

(21/A-8)

SEAT No. _____

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SARDAR PATEL UNIVERSITY V.V.NAGAR

B.Sc. (VIth SEM.) ELECTRONICS

3rd APRIL-2019 EXAMINATION

SUBJECT- INDUSTRIAL ELECTRONICS - II

SUB.CODE-US06CELE05

TIME: 10:00 am to 1:00 pm

MARKS-70

Q-1 Choose correct answer

[10]

1. A large value of inductor in bridge circuit results in _____.
(A) discrete current (C) continues current
(B) zero current (D) None of above
2. Single phase bridge control circuit consists of _____ SCRs.
(A) 4 (C) 3
(B) 2 (D) None of above
3. B2 and B6 is _____ type of configuration.
(A) Bridge (C) Half wave
(B) Full wave (D) None of above
4. PLC used for _____.
(A) power control (C) logical control
(B) voltage control (D) current control
5. Power controlling done by _____.
(A) phase control (C) amplification
(B) rectification (D) None of above
6. PLC stands for _____.
(A) programmable level controller (C) preliminary level controller
(B) programmable logic controller (D) None of above
7. Dual converter consists of _____.
(A) inverter and oscillator (C) inverter and rectifier
(B) rectifier and amplifier (D) None of above
8. Type A chopper consists of _____ chopping network.
(A) one (C) four
(B) three (D) None of above
9. For the speed reversal of DC motor _____ is used.
(A) amplifier (C) Type B chopper
(B) dual converter (D) None of above
10. Freewheeling diode used in _____.
(A) Type A chopper (C) Type B chopper
(B) Cycloconverter (D) None of above

Q-2 Short answer type question. (any TEN)

[20]

1. Why power controlling is needed?
2. Briefly explain phase control.
3. List applications of chopper.
4. State advantage and disadvantage of full wave bridge control circuit.
5. State principle of step up chopper.
6. State function of dual converter.
7. List different section of PLC section.
8. State function of freewheeling diode.
9. What is chopper?
10. Draw waveform of full wave control circuit.
11. Differentiate Type A and Type B chopper.
12. List the application of PLC .

(1)

P.T.O.

- Q.3 Explain different version of full wave phase control circuit in detail. [10]
OR
- Q.3 Explain functional mechanism and principle of dual converter with necessary diagram. [10]
- Q.4 Explain the principle of chopper operation with necessary circuit diagram. [10]
OR
- Q.4 Draw the circuit diagram of step up chopper and explain its working with necessary waveform. [10]
- Q.5 Explain functional mechanism of type B chopper with diagram and waveform. [10]
OR
- Q.5 Describe functional mechanism of first quadrant type A chopper with diagram and waveform. [10]
- Q.6(a) Describe overvoltage and over current protection circuit with necessary circuit diagram. [06]
- Q.6(b) Discuss the method of designing a snubber circuit. [04]
OR
- Q.6 What is PLC? Draw block diagram of PLC system and discuss function of all section of it. [10]

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