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# DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – DECEMBER 2023

Semester: IV 055CS44 PC HARDWARE AND TROUBLESHOOTING

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) Explain the different processor modes in a CPU. (10 Marks)  
b) Explain the significance of clock speed in CPU performance. (10 Marks)
2. a) What are some tactics for optimizing CMOS settings in a computer system? (5 Marks)  
b) Describe the POST (Power-On Self-Test) process in BIOS. (5 Marks)  
c) Explain the process of configuring the standard CMOS setup in BIOS. (10 Marks)
3. a) What is a DVD-ROM, and how does it compare to a CD-ROM? (5 Marks)  
b) Describe the different types of DVD media available. (5 Marks)  
c) Explain the operation of a DVD drive and its decoder. (10 Marks)
4. a) What are the primary signals used in a serial port, and how does asynchronous communication work? (5 Marks)  
b) What are the IEEE 1284 modes, and how do they enhance parallel port functionality? (5 Marks)  
c) Explain the key signals used in a parallel port and provide a timing diagram for data transfer. (10 Marks)
5. a) Explain the concept of USB hubs and their role in expanding the number of USB ports. (10 Marks)  
b) What is USB, and why is it considered a widely adopted standard for connecting peripherals. (10 Marks)
6. a) What considerations should you keep in mind when selecting and installing memory for a computer?. (5 Marks)  
b) What is the fundamental purpose of computer memory? (5 Marks)

- c) Explain the difference between RAM and ROM. **(10 Marks)**
- 7. a) Define the term "form factor" as it relates to motherboards. **(5 Marks)**
- b) What is the purpose of expansion slots on a motherboard? **(5 Marks)**
- c) Can you provide details about the Intel D850GB motherboard? **(10 Marks)**