ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END-SEMESTER EXAMINATION: JANUARY 2021** (Academic Session: 2020 – 21)		
Name of the Program:	B.Tech.	**Semester:** (I/III/ V/ VII/IX)	VII
Paper Title :	Embedded systems design	**Paper Code:**	EEC44101
Maximum Marks :	40	**Time duration:**	3Hr
Total No of questions:	08	**Total No of Pages:**	01
(Any other information for the student may be mentioned here)			

Answer all the Groups

Group A

Answer all the questions of the following $5 \times 1 = 5$

1. a) What is the purpose of watchdog timer in embedded system design?
b) Explain any two non-operational quality attributes?
c) Write at least two differences between Embedded C and C language ?
d) 8051 or PIC which one is best suitable microcontroller in Embedded systems and why?
e) Why ARM is most popular?

Group –B

(**Short Answer Type Questions**)

Answer *any three* of the following $3 \times 5 = 15$

2. Explain the assembly language to machine language conversion process in Embedded system firmware design. [5]

3. Describe the FSM model of Automatic washing machine. [5]

4. Explain operational quality attributes with example.. [5]

5. Explain SCON and SBUF special function registers of 8051 Microcontroller. [5]

GROUP –C

(**Long Answer Type Questions**)

Answer *any two* of the following

$2 \times 10 = 20$

6. a) Explain I2C bus of internal communication Interfaces . [4]

b) Discuss about pushbutton switch and relay I/O subsystem. [6]

7. a) Discuss about Wifi and Zigbee wireless communication interfaces. [5]

b) Explain features of PIC microcontroller in Embedded System. [5]

8. a) Differentiate ARM and PIC microcontroller . [4]

b) Explain Interrupt structure in 8051 microcontroller . [6]