

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2011-12 & thereafter)

SUBJECT CODE : 11PH/MC/MM54

B.Sc. DEGREE EXAMINATION NOVEMBER 2014
BRANCH III - PHYSICS
FIFTH SEMESTER

REG. No. _____

COURSE : MAJOR – CORE
PAPER : MICROPROCESSORS AND MICROCONTROLLERS
TIME : 30 MINS. MAX. MARKS : 30

SECTION – A

TO BE ANSWERED IN THE QUESTION PAPER ITSELF

ANSWER ALL QUESTIONS: (30 x 1 = 30)

I. CHOOSE THE CORRECT ANSWER:

1. What is called a group of four bits?
a. nibble b. byte c. word d. numbers
2. What is accumulator?
a. Accumulator is a 8 bit register
b. Accumulator is the part of ALU
c. Result of an operation is stored in the accumulator
d. All of these
3. What is the memory capacity of 8085 microprocessor?
a. 8KB b. 16KB c. 32KB d. 64KB
4. Which is prime memory?
a. Hard disc b. CD-ROM c. EPROM d. Floppy
5. RAM is a ----- memory.
a. volatile b. nonvolatile c. secondary storage d. backup storage
6. The system bus contains ----- buses.
a. two b. three c. four d. five
7. The 8085 microprocessor has ----- bit data bus.
a. 2 b. 4 c. 8 d. 16
8. 16 bit additions using register pairs modify only ----- flag.
a. carry b. zero c. parity d. sign
9. Program counter is a ----- bit register.
a. 4 b. 8 c. 16 d. 32
10. Which is not logic instruction?
a. ANI b. ADI c. XRI d. ORI
11. Example of two byte instruction is
a. ADD b. MOV c. MVI d. JZ
12. Addition of 79_H and 68_H is
a. C1 b. D1 c. E1 d. F1
13. Subtraction of 97_H from 65_H is
a. 32 b. CE c. BE d. 23
14. How many pins are present in Intel 8255 IC?
a. 16 b. 20 c. 32 d. 40
15. What is called an interrupt caused by I/O devices?
a. Software interrupt b. Hardware interrupt
c. Enable interrupt d. Disable interrupt

II. FILL IN THE BLANKS:

16. ALE stands for _____.
17. _____ are the six general purpose registers present in 8085.
18. PPI stands for _____.
19. _____ is the first interrupt in the order of interrupt priority.
20. 8051 operates in two modes, they are single chip mode and _____ mode.

III. STATE WHETHER TRUE OR FALSE:

21. Address bus is called as unidirectional bus (true/false).
22. Data transfer instructions affect all flags (true/false).
23. Add instructions do not affect any flag (true/false).
24. Input and Output devices are called peripherals (true/false).
25. TRAP is a maskable interrupt (true/false).

IV. ANSWER BRIEFLY:

26. What is meant by machine language?
27. What is the use of data bus?
28. Classify branch instructions.
29. What is memory map?
30. What is embedded microcontroller?

XXXXXXXX

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2011-12 & thereafter)

SUBJECT CODE : 11PH/MC/MM54

B.Sc. DEGREE EXAMINATION NOVEMBER 2014
BRANCH III - PHYSICS
FIFTH SEMESTER

COURSE : MAJOR – CORE
PAPER : MICROPROCESSORS AND MICROCONTROLLERS
TIME : 2½ HOURS **MAX. MARKS : 70**

SECTION – B

ANSWER ANY FIVE QUESTIONS: (5 X 5 = 25)

1. Discuss the Flag structure in 8085.
2. Write any five data transfer instructions and explain.
3. Write a program to convert BCD to hexadecimal numbers.
4. Write an ALP to arrange the given set of numbers in descending order.
5. Explain the interfacing of input port to 8085.
6. Explain SIM and RIM instructions.
7. List the applications of 8051 microcontroller and explain any one of them.

SECTION – C

ANSWER ANY THREE QUESTIONS: (3 X 15 = 45)

8. Discuss the addressing modes in 8085. Give two examples for each mode.
9. Write an ALP for 8 bit addition, subtraction and multiplication.
10. Describe the functions of a memory interfacing with one example.
11. Describe the interrupt structure of 8085.
12. Describe the architecture of 8051 microcontroller.

XXXXXXXX