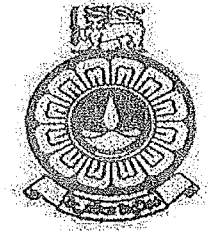


The Open University of Sri Lanka
B.Sc. (IT) Degree Programme – 2023/2024
Department of Computer Science
COU 4304 – Computer Architecture
No Book Test 2
Duration: One hour only (1 hour)

Sample



Date: 05.05.2024

Time: 01.00 p.m. – 02.00 p.m.

ANSWER ALL QUESTIONS

IndexNumber:.....

1. Define the term 'software'. (04 Marks)

2. The IAS computer mainly consists of four (04) structures. What are they? (08 marks)

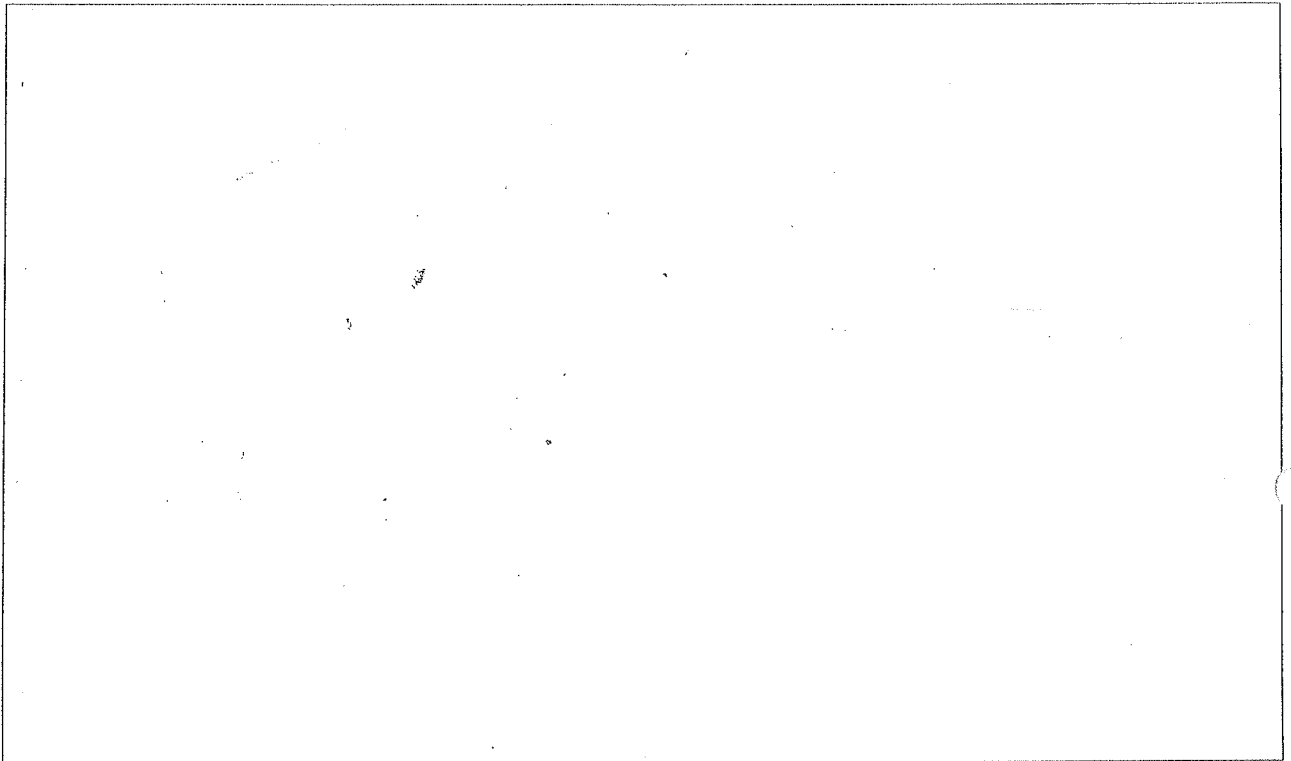
i.

ii.

iii.

iv.

3. Briefly describe the three (03) types of Buses. (09 Marks)

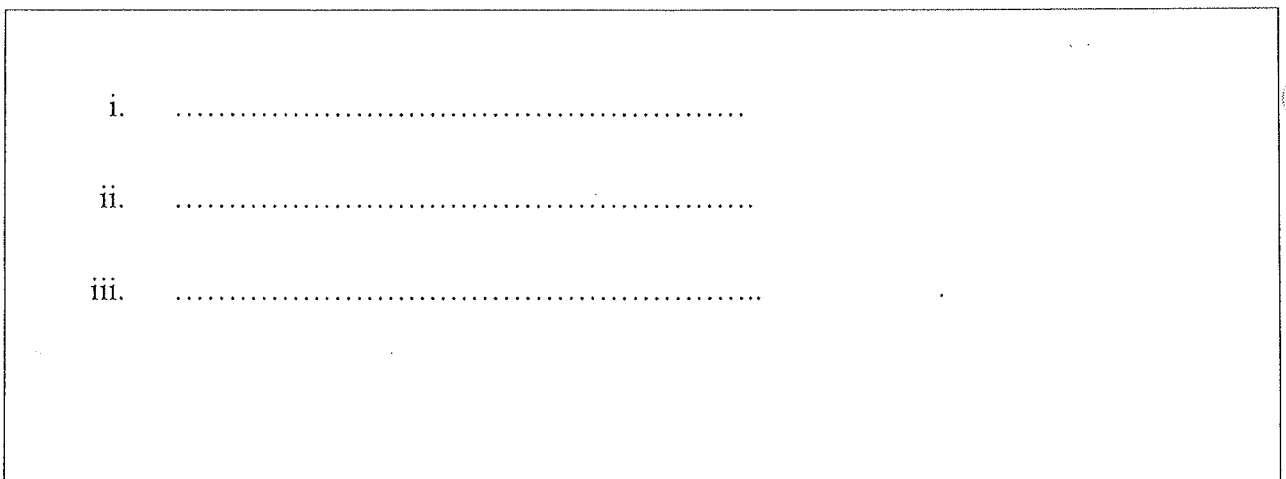


4. What are the three (03) types of pipeline hazards? (06 marks)

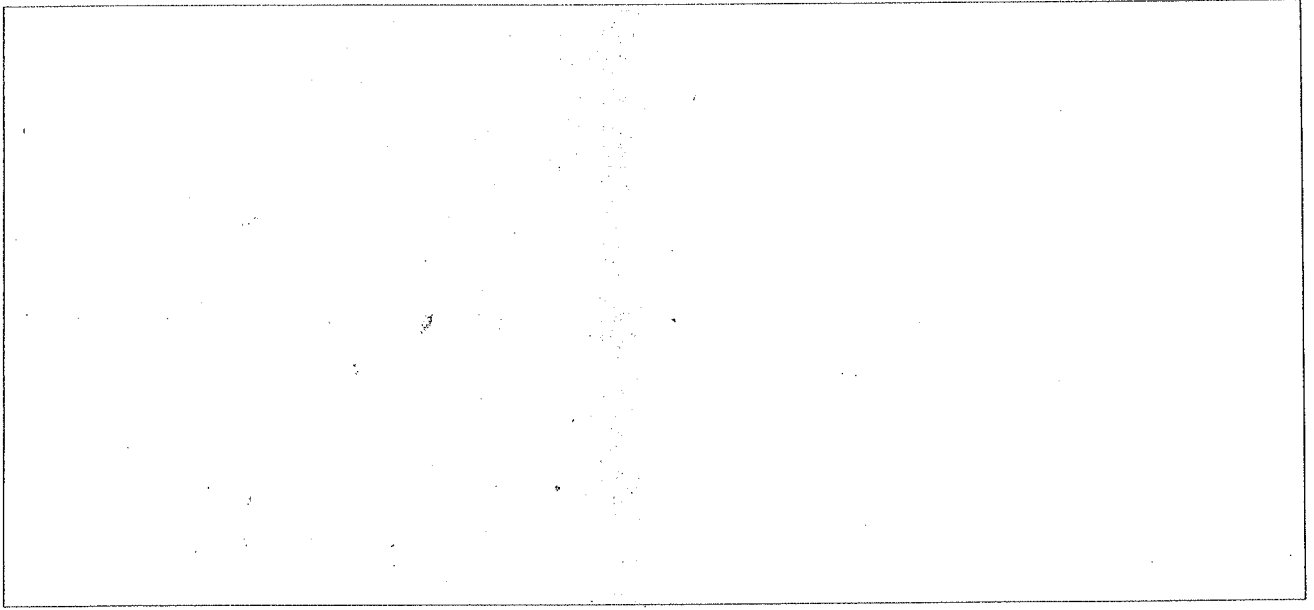
i.

ii.

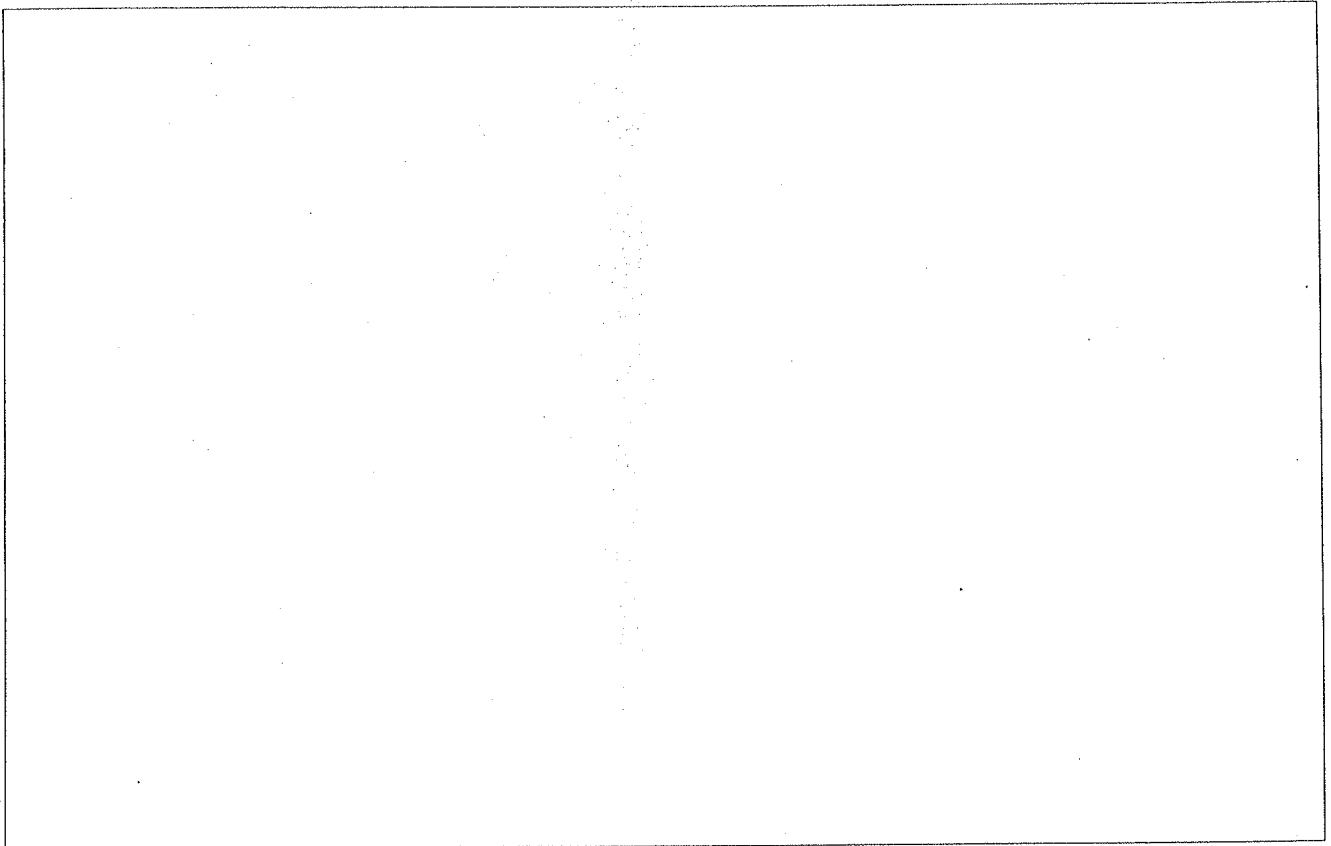
iii.



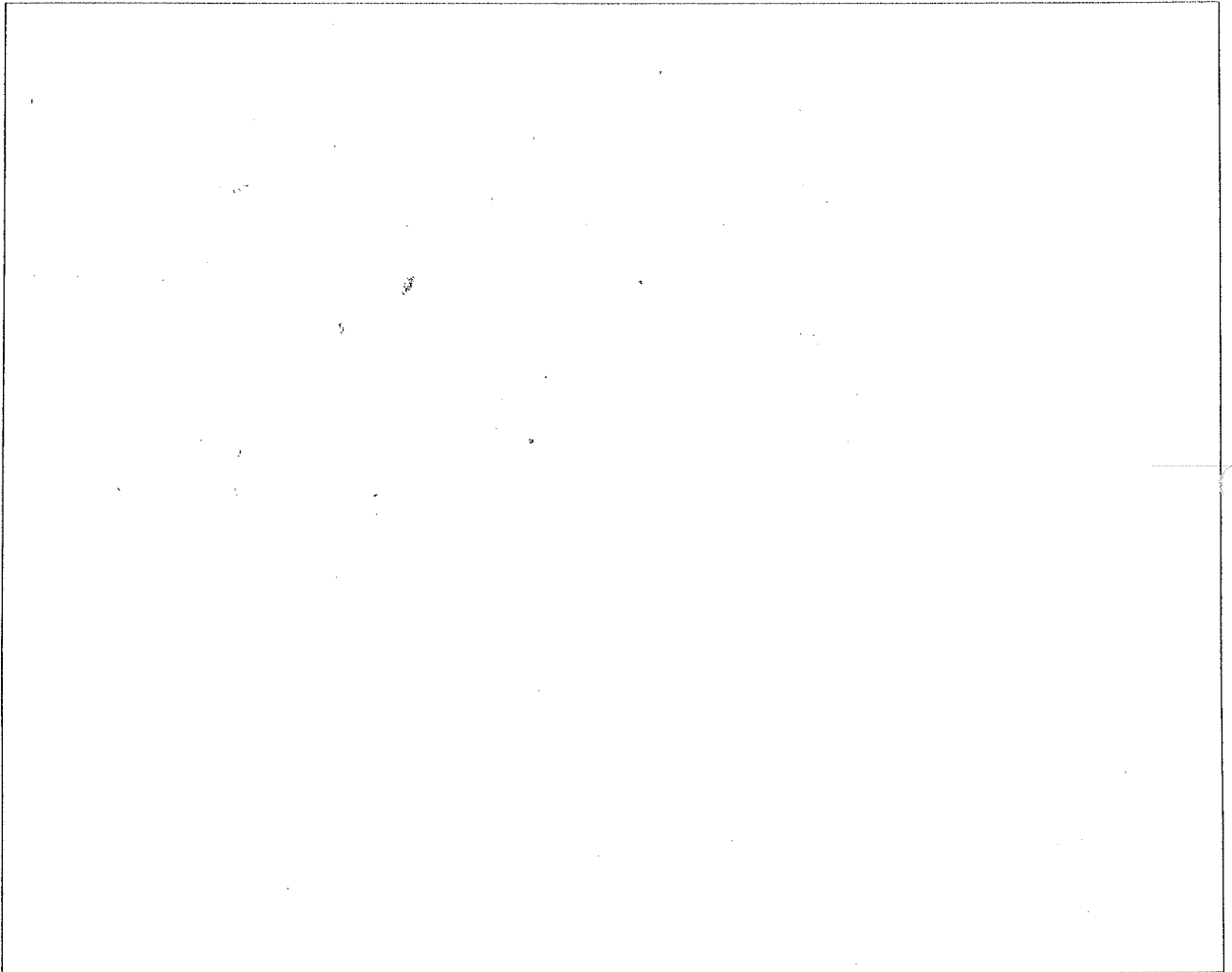
5. Describe the nature of finite state machines by using real-world example. (07 Marks)



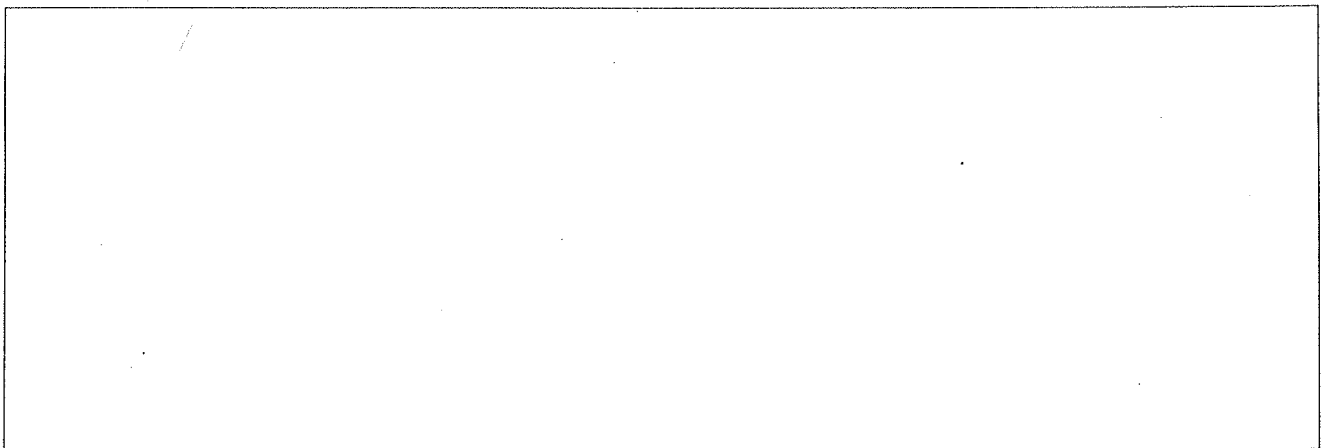
6. Provide four (04) important features of cache memory? (08 Marks)



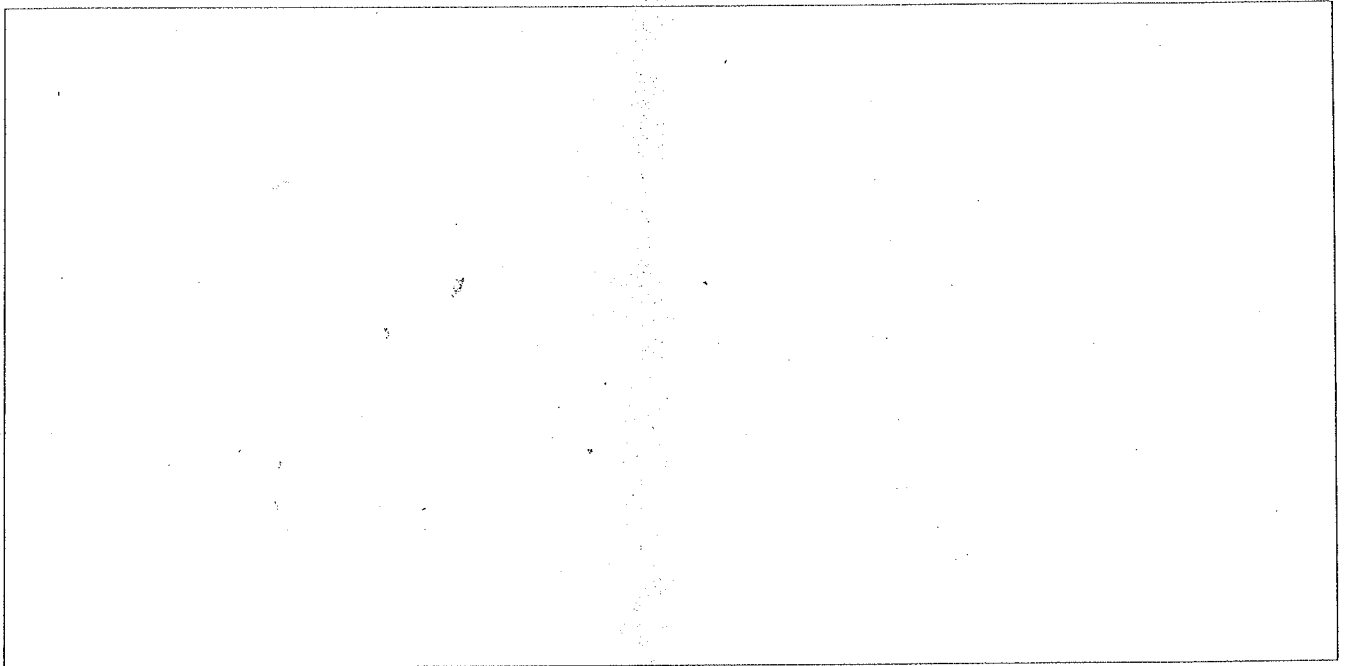
7. Draw the instruction cycle state diagram. (14 Marks)



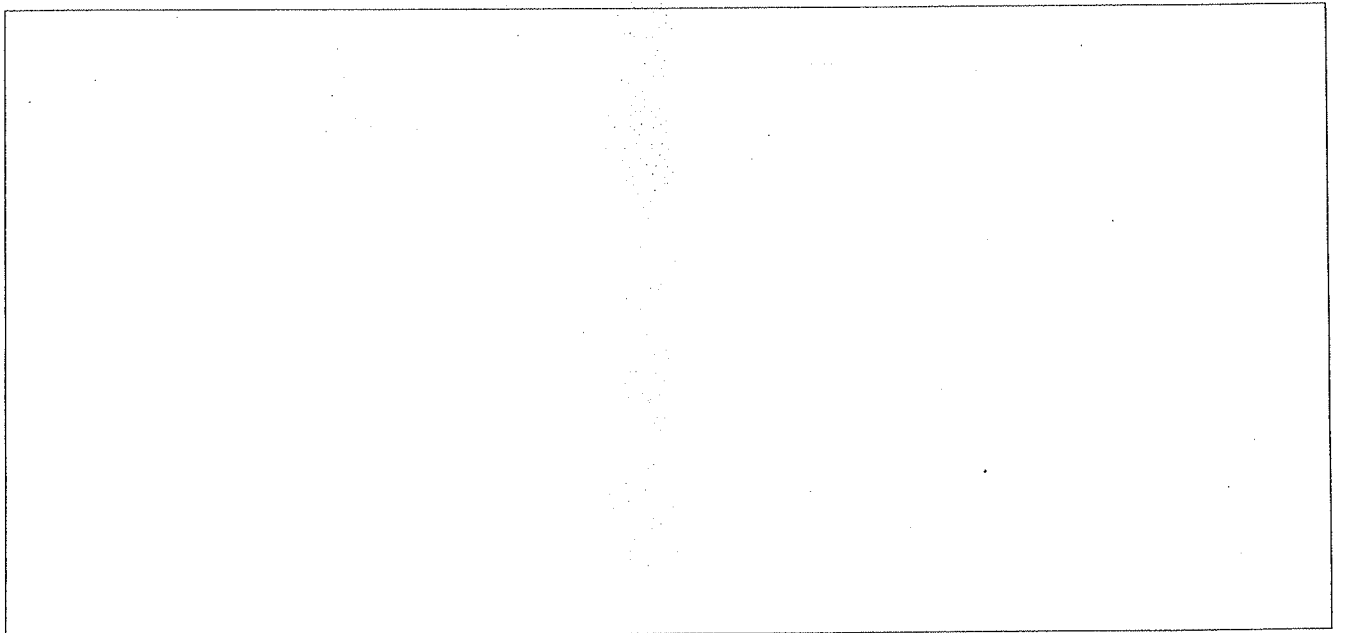
8. What is the function of Arithmetic and Logic Unit? (05 Marks)



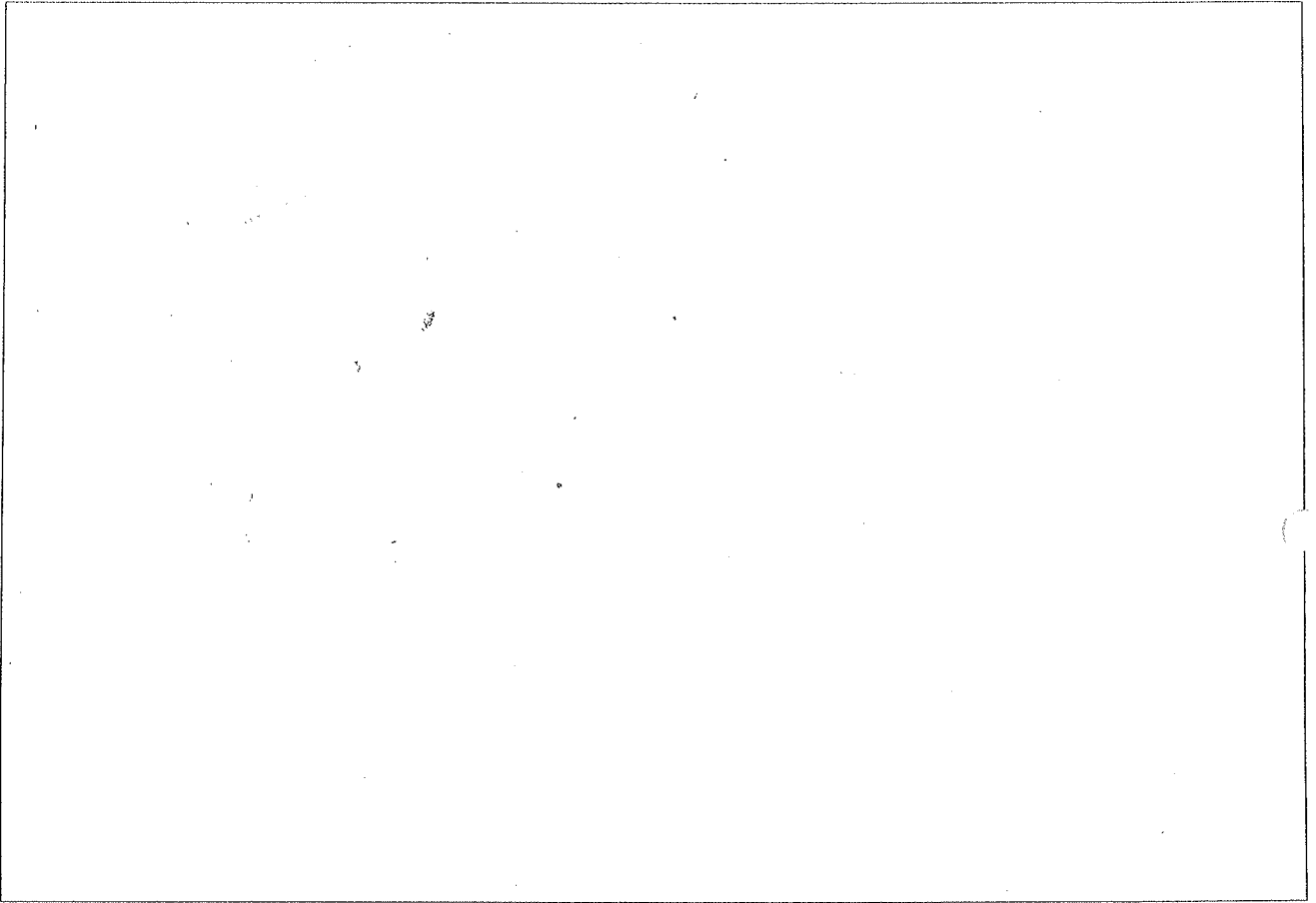
9. List three (03) characteristics of a Von Neumann-based computer. (06 Marks)



10. What is the purpose of swapping? (05 Marks)



11. Define the terms '*seek time*', '*access time*' and '*transfer time*'. (12 Marks)



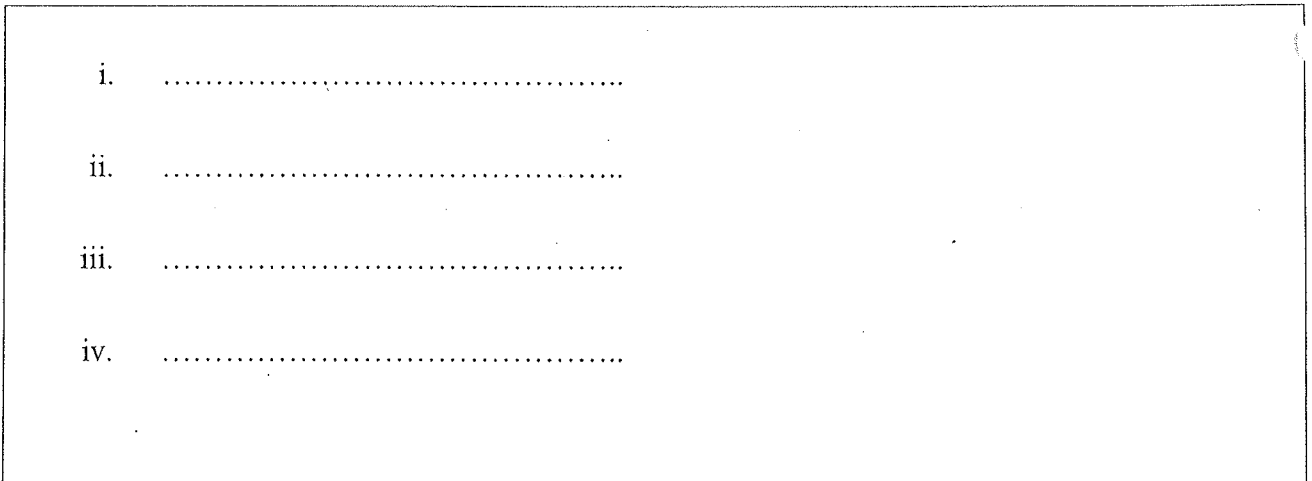
12. What are the four types of operands commonly encountered in computer architecture?
(08 Marks)

i.

ii.

iii.

iv.



13. What are the structural components of the CPU? (08 Marks)

i.
ii.
iii.
iv.

**** End of the Paper****

