C.U.SHAH UNIVERSITY
Summer Examination-2017

Subject Name: Advanced Computer Architecture

Subject Code: 4TE08ACA1   **Branch: B.Tech (IT)**

Semester : 8   **Date :12/04/2017**   **Time :2:30 To 5:30**   **Marks : 70**

Instructions:
  (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  (2) Instructions written on main answer book are strictly to be obeyed.
  (3) Draw neat diagrams and figures (if necessary) at right places.
  (4) Assume suitable data if needed.

Q-1	**Attempt the following questions:**	**(14)**
a)	What is Multithreading?	
b)	What is Vector Processor?	
c)	Define Multi-Processor.	
d)	Define Virtual Memory.	
e)	What is Dynamic Scheduling?	
f)	Define Cache memory.	
g)	Define Instruction Pipeline.	
h)	Define Multi-Computer.	
i)	What is Pipeline?	
j)	What is SMT Architecture?	
k)	What is Synchronization?	
l)	What is Reliability in terms of memory?	
m)	Explain Bus.	
n)	What is CMP Architecture?	

Attempt any four questions from Q-2 to Q-8

Q-2		**Attempt all questions**	**(14)**
	(a)	What is Superscalar Processor? List out advantage and disadvantage of Superscalar Processor.	**(7)**
	(b)	Explain Speculation - Compiler techniques for exposing ILP.	**(7)**

Q-3		**Attempt all questions**	**(14)**
	(a)	What is ILP? Explain Challenges of ILP.	**(7)**
	(b)	Explain Memory Hierarchy in computer system.	**(7)**

Q-4		**Attempt all questions**	**(14)**
	(a)	What is Non-Linear Pipeline Processor? Explain the working of Non-Linear pipeline processor.	**(7)**
	(b)	Explain Arithmetic Pipeline design.	**(7)**
Q-5		**Attempt all questions**	**(14)**
	(a)	Explain Symmetric Shared Memory Architectures.	**(7)**
	(b)	Explain Heterogeneous Multi-Core Processors.	**(7)**
Q-6		**Attempt all questions**	**(14)**
	(a)	Explain RAID Architecture with different level.	**(7)**
	(b)	Explain Distributed Shared Memory Architectures.	**(7)**
Q-7		**Attempt all questions**	**(14)**
	(a)	Explain SUN CMP architecture.	**(7)**
	(b)	What is Consistency? Explain Models of memory consistency.	**(7)**
Q-8		**Attempt all questions**	**(14)**
	(a)	Explain Design Issue of Multi-Core Architecture.	**(7)**
	(b)	Explain Hardware and Software Multithreading.	**(7)**