

(Pages : 2)

**N – 6361**

Reg. No. : .....

Name : .....

**Fourth Semester M.Sc. Degree Examination, June 2022**

**Computer Science**

**Elective II**

**CS 1642 D : EMBEDDED SYSTEMS**

**(2016 Admission Onwards)**

Time : 3 Hours

Max Marks : 75

**SECTION – A**

Answer **all** questions. Each question carries **3** marks.

1. List out different program models for embedded system designing
2. Give some applications of Embedded Systems.
3. Write short notes on wireless devices
4. What is Socket? Explain how it is used for RPC
5. Distinguish between macros and functions.
6. What are the types of semaphore?
7. What is the purpose of RTLinux?
8. Mention the services provided by RTOS.
9. Name and explain the interrupt which is used to perform OS timer functions  
(9 × 3 = 27 Marks)

P.T.O.  
20

## SECTION – B

Answer any **two** questions from each module. Each carries **8** marks.

### Module – I

- 10 Give an account on the hardware requirements in an embedded system.
- 11 With a neat sketch, explain the architecture of 8051 Microcontroller along with its Instruction set
- 12 Explain the various types Network Embedded Systems.

### Module – II

- 13 How and when are the following used in a C program
  - (a) # include
  - (b) typedef
  - (c) null pointer
  - (d) infinite loop
- 14 Define task. Explain the five states of task with smart curd reader example.
- 15 What is a message pipe? With a neat sketch, explain the OS functions of a pipe.

### Module – III

- 16 Explain various forms of Interrupt routines in detail
- 17 Discuss the features and functions of VxWorks
- 18 Define host and target machines. Explain how embedded software is uploaded in target machine.

**(6 × 8 = 48 Marks)**



(Pages : 2)

N – 6357

Reg. No. : .....

Name : .....

Fourth Semester M.Sc. Degree Examination, June 2022

Computer Science

CS 1641 : RESEARCH AND TECHNICAL WRITING

(2016 Admission Onwards)

Time : 3 Hours

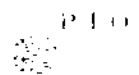
Max. Marks : 75

PART – A

Answer **all** questions. **Each** carries **3** marks.

1. What makes people to undertake research?
2. What are the different postulates of scientific research?
3. How does one go about developing working hypotheses?
4. Give a general outline of a popular report.
5. What are the different formatting used in LaTeX?
6. How can we insert the mathematical formula in a LaTeX document?
7. What are tuples?
8. What is meant by generators?
9. Write short note on 'Mapping functions in a Dictionary'.

(9 × 3 = 27 Marks)



## PART – B

Answer any **two** questions from each module. Each carries **8** marks.

### Module I

10. How to determine the sample design? Explain the various sample designs.
11. What are the significance of seminar, workshop, conference and symposium? Explain in detail
12. Explain different types of research with suitable examples.

### Module II

13. Discuss the various steps in the preparation of technical reports and thesis.
14. How will you write the research papers using LaTeX? Explain with an example
15. Write a LaTeX script to prepare a document with formula, hyperlink, bookmark and bibliography

### Module III

16. How the Python interact with databases? Explain with suitable examples.
17. Explain various string operations used with Python.
18. How the classes are created in Python? Explain with suitable examples.

**(6 × 8 = 48 Marks)**

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