

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY**(AUTONOMOUS)**

III B. Tech I Sem – Semester End Examinations – Supplementary – Jul 2022

COMPUTER ORGANIZATION & OPERATING SYSTEM**[194GA05508]**

(Electronics & Communication Engineering)

Time: 3 hours**Max. Marks: 70****PART-A**

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- a) Define contemporary computer.
 - b) Write the Add rule for floating point numbers.
 - c) What are the different types of addressing modes?
 - d) What are the most common fields of an instruction format?
 - e) List the services of operating system.
 - f) What are the key goals of operating system?
 - g) Define process.
 - h) What is dead lock?
 - i) Define file.
 - j) What are directory attributes?

PART-B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT-1

- 2 a) Explain the different functional units of a computer. [5M]
 - b) Draw the flowchart and explain about Booth's algorithm. [5M]
- (OR)
- 3 a) Draw the flowchart and explain about division algorithm. [5M]
 - b) Explain in detail the difference between multiprocessor and multicomputer. [5M]

UNIT-2

- 4 a) Differentiate between RISC & CISC. [5M]
 - b) Explain about the instruction cycle with the help of an example. [5M]
- (OR)
- 5 a) Explain the following addressing modes with examples. [5M]
 - i) Direct ii) Immediate
 - b) Explain in detail the stack organization. [5M]

UNIT-3

- 6 a) Write in brief what operating systems do? [5M]
 - b) Explain in brief system calls. [5M]
- (OR)
- 7 a) Write in brief about operating system security and protection. [5M]
 - b) Explain in brief operating system resource management. [5M]

UNIT-4

- 8 a) Explain in brief dead lock avoidance. [5M]
 - b) Explain any two process scheduling algorithms. [5M]
- (OR)
- 9 a) Explain in brief inter process communication. [5M]
 - b) Write about page replacement. [5M]

UNIT-5

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| 10 | a) | Explain in brief the access methods for file system interface. | [5M] |
| | b) | Write in brief about allocation methods for file system implementation. | [5M] |
| (OR) | | | |
| 11 | a) | Explain in brief SCAN and FCFS disk scheduling algorithms. | [5M] |
| | b) | Write in brief about RAID. | [5M] |
