Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

MCA (E-I) (2015 & Onward) (Sem.–3)

EMBEDDED SYSTEM

Subject Code : MCA-305C

M.Code : 74079

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

Q1. Explain the following :

a) Features of embedded system

b) Challenges in designing an embedded system

Q2. What are various recent trends in embedded system design? Explain common architecture for the embedded system design.

SECTION-B

Q3. What is the significance of addressing mode? Discuss merits and demerits of different addressing modes.

Q4. Draw and explain the working of 8-bit 40 pin PIC microcontroller 16F877A.

SECTION-C

Q5. Define interrupt. Explain how an interrupt is handled. Give example to support your answer.

Q6. Explain the following :

a) Assembler directive

b) Instruction set

SECTION-D

Q7. Discuss the role of embedded system in digital signal processing and multimedia applications.

Q8 Explain how an embedded system can be used in networking and telecom applications.

SECTION-E

Q9 **Answer briefly :**

a) What is significance of control bus?

b) List any four special function registers.

c) What is need of GPIO?

d) List various embedded software design issues.

e) Define register.

f) What is use of cache memory?

g) Define trap.

h) What is use of embedded system in consumer appliances?

i) List demerits of embedded system.

j) Define the role of actuator in embedded system.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.