

I B. Tech I Semester Supplementary Examinations, July/August - 2021**FUNDAMENTALS OF COMPUTER SCIENCE**

(Com. to CSE, IT)

Time: 3 hours

Max. Marks: 75

Answer any five Questions one Question from Each Unit**All Questions Carry Equal Marks**

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1. a) Explain the components and their functionality of a CPU. (8M)
- b) What is the need of a memory? Explain memory hierarchy. (7M)

**Or**

2. a) What is a mother board? Describe its generic layout. (8M)
- b) Describe the fundamental differences among various Memory devices. (7M)

3. a) What is language processing? Write about Compiler and Interpreters in detail. (8M)
- b) Draw a flow chat to compute the profit or loss of a business. (7M)

**Or**

4. a) What is structured programming? How are conditions and selections specified in structured programming? (8M)
- b) What is an Algorithm? How does an algorithm differ from a pseudo code and a program? (7M)

5. a) What is an Operating system? How does it act as a task scheduler? Explain. (8M)
- b) What is IP address? Explain its significance in Networking? (7M)

**Or**

6. a) Compare and contrast between GUI based Operating system and CLI based Operating System. (8M)
- b) What is Network Interface Card? Why we need NIC in Network? (7M)
7. a) What is a File system? Write the applications and advantages of File systems. (8M)
- b) What is a Database? Write a short note on different database models? (7M)

**Or**

8. a) What is the role of analysis in system development? (8M)
- b) What is Relational Database Management System? Why is it so popular? Justify. (7M)
9. a) What is Grid Computing? Explain its components? (8M)
- b) Describe the applications of grid computing. How does it differ from distributed computing. (7M)

**Or**

10. a) What is Cloud computing? Describe its pros and cons over conventional data centers? (8M)
- b) What is Wireless Sensor Network? Explain the applications of WSN's? (7M)