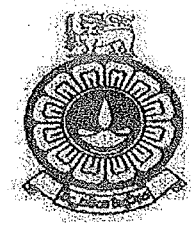


Sample

THE OPEN UNIVERSITY OF SRI LANKA
B.SC. (IT) DEGREE PROGRAMME – 2023/2024
DEPARTMENT OF COMPUTER SCIENCE
COU 4304 – COMPUTER ARCHITECTURE
NO BOOK TEST 1
DURATION: ONE HOUR ONLY (1 HOUR)



Date: 31.03.2024

Time: 01.00 p.m. – 02.00 p.m.

ANSWER ALL QUESTIONS

Index Number:.....

1. Define the terms 'Structure' and 'Functions' related to the computer organization.
(08 Marks)

2. Name four (04) main functions of a computer (08 marks)

i.

ii.

iii.

iv.

3. Write Verilog code for the below Circuit Figure 01. (16 Marks)

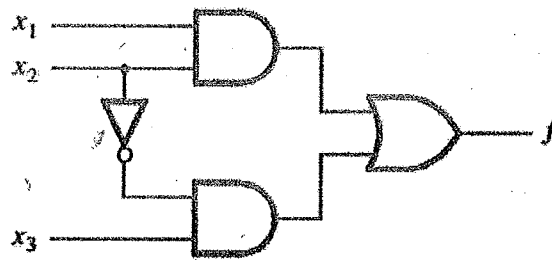
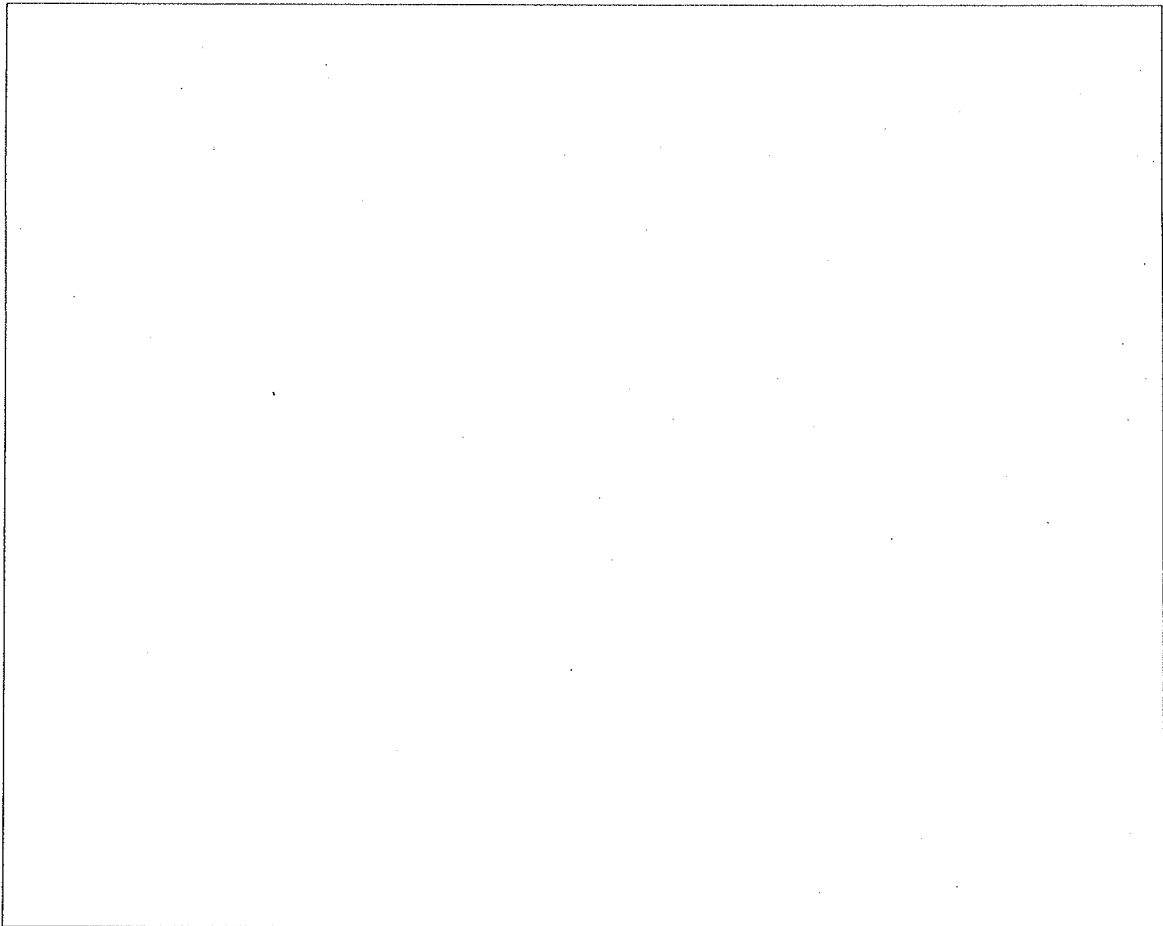


Figure 01



4. Name and define the functions of any four (04) registers. (08Marks)

i.	.....

ii.	.....

iii.	.....

iv.	.....

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

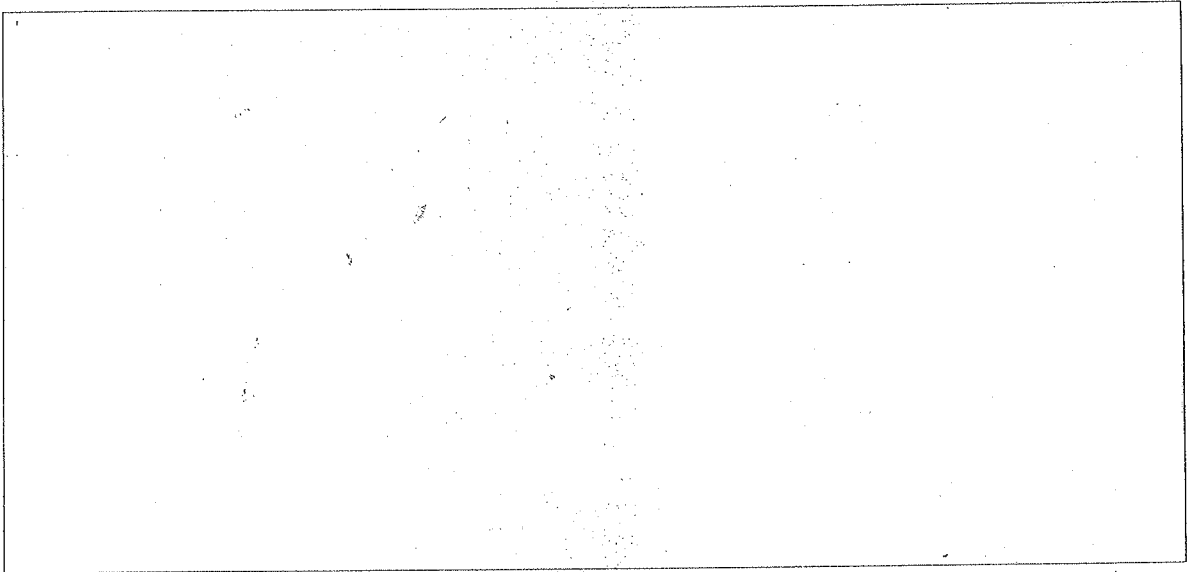
i.	.....

ii.	.....

iii.	.....

iv.	.....

8. What is refers to Von Neumann Bottleneck? (05 marks)



9. Mention four (04) advantages of Segmentation. (08 Marks)

i.
.....

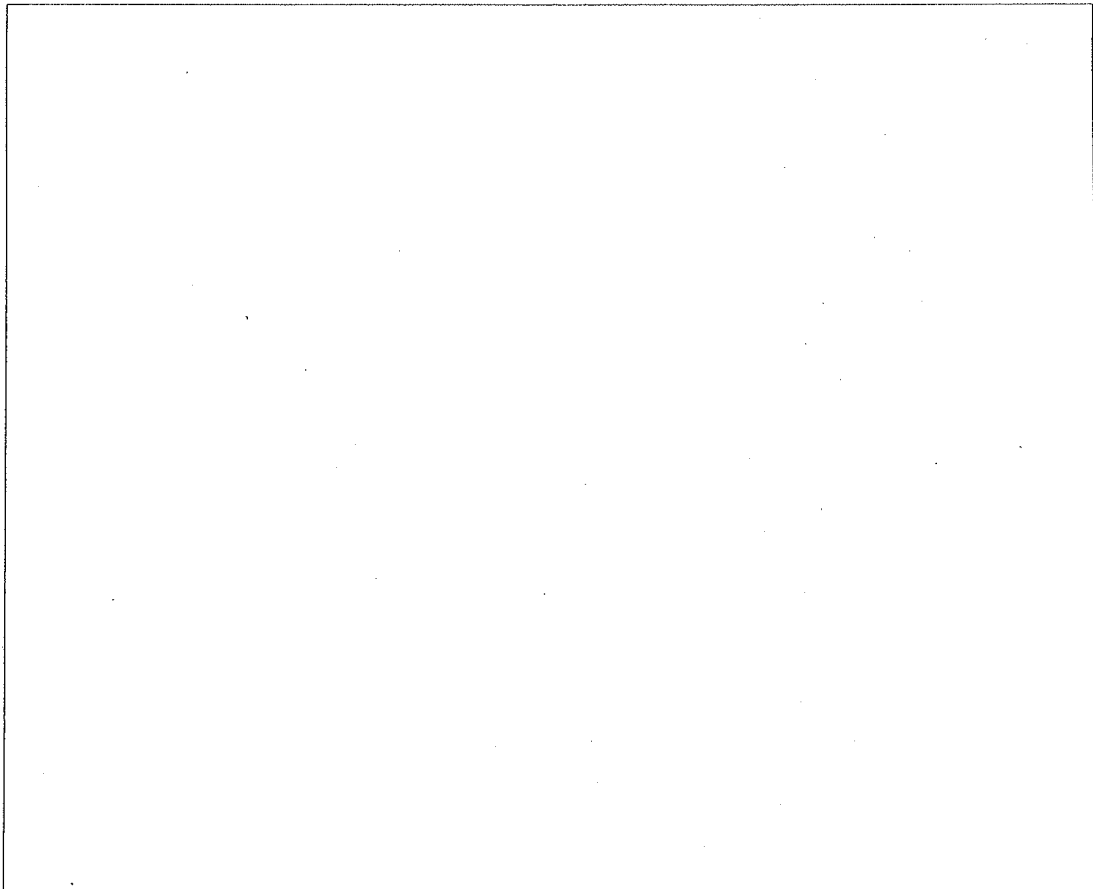
ii.
.....

iii.
.....

iv.
.....

10. Draw the logic circuit for given Verilog Code. (15 Marks)

```
module example2 (x1, x2, x3, x4, f);  
    input x1, x2, x3, x4;  
    output f;  
  
    or (g, x1, x3);  
    or (h, x2, x4);  
    and (f, g, h);  
  
endmodule
```



11. Mention five (05) examples for optical disk products. (05 Marks)

i.	.....
ii.	.....
iii.	.....
iv.	.....
v.	.....

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

