

Enroll No

Q.P.Code
UT 3485

Unit Test -II (2025-26)

T.Y. B.Tech.-Electrical Engineering

Course Code: EE315

Course Name: Microcontroller & its Applications

Day & Date: Saturday 20/09/2025

Time: 10.30 am To 11.30 am

Max Marks- 25

- Instructions:**
- 1) All questions are compulsory.
 - 2) Figures in rounded() brackets within the question, indicate the scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
 - 3) CO is the index number of the Course Outcome statement.
 - 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
 - 5) Assume suitable data if necessary.
 - 6) Use of non-programmable calculators is allowed

		Marks	BT Level	Cos
Q.1	A Explain how a pin on Port 0 behaves when it is configured as input and as output. Include circuit-level explanation. (Dig-02M, explanation 04M)	06	02	CO3

OR

Explain the function and bit structure of the TCON register in the 8051 microcontroller. (Dig- 01M, explanation 05M)

B	Assume that XTAL = 12 MHz. What value do we need to load the timer's register if we want to have a time delay of 5 ms (milliseconds) (2M)? Show the program for timer 0 to create a pulse width of 5 ms on P2.3.(Step wise program 5M)	07	03	CO2
Q.2	A Explain the function and bit structure of the IE (Interrupt Enable) register in the 8051 microcontroller. (Dig- 01M, explanation 05M)	06	02	CO3

OR

Explain the function and bit structure of the SCON (Serial Control) register in the 8051 microcontroller. (Dig- 01M, explanation 05M)

B	Develop an Assembly Language Program (ALP) to transfer the data "RIT" serially at a baud rate of 4800. Assume crystal frequency is 11.0592 MHz. (Step wise program 6M)	06	03	CO2
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