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RAN-2103000206020093**T. Y. B. Sc. (Electronics) (Sem. - VI) Examination April - 2023****Electronics : Paper - VIII****Microcontroller And Embedded System****Time: 2 Hours]****[Total Marks: 50****सूचना : / Instructions**

(1)

नीचे दृशविले निशानीवाणी विगतो उत्तरवली पर अवश्य लभवी.

Fill up strictly the details of signs on your answer book

Name of the Examination:

T. Y. B. Sc. (Electronics) (Sem. - VI)

Name of the Subject :

Electronics : Paper - VIII Microcontroller And Embedded System

Subject Code No.: 2103000206020093

Seat No.:

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. Describe the general interfacing pins available on Arduino UNO board.
2. Explain the pinMode() function?
3. Draw the internal diagram of common cathode seven segment display device.
4. What is A/D converter? Discuss the meaning of resolution with respect to ADC?

Q. 2. (a) Show how a relay switch can be connected to 8051 microcontroller.**07**

(b) Explain the delay function delay() and delayMicroseconds().

07**OR****Q. 2. (a) Describe the Arduino sketch window.****07**

(b) Describe the hardware interfacing pins available on Arduino.

07**RAN-2103000206020093]****[1]****[P.T.O.]****P1720**

Q. 3. (a) Explain the type of variables used by Keil C used for the programming 8051 microcontroller. Also discuss the arithmetic and logic operators. **07**

(b) Write a program to toggle the Port 3.1 of 8051 microcontroller using Keil C. **07**

OR

Q. 3. (a) What is an LCD display module? Show how is it interfaced with 8051. **07**

(b) Write a program to generate a square wave on the port pin 11 of Arduino with a frequency of 500 HZ. **07**

Q. 4. Write Short Notes. (ANY TWO) 14

(a) Interfacing seven segment display.

(b) Data conversion programs in 8051 C.

(c) The *for loop* in Arduino.

(d) DAC interfacing.
