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T.Y.B.Sc. (Sem. VI) Examination March - 2025

Electronics Paper - VIII

(Microcontroller And Embedded System)

Time: 2 Hours]

[Total Marks: 50

सूचना : / Instructions

(१)

नीचे दृश्यावले निशानीवाणी विगतो उत्तरवही पर अवश्य लक्षणी.
Fill up strictly the details of signs on your answer book

Name of the Examination:
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Name of the Subject :
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Subject Code No.:

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Student's Signature

- (2) Figure on the right indicates full marks
- (3) All symbols and abbreviations have their usual meaning
- (4) Non-programmable calculators are allowed
- (5) Q.1 is compulsory
- (6) Assume data if necessary

Q.1. Answer in short: 08

1. What is an Arduino code called?
2. Draw the internal diagram of common anode seven segment display device.
3. How is the baud rate initialized in Arduino?
4. Define A/D converter?

Q.2 (a) Discuss the circuit to interface a relay to microcontroller. 07

(b) Write a program to generate a square wave on the port pin 11 of Arduino with a frequency of 2KHz 07

OR

Q.2 (a) Describe the hardware interfacing pins on Arduino Uno. 07

(b) Write a program to detect the key press on Arduino and toggle an LED in its response. 07

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[P.T.O.] P0235

- Q.3.** (a) Explain the meaning of setup and loop functions of Arduino sketch. **07**
How are the global and local variables declared.
- (b) Write a program to read the analog voltage on pin A3 of Arduino **07**
and display the equivalent voltage on the computer screen.

OR

- Q.3** (a) Define baud rate. Discuss the functions used for serial communication **07**
in Arduino.
- (b) List some 8051 microcontroller applications in embedded system **07**

- Q.4. Write Short Notes (ANY TWO) 14**
- (a) The for loop in Arduino
- (b) Sensor interfacing
- (c) ADC interfacing
- (d) Interfacing 8051 to external memory
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