PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2018
(Fifth Semester)

Branch- **ELECTRONICS**

CORE ELECTIVE -1: PROGRAMMABLE LOGIC CONTROLLER

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (10 x 2 = 20)

1   Expand PAL.
2   Define PGA.
3   What are the PLCsizes?
4   What is a processor memory module?
5   Define Latching relays.
6   What are the Examine - ON instructions?
7   Define OFF Delay Timer.
8   List out the timer application.
9   What are the instructions used in simple materials handling applications?
10   Give the feature of conveyor belt motor control.

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

11 a Explain the Programmable logic structures with neat diagram.
                            OR
    b Write the Programmable logic arrays.

12 a List out the PLC Hardware components and explain.
                            OR
    b Elucidate the I/O section.

13 a Explain the electromagnetic control relays.
                            OR
    b What are the Examine OFF Instruction? Explain.

14 a Write the program for up/down counter.
                            OR
    b List out the counter applications.

15 a Write the program of simple materials handling applications.
                            OR
    b Write the program of process control.

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

16   Describe the PLAs traffic light controller using PAL.

17   Discuss about the diagnostics of PLCs with computers.

18   How to converting simple relay ladder diagram into PLC relay ladder diagram? Explain.

19   List out the data manipulating instructions and explain it.

20   Write the program of automatic control of warehouse door.