

B.Sc. (NEP) Sem.-3 Examination

DSC-C-232

Electronics

Time : 2-00 Hours]

November-2025

[Max. Marks : 50

- Instructions: (1) All questions carry equal marks.
 (2) Symbols used here have their usual meanings.
 (3) Figures to the right indicate marks.

- 1 (A) With diagram explain DTL in detail with logic operation 05
 (B) Explain TTL NOR gate in detail. 05
 OR
 (A) With diagram explain Integrated injection logic in detail. 05
 (B) Explain PMOS NOR gate and PMOS NAND gate circuit in detail. 05
- 2 (A) Draw the pin diagram of IC 555 and explain astable multivibrator in detail 05
 (B) With the help of Truth Table and wave form explain Edge Triggered D flip-flop. 05
 OR
 (A) With figure explain Schmitt trigger in detail. 05
 (B) Explain with figure RS flip-flop. 05
- 3 (A) Explain Serial-In Serial-Out Register. 05
 (B) Explain 4-bit serial input shift register in detail. 05
 OR
 (A) Explain Parallel-In Parallel-Out Register 05
 (B) Explain in detail about ROMs, PROMS and EPROMs. 05
- 4 (A) Draw the timing diagram of Opcode fetch cycle. 05
 (B) Draw the pin diagram of 8085. Define opcode and operand. 05
 OR
 (A) Draw the timing diagram of Memory Write. 05
 (B) Name and explain addressing modes of Intel 8085. 05
- 5 Attempt any Ten out of Twelve. 10
- (1) The ECL logic circuit has other common names as non-_____ logic.
 (2) In _____ logic both types P-type and N-type MOS transistors are used on the same chip.
 (3) Fan-out in TTL NAND is _____.
 (4) When EN=____, the flip-flop is disabled and R and S have no effect.
 (5) For bipolar diodes and transistors, the switching time is in the _____ second region.
 (6) Latch is another term for _____ flip-flop.
 (7) The basic building block of a shift register is the _____.
 (8) ROM stands for _____ and is a type of memory that is non-volatile.
 (9) Unlike ROM, RAM is a _____ memory, meaning data is lost when power is turned off.
 (10) The 8085 microprocessor has _____ general-purpose registers, each of 8 bits.
 (11) The Program Counter (PC) in the 8085 holds the _____ address of the next instruction to be executed.
 (12) The 8085 uses a _____ address bus and an 8-bit data bus.

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