

SVKM's NMIMS
MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Programme: B.Tech (Computer)

Year: III Semester: V

Academic Year: 2019-20

Subject: Microprocessor & Microcontroller

Date: 12 November 2019

Marks: 70

Time: 10.00 am - 1.00 pm

Durations: 3 (hrs)

No. of Pages: 2

Final Examination (2019-20)/ Re-Examination (2017-18/ 2018-19)

Instruction: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

NB:

- 1) Question No.1 is compulsory.
- 2) Out of remaining questions, attempt any 4 questions.
- 3) In all 5 questions to be attempted.
- 4) All questions carry equal marks.
- 5) Answer to each new question to be started on a fresh page.
- 6) Figures in brackets on the right hand side indicate full marks.

Q1. Answer the following. [14]

- a) Why banking is required in 8086 explain with diagram. [03]
- b) Draw architecture of 8087. [04]
- c) WAP to multiply two 16 bit no. in 8086. [03]
- d) Draw the architecture of 8051. [04]

Q2. Answer the following. [14]

- a) Draw and explain SFR TCON and TMOD. [07]
- b) Write a program to find the largest number in given series:

The series is : 02h,05h,01h,0Fh,04h

[07]

Q3. Answer the following.

[14]

- a) Draw and explain memory configuration system diagram of 8086 in maximum mode. [07]
- b) Draw and explain timing diagram of 8086 read cycle in minimum mode. [07]

Q4. Answer the following.

[14]

- a) Define interrupts and with help of diagram explain response to interrupt in 8086. [07]
- b) Draw architecture of 8255A programmable peripheral interface and explain its modes. [07]

Q5. Answer the following.

[14]

- a) Why PIC is used and explain interfacing of 8259 with 8086 with diagram. [07]
- b) Write a program to display 'YES' on LCD [07]

Q6. Answer the following.

[14]

- a) Explain Interrupt Enable (IE) and Interrupt Priority (IP) SFR of 8051. [07]
- b) Draw and explain architecture of DMA 8257. [07]

[14]