



RAN - 2003000204020093

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S. Y. B. Sc. (Sem. IV) Examination April - 2025

Electronics - V (Old) (Switching Power Supply)

[Total Marks: 50

સૂચના : / Instructions

(૧)

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 (Sem. IV)

Name of the Subject :

Electronics - V (Old) (Switching Power Supply)

Subject Code No.: 2003000204020093

Seat No.:

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Student's Signature

- (2) Q. 1 is compulsory.
- (3) Figures at extreme right indicate full marks.
- (4) Draw figures/diagrams to support your answer.
- (5) Assume data, if required.

Q.1 Write very short answers:

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- A) Draw the DIAC characteristics.
- B) What are step-down converters
- C) Enlist the applications of UPS
- D) Explain the term signal-to-noise ratio.

Q.2

- A) Name different types of UPS and explain any one in detail using a suitable block diagram **10**
- B) Explain the importance of phase synchronization in UPS **4**

OR

Q.2

- A) What are Switching Mode Power Supplies? Enlist its advantages over Linear Power Supplies **7**
- B) Explain the construction and working of type C chopper. **7**

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Q.3

- A) Using two transistor analogy explain the working of SCR? 7
B) Discuss the construction & working of DIAC. 7

OR

Q.3

- A) Give the principle of Inverter. Explain McMurray inverter in detail. 10
B) State the principle of Chopper and differentiate them. 4

Q.4

Write Short notes: (ANY TWO)

14

- A) BJT as a switch
B) IC SG 3524 block diagram
C) Battery Charger
D) Construction working and characteristics of TRIAC