# 0910N674

Candidate's Seat No :____

**B.Sc. Semester-6 Examination**

**CC-308 ELE**

**(Electronics)**

**Time : 2-30 Hours]** **October-2025** **[Max. Marks : 70**

Instrucstions : (1) All questions are compulsory.
(2) All questions carry equal marks.

1. Explain about R-QR type D/A Converter in detail. Also calculate VA for 5 bit resistive divider network having i/p 01011. Here 0=OV & 1=+10v. **(14)**

**OR**

1. Give logic diagram of 3 bit simultaneous type A/D converter & explain it's working. Also discuss monotonicity test
2. Write a program to count 0 to 9 with 1 sec. delay between each count. After count 9 it restart to 0 & repeat the sequence continuously clock frequency =3MHz **(14)**

**OR**

2. Write a program to generate continuous square wave with period of 500$\mu$s. Assume that system clock period is 400 ns. use bit Do to o/p of the square wave.
3. Write a program to provide the given on/off 3 traffic lights & 2 pedestrian sigh **(14)**

| Lights | Data bits | On Time |
|---|---|---|
| Green | D0 | 20 |
| Yellow | D2 | 10 |
| Red | D4 | 20 |
| Walk | D6 | 20 |
| Don't walk | D7 | 30 |

**OR**

3. Explain about all conditional CALL & conditional Return conditions. Also discuss difference & similarity between CALL & RET PUSH & POP.
4. Draw the block diagram of 8255A & explain each block in detail. Also explain MODE O as simple input or output. **(14)**

**OR**

4. Explain about following DAC applications:
   1) Square wave
   2) Triangular wave.
5. Attempt any 7 out of 12. **(14)**
   1. Give the full form of SAR & OS.
   2. How many comparators are required in 3 bit & 4 bit simultaneous A/D converter.
   3. What is LSB weight of a 8 bit resistive ladder ?
   4. What is the use of STACK & SUBROUTINE ?
   5. What is the full form of RAR & RRC ?
   6. In which mode all port function as simple I/O ?
   7. LX1B 3456 H require _____T states & ORA A require _____T States.

   **Explain the following instructions:**

   8. CNC.
   9. CNZ
   10. RPO
   11. JMP
   12. RZ

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