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**Question Paper Code: 53Q01**

M.E. DEGREE EXAMINATION, NOV 2018

Third Semester

Computer Science and Engineering

15PCS301 - MULTI CORE ARCHITECTURE

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 1= 5 Marks)

1. SMT Architecture stands for CO1- R
  - (a) Simultaneous Multithreading
  - (b) Single Multithreading
  - (c) Stage Multithreading
  - (d) Delay threading
2. SC violation due to write buffers with bypassing capability suggests CO2 -R
  - (a) With cache
  - (b) Without cache
  - (c) Between cache
  - (d) Scheduled cache.
3. GPU Architecture stands for CO3- R
  - (a) Graphics Processing Unit
  - (b) Geo Processing Unit
  - (c) General Preparation Unit
  - (d) Graphics Preparing Unit
4. Memory technology is based on CO4 -R
  - (a) Latest development in memory
  - (b) Classification of memory
  - (c) Design of memory
  - (d) Size of memory
5. Open mp programs that applied for looping statements that contains CO5- R
  - (a) Private class
  - (b) Public class
  - (c) Static class
  - (d) Independent class

PART – B (5 x 3= 15Marks)

- |     |                                                           |         |
|-----|-----------------------------------------------------------|---------|
| 6.  | Write a short notes on Multithreading.                    | CO1-U   |
| 7.  | What is a vector processor?                               | CO2-U   |
| 8.  | List out the different versions of IBM cell Architecture. | CO3-U   |
| 9.  | Sketch the optimization technique block diagram.          | CO4-Ana |
| 10. | List out the different parallel programming models.       | CO5-U   |

PART – C (5 x 16= 80Marks)

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|-----|----------------------------------------------------------------------------------------------------|---------|------|
| 11. | (a) Explain in detail about the measuring & performance reporting in ILP.                          | CO1- U  | (16) |
|     | Or                                                                                                 |         |      |
|     | (b) Illustrate the different levels for parallel architectures.                                    | CO1- U  | (16) |
| 12. | (a) Describe the different types of Multiprocessor issues.                                         | CO2- U  | (16) |
|     | Or                                                                                                 |         |      |
|     | (b) Explain in detail about multiprocessor Cache Coherence.                                        | CO2- U  | (16) |
| 13. | (a) Differentiate the ideas that relate the properties of homogenous & heterogeneous architecture. | CO3-Ana | (16) |
|     | Or                                                                                                 |         |      |
|     | (b) How do you differentiate the properties of Intel , SUN CMP , IBM cell Architecture?            | CO3-Ana | (16) |
| 14. | (a) Describe the concept of virtual memory & virtual machines.                                     | CO4 -U  | (16) |
|     | Or                                                                                                 |         |      |
|     | (b) State and explain the different optimization techniques.                                       | CO4 -U  | (16) |
| 15. | (a) List the contents of your open MP subdirectory and explain in detail.                          | CO5-U   | (16) |
|     | Or                                                                                                 |         |      |
|     | (b) What are the different types of message passing interface methods and explain in detail.       | CO5-U   | (16) |