

Reg No.: \_\_\_\_\_



**Jyothi Engineering College(Autonomous)**

B. Tech Degree S2 (R) Examination, May 2026(2025 Scheme)

**25EST201 - FOUNDATIONS OF COMPUTING: FROM HARDWARE ESSENTIALS TO WEB DESIGN**



Total Mark: 60

AD/CS/14/EC

Total Time: 2hrs 30 min  
CO MARK

**PART A**

(Answer All Questions. Each question carries 3 marks)

1. Differentiate between cold booting and warm booting. CO1 (3)
2. Explain how memory hierarchy influence computers speed. CO1 (3)
3. Why is the control unit called the manager of the CPU? CO2 (3)
4. Convert the decimal fraction  $0.54_{10}$  into its binary equivalent. CO2 (3)
5. What are the advantages and disadvantages of shell scripting? CO3 (3)
6. Define Network Topology and identify two commonly used topologies. CO3 (3)
7. Briefly describe the CSS syntax. CO4 (3)
8. Write short note on JavaScript reserved words. CO4 (3)

**PART B**

(Answer any one full question from each module, each question carries 9 marks)

**Module - 1**

9. a) Explain the important characteristics of a Solid State Drive. CO1 (5)
- b) Explain differences between Solid State Drives and Hard Disk Drives. CO1 (4)

**OR**

10. a) Define bus and explain basic bus terminologies. CO1 (5)
- b) Explain the concept of memory hierarchy in a computer system and describe its different levels. CO1 (4)

**Module - 2**

11. a) With a neat sketch, illustrate the internal structure of a CPU and explain its components. CO2 (5)
- b) Discuss the role of an instruction set in CPU operation. Explain different types of instructions commonly found in an instruction set with suitable examples. CO2 (4)

**OR**

12. a) Convert 0.64 to binary and 0.1110 to decimal. CO2 (5)
- b) Write in detail about signed integer representation and unsigned integer representation with examples. CO2 (4)

**Module - 3**

13. a) Discuss the basic structure of shell scripting with example. CO3 (5)
- b) Explain about basic commands in Linux. CO3 (4)

**OR**

14. a) Explain the working of DHCP. CO3 (5)  
b) What are the common security issues of DNS? CO3 (4)

**Module - 4**

15. a) Build a simple calculator using HTML, CSS and JavaScript. CO4 (5)  
b) Differentiate between XHTML and HTML. CO4 (4)

**OR**

16. a) Explain CSS- Property value forms in detail. CO4 (5)  
b) Use the Math object in JavaScript write a program to generate a random number between 1 and 100. CO4 (4)

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