

SYMBIOSIS INTERNATIONAL UNIVERSITY

(Established under Section 3 of the UGC Act, 1956 vide notification No. F.9-12/2001-U.3 of the Government of India)
Accredited by NAAC with 'A' grade



Name of the Institute: SIT

Programme Name: B.Tech.

Batch: 2011-15

Programme Code: 070121

Semester: III

Course Name: Computer Organization (CS & IT)

Course Code: 0701211305, 0701213305

Maximum Marks: 60

Date: 5/12/2013

Time: 01.30 PM to 04.00 PM

Day: Thursday

Instructions:

1. All question from Part A & Part B are compulsory.
2. Functional calculators are allowed.
3. Draw neat diagrams wherever necessary.

PART A

- Q.1 a) Find out the number of page faults using FIFO page replacement algorithm for the given page reference string : 1 2 3 4 1 2 5 1 2 3 4 5 [Number of frames = 4] 4
- b) What is an I/O module? 2
- c) Explain Look-through cache organization with neat diagram. 4
- d) Solve: 2
- 1) $(1010.11)_{\text{base } 2} = (?)_{\text{base } 10}$
 - 2) $(3152)_{\text{base } 10} = (?)_{\text{base } 2}$
 - 3) $(3172)_{\text{base } 8} = (?)_{\text{base } 16}$
 - 4) $(11100.10101)_{\text{base } 2} = (?)_{\text{base } 16}$
- e) Draw Bus Interconnection scheme. 3

PART B

- Q.2 a) Explain following types of operations in detail with examples. 8
- 1) Data Transfer Operations
 - 2) Arithmetic Operations
 - 3) Logical Operations
 - 4) Input/ Output Operations
- b) Explain Processor organization in detail with their operations. 7

- Q.4 a) Explain characteristics of Memory System. 8
- b) Explain design of multiplier control unit using delay element method. 7
- Q.5 a) With suitable diagram explain how mapping is performed in Set-associative mapping cache organization? 7
- b) Write a short note on: 8
- 1) PROM
 - 2) EPROM