PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS) I4EUJ2JV\

BSc DEGREE EXAMINATION MAY 2017
(Fifth Semester)

Branch- **ELECTRONICS**

CORE ELECTIVE-I PROGRAMMABLE LOGIC CONTROLLER

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks . (10x2 = 20)

1 Draw the programmable logic structures.
2 Write the applications of programmable logic devices.
3 Enumerate the PLC Hardware components.
4 List out the Digital I/O Modules.
5 Write the principle of operation in Motor starters.
6 Draw the proximity switches.
7 Write a note ON Delay Timer.
8 Give the program control Instructions.
9 Show the Automatic control of warehouse Door.
10 Write the principle of working in Bottle label Detection.

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Explain the principle of operation in programmable logic Arrays.
OR
b Discuss about PLAS Traffic light controller using PAL.

12 a Give an account on the introduction and parts of PLC with neat diagram.
OR
b Elucidate the working of programming devices.

13 a ' Describe the working principle of Electromagnetic control Relays with neat sketch.
OR
b Write a note on Proximity switches and Latching Relays.

14 a Write about the working function of counter Instructions.
OR
b Explain the working of Automatic Lubricating oil supplier.

15 a Elucidate simple materials handling applications.
OR
b Discuss the operation of conveyor Belt motor control.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Explain the operation of sequential Network design with programmable logic devices.
17 Write the following terms of PLC Hardware components and I/O section with necessary diagrams.
18 Elucidate the working function of PLC Ladder diagram and Relay Ladder diagram.
19 Enumerate the timer and counter applications.
20 Write the following terms of conveyor Belt control and Automatic car washine machine.

Z-Z-Z END