

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For candidates admitted during the academic year 2019-2020 & thereafter)
SUBJECT CODE : 19PH/PC/EL44

M.Sc. DEGREE EXAMINATION APRIL 2023
BRANCH III - PHYSICS
FOURTH SEMESTER

COURSE : MAJOR CORE
PAPER : ELECTRONICS II
TIME : 3 HOURS

MAX. MARKS : 100

SECTION A

ANSWER ALL THE QUESTIONS **(10x3=30)**

1. Name the memory segments in 8086.
2. Explain pipeline processing in 8086.
3. What is meant by block move?
4. Discuss string manipulation instructions. Give example.
5. What is flash in 8051?
6. What is RISC? Why is it used in embedded systems?
7. How many I/O ports are there in 8051? How many pins are there for configuration?
8. Explain the function of XTAL1 and XTAL2 pin in 8051?
9. Mention few types of embedded operating systems.
10. Name the key features of instruction sets of PIC16c6x.

SECTION B

ANSWER ANY FIVE QUESTIONS **(5x5=25)**

11. Discuss about interrupt priorities of 8086 with example.
12. Explain Min.Mode, Max.Mode of 8086 and the uses.
13. What is the data transfer instruction in 8086? Explain.
14. What are the flag control instructions in 8086? Discuss any five of them.
15. Enumerate the difference between DPTR and PC in 8051?
16. What are the interrupt signals in 8051? Explain each of them.
17. Give the memory organization diagram of PIC microcontroller.

SECTION C

ANSWER ANY THREE QUESTIONS **(3x15=45)**

18. Explain the architecture of 8086 with a neat diagram.
19. Write a program for 8086 to find the factorial of a given number.
20. Write ascending order sorting program for 8051 for the data: 05H, 08H, 0H, 06H, 04H.
21. Explain with a neat diagram and program the interfacing of 8051 for a stepper motor.
22. Explain with a neat diagram and program the application of PIC embedded microcontroller in industrial safety.
