

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – ELECTRONICS

PROGRAMMABLE LOGIC CONTROLLER

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 What is the primary purpose of a PLC?
(i) To control machinery on factory assembly lines
(ii) To control building management systems
(iii) To control industrial processes
(iv) All the above
- 2 What types of programming language is typically used to program a PLC?
(i) C++ (ii) Java
(iii) Ladder logic (iv) Python
- 3 Mention in plc programming ,a retentive function is one that _____
(i) Defaults to the 'on' state (ii) Defaults to the 'off' state
(iii) is not reset after a power cycle (iv) cannot be edited or deleted
- 4 Which one of the following is an example for scientific automation?
(i) Rocket launching (ii) street solar lightening
(iii) Automated bottle filling stations (iv) Smoke detection
- 5 Which is the full form of SCADA?
(i) Supervisory control and document
(ii) Supervisory control and Data acquisition.
(iii) supervisory coloumn and data assessment
(iv) Special circuit and Data Analysis

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Bring out the parts of PLC.
OR
b Show the special I/O module in PLC.
- 7 a Analyze the function of program scan.
OR
b Summarize the points in manually operating switches.
- 8 a Describe the function of timer instruction
OR
b Compare Up & Down counter.
- 9 a Outline the concept of subroutine functions.
OR
b Explain the function of suspend Instruction.
- 10 a Discuss the addition in math instruction.
OR
b Explain the types of process in PLC.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Distinguish between PLC and Computers.
OR
b Differentiate Analog & Discrete I/O modules.
- 12 a Elucidate the relay type instruction in PLC.
OR
b Examine the output control devices in PLC.
- 13 a Differentiate ON Delay and OFF Delay timer instructions.
OR
b Assume and explain the control of traffic light in one direction.
- 14 a Identify the function of flashing pilot light subroutine.
OR
b Analyze the concept of data compare instruction.
- 15 a Point out and explain other word level math instruction.
OR
b Outline the concept of structure of control systems.

Z-Z-Z

END