

19. Enumerate the use of VLSI circuit design Technology in embedded systems.
20. Explain in detail about the Parallel communication network using ISA, PCI and PCI-X.

S.No. 5340

16 SCCEL 9

(For candidates admitted from 2016-2017 onwards)

B.Sc. DEGREE EXAMINATION, APRIL 2022

Part III – Electronics – Major

MICRO CONTROLLERS AND EMBEDDED SYSTEMS

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. Define Port.
2. What is the use of Data Pointer?
3. What do you mean by roll over in timer?
4. Draw the RESET Circuit of 8051 Microcontroller
5. What are the various types of LCD?
6. What is the purpose of diode in relay interfacing?
7. Define embedded system.
8. Write any three example of embedded systems.

9. What are the various types of Parallel Communication Networks?

10. Define Network Protocols.

PART B — ($5 \times 5 = 25$)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain the watch dog Timer process in detail.

Or

(b) Evaluate the operation of internet Enabled systems.

12. (a) Enumerate the processor embedded into a system.

Or

(b) Explain embedded hardware devices in detail.

13. (a) Describe how PWM is used for speed control of dc motors?

Or

(b) Explain the DAC interfacing with relevant circuit diagram.

14. (a) Explain the TMOD bits in Detail.

Or

(b) Write a program for accepting the external key using interrupt, if the key is pressed LED is glow (which is connected in P2.0)?

15. (a) Mention the features of 8051 Microcontrollers.

Or

(b) How can you calculate the time period if the clock frequency is 11.0592 MHz.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

16. Explain the architecture of 8051 Microcontroller with neat block diagram.

17. Explain the Serial Communication process in detail with suitable transmission and reception programs.

18. Explain the 2×16 LCD interfacing with 8051 Microcontroller and also mention the suitable program for that interfacing.