



BRAINWARE UNIVERSITY

Term End Examination 2023-2024 Programme - B.Sc.(ANCS)-Hons-2021/B.Sc.(ANCS)-Hons-2022 Course Name - Microprocessor and Microcontroller Course Code - GEEC301 (Semester III)

Full Marks: 60

Time: 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

- 1. Choose the correct alternative from the following:
- (i) When a subroutine is called by CALL instruction, the microprocessor stores the 16-bit address of the instruction next to CALL on the
 - a) Stack pointer

b) Program counter

- c) Accumulator
- d) Stack (ii) The program counter in a 8085 micro-processor is a 16-bit register, because
 - a) It counts 16-bits at a time
- b) There are 16 address lines
- c) It facilitates the user storing 16-bit data temporarily
- It has to fetch two 8-bit data at a time
- (iii) Which is used as DMA controllers with 8085/8086 microprocessor?
 - a) 8237

b) 8257

c) both (a) & (b)

- d) None of these.
- (iv) Choose the correct option: Which of the following registers are not bit addressable of 8051?
 - a) SCON

b) PCON

c) PSW

- d) None of these
- (v) Which semiconductor technology is used for fabrication of 8085 microprocessor?
 - a) ECL

b) NMOS

c) NMOS and HMOS

- d) NMOS and CMOS
- (vi) First microprocessor chip invented by Intel Corporation in early 1970s was
 - a) Intel 8080

b) Intel 4004

c) Intel 8085

- d) Intel 8086
- (vii) In 8085 microprocessor, name the 16 bit register is called
 - a) Stack Pointer

b) Program Counter

c) Both a and b

- d) None of these
- (viii) The port that is used for the generation of handshake lines in mode 1 or mode 2 is
 - a) port B

b) port A

c) port C Opper In 8085 microprocessor, name the 16 bit register		
a) Stack Pointer c) Both a and b Which one of the following is non-maskable into	d) None of these errupt of 8085 microprocessor?	
a) RST 5.5 c) TRAP (xi) Name of typical dedicated register is:	b) RST 6.5 d) RST 5	
a) PC	b) IR d) All of these	
(xii) Which of the following instructions is an arminal poly AB	d) WAIT	
c) STI (xiii) How many register banks are present in 8051 m	icrocontroller?	
	b) 3 d) 1	
c) 2 (xiv) An 8-bit microprocessor has an	u) 1	
a) 8 bit data bus	b) 8-bit address busd) 8-bit interrupt lines	
(xv) Temporary registers in 8083 are	b) D and E	
	d) W and Z	
Group	R	
(Short Answer Typ	pe Questions)	3 x 5=15
2. In microprocessor 8085, draw the timing diagram	n for the instruction of MVI A,45H	(3)
3. List the flags of the 8086 microprocessor.		(3)
4. Discuss the salient features of the 8051 family o		(3)
Explain the operation of the following instruction: (i data) JZ addr, (ii) DAA, (iii) RAR, (iv) ADI	(3)
6. Write a program logical AND operation of two 8 microprocessor.	3-bit number using 8085	(3)
OR Write a program logical OR operation of two 8-	bit number using 8085 microproces	sor. (3)
Group (Long Answer Typ	p-C pe Questions)	5 x 6=30
7. Distinguish between microprocessor and micro	ocontroller.	(5)

(5) 8. Write down an assembly language program to block of data transfer one memory location to another memory location. (5) 9. With example explain various addressing modes of 8085 microprocessor. Librory Versity
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300, Raminishnapur Road, 700125
Kohala, West Bengal 700125 (5) 10. Distinguish between 8085 and 8086 microprocessor (5) 11. Explain memory mapped I/O and I/O mapped I/O. (5) 12. Draw and explain the timing diagram of the instruction LXI D, 56FEH (Opcode-3EH) which is stored in the memory location 2004H. OR (5) Explain the meaning of CMP and SUB instruction of 8085 microprocessor. What is the difference between these two instructions?