



RAN - 1903000203020093



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S. Y. B. Sc. (Electronics) (Sem. - III) Examination

March - 2023

Electronics : Paper - V

Linear Power Electronics

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

S. Y. B. Sc. (Electronics) (Sem. - III)

Name of the Subject :

Electronics : Paper - V Linear Power Electronics

Subject Code No.: **1903000203020093**

Seat No.:

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Student's Signature

(2) All questions are compulsory.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ
O.M.R. Sheetની પાછળ છાપેલ છે.***

***Important instructions to fillup O.M.R. Sheet
are given on back side of the provided O.M.R. Sheet.***

- Q. 1.** Voltage regulators require
- A) Only line regulation B) Only load regulation
C) A constant load D) Load and line regulation
- Q. 2.** What type of regulators offer inherent short-circuits protection?
- A) Shunt regulators B) Series regulators
C) Three-terminal regulators D) Switching regulators
- Q. 3.** Voltage regulators keep a constant _____ output voltage when the input or load varies within limits.
- A) DC B) AC
C) Ripple D) None
- Q. 4.** Switching regulators are series type regulators, which has _____ power dissipation and _____ efficiency.
- A) Increased, increased B) Increased, reduced
C) Reduced, reduced D) Reduced, increased
- Q. 5.** The output voltage of a regulated power supply is affected by which of the following factors
- A) Input voltage B) Load current
C) Temperature D) All the above
- Q. 6.** A fixed voltage regulator can be a _____.
- A) Positive voltage regulator
B) Negative voltage regulator
C) Positive or negative voltage regulator
D) None of the above

- Q. 19.** Why is heat produced in a diode?
- A) Due to current passing through the diode
 - B) Due to voltage across the diode
 - C) Due to the power rating of the diode
 - D) Due to the PN junction of the diode
- Q. 20.** Which of the following circuits would require the least amount of filtering?
- A) A half-wave rectifier
 - B) A full-wave rectifier
 - C) A bridge rectifier
 - D) A full-wave rectifier and a bridge rectifier
- Q. 21.** The regulator with the highest efficiency is the
- A) Shunt regulator
 - B) Series regulator
 - C) Switching regulator
 - D) Dc-to-dc converter
- Q. 22.** Several cells in the series form a
- A) Power supply
 - B) Battery
 - C) Thermocouple
 - D) Charger
- Q. 23.** The chemical energy in a battery or cell
- A) Is a form of kinetic energy
 - B) Cannot be replenished once it is gone
 - C) Changes to kinetic energy when the cell is used
 - D) Is caused by electric current
- Q. 24.** In a power supply diagram, which block indicates a pulsating dc output?
- A) Transformer
 - B) Filter
 - C) Rectifier
 - D) Regulator

- Q. 31.** Thermal shutdown occurs in an IC regulator if
- A) Power dissipation is too high
 - B) Internal temperature is too high
 - C) Current through the device is too high
 - D) None
- Q. 32.** Testing a good diode with an ohmmeter should indicate
- A) High resistance when forward or reverse biased
 - B) Low resistance when forward or reverse biased
 - C) High resistance when reverse biased and low resistance when forward biased
 - D) High resistance when forward biased and low resistance when reverse biased
- Q. 33.** The 79XX series of voltage regulators produces an output voltage that is
- A) Negative
 - B) Positive
 - C) Either Positive or negative
 - D) Unregulated
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SPACE FOR ROUGH WORK