22102785

QP CODE: 22102785

Reg No : .....

Name : .....

## B.Sc DEGREE (CBCS) REGULAR EXAMINATIONS, AUGUST 2022

### Fourth Semester

B.Sc Physics Model II Applied Electronics

### Vocational Course - AE4VOT08 - APPLICATIONS OF MICROPROCESSORS

2020 Admission Only

5FDC5F52

Time: 3 Hours Max. Marks : 60

**Part A**

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. Explain the functions of IN and OUT intsructions.
2. What is transducer?
3. How can we control the speed of a stepper motor?
4. What is microcontroller in simple words?
5. What is the difference between Microprocessor and Microcontroller?
6. Which is the first microcontroller?
7. How much on chip RAM is available in 8051 microcontroller?
8. When reset the microcontroller,what is the content in PC?
9. What is the use of Zero flag?
10. What are applications of stack?
11. What are the functions of P3.0?
12. What is the disadvantage of a level triggered pulse?

(10×1=10)

**Part B**

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. How traffic signals work in india?

14. Write a programme to generate 1ms pulse.

15. What are registers in 8051? Exaplain.

16. What is address bus,data bus and control bus in 8051? Explain.

17. What is the use of crystal oscillator in 8051 microcontroller?Explain with diagram.

18. Draw and explain internal memory organization in 8051.

19. How to interface external memory with 8051?

20. What are the different modes of operations of timer in 8051. Explain.

21. What is an interrupts? What is Interrupt Service Routine?What is meant by interrupt priority?

(6×5=30)

**Part C**

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. How to interface seven segment LED display with 8085? Explain.

23. How to interface a temperature transducer with 8085? Write a programme to control the temperature in a room.

24. Draw and explain I/O ports in 8051.

25. Draw and Explain architecture of 8051 microcontroller.

(2×10=20)