

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2018  
(Fourth Semester)

Branch – PHYSICS

**MICROPROCESSOR & ITS APPLICATIONS**

Time : Three Hours

Maximum : 75 Marks

Answer ALL questions

ALL questions carry EQUAL marks (5 x 15 = 75)

- 1 a Explain in detail about microprocessor architecture and its operations.  
OR  
b Discuss about the 8085 microprocessor and its signals.
- 2 a Discuss about the various arithmetic operations in 8085 microprocessor with two examples.  
OR  
b Write a note on the programming techniques, looping, counting and indexing. Illustrate a program for block transfer of data bytes.
- 3 a Write a program to count continuously in hexadecimal from FFH to 00H in a system with a  $.5 \mu s$  clock period.  
OR  
b Interface an 8-bit D/A converter with the 8085 microprocessor.
- 4 a Explain in detail about the block diagram of 8254 programmable interval timer. Illustrate 8254 as a counter.  
OR  
b Discuss about the 8259A programmable Interrupt controller.
- 5 a Describe about software-controlled asynchronous serial I/O.  
OR  
b How will you design a system – single board microcomputer?

Z-Z-Z

END