	B) Practically zero
C) Practically infinity	D) Practically very low

8. Which is the device made and interconnected by two transistors?

A) UJT	B) LED
C) FET	D) SCR

9. How many layers of PN - junctions are used in SCR fabrication?

A) Two layer two junctions	B) Three layer four junctions
C) Four layer three junctions	D) Three layer three junctions

10. Which semiconductor devices are composed inside the solid state relays?

A) Diodes and transistors	B) UJYs and FETs
C) MOSFETs and IGBTs	D) Thyristor and transistors

11. Which type of defects are occurring in solid state relays?

A) Tendency to fail open	B) More sparking
C) Tendency to fail shorted	D) Intermittent working

12. What is the maximum specified voltage for the TRIAC TIC 201D?

A) 2.1 V	B) 1.5 V
C) 2.5 V	D) 1.7 V

13. How the lamp failures caused by the high inrush currents in lamp dimmer circuits using TRIAC is eliminated?

A) By the fuse	B) Using Safety resistor
C) By soft start circuit	D) Using MCB

14. What is the load current handled by the solid state relay that must be mounted to some heatsink to protect the device?

A) 3 Amp	B) 2 Amp
C) 1 Amp	D) Greater than 4 Amp

15. What is the maximum current ratings of solid state relays available in high power packages?

A) 40 Amp	B) 100 Amp
C) 10 Amp	D) 1 Amp

16. Which device generates high frequency radio frequency interferences by the extremely rapid turn-ON time?

A) TRIAC	B) UJT
C) Op-Amp	D) Transistor

17. Which characteristics exhibits the current conduction increases while the voltage across the devices decreases in a

- DIAC?
- A) Linearity characteristics B) Positive resistance characteristics
C) Negative resistance characteristics D) Nonlinearity characteristics
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- 18.** How the solid state relays are working for increased lifetime?
- A) Slower in operations B) Spark generated during switching
C) Bulky profile D) No moving parts to wear and tear
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- 19.** What is the maximum drain current, I_D for BF 245B?
- A) 15mA B) 35mA
C) 25mA D) 45mA
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- 20.** What is the code number of TRIAC?
- A) 2N2646 B) 2N1597
C) BFW10 D) BT136
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- 21.** What type of control is used for FET?
- A) Resistance controlled device B) Current controlled device
C) Voltage controlled device D) Frequency controlled device
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- 22.** Which is the N - channel FET?
- A) Main current flows through N-doped material B) Main current flows through P-doped material
C) S-terminal connected to positive D) AC supply connected to drain termin
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- 23.** What is the minimum current ratings of solid state relays available in low power packages?
- A) 10 milli Ampere B) 50 milli Ampere
C) Few micro Amperes D) 100 milli Ampere
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- 24.** What will happen in SCR with forward biased condition and gate current is applied?
- A) Reverse current turned off B) Reverse current conduction commences
C) Forward current conduction commences D) Forward current conduction stops
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- 25.** What is the maximum drain current I_D for BFW10?
- A) 20 mA B) 30 mA
C) 5 mA D) 10 mA
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- 26.** What is the switching speed of solid state relays?
- A) 1 to 100 milli seconds B) 10 to 60 nano seconds
C) 1 to 25 nano seconds D) 1 to 100 nano seconds
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- 27.** What is the function of solid state relay(SSR)?
- A) High gain amlifier B) High speed switching
C) High frequency oscillator D) Low pass filter
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- 28.** Which is the package type for the JFET BFW10?
- A) TO-92 B) TO-82
C) TO-72 D) TO-62
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- 29.** Which voltage level is reached to increase the current through DIAC rapidly?
- A) Break over voltage B) Zener voltage
C) Break down voltage D) Cut in voltage
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- 30.** What is the maximum drain - source voltage, V_{DS} for BFW10?
- A) 40 V B) 30 V
C) 50 V D) 20 V
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- 31.** What is the maximum forward gate current (I_g) for BFW10 JFET?
- A) 10 mA B) 8 mA
C) 20 mA D) 5 mA
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- 32.** What is the maximum power dissipation P_{max} for BF 245B?
- A) 100 mw B) 300 mw
C) 400 mw D) 200 mw
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- 33.** Which device is a unipolar transistor?
- A) BJT B) FET
C) IGBT D) UJT
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- 34.** What is the common and popular application of U.J.T?
- A) Relaxation oscillator B) Multivibrator
C) Motor speed controller D) Voltage regulator
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- 35.** What is the term stands for TRIAC?
- A) Triode AC semiconductor B) Triode DC semiconductor
C) Triode Alternate control D) Triode Access console
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- 36.** Which measuring instrument is used to make quick test on a TRIAC?
- A) Ohmmeter B) Ammeter
C) Voltmeter D) Oscilloscope