Subject Code: H3802/R13

M. Tech –II Semester Regular/ Supply Examinations, October, 2015

ADVANCED COMPUTER ARCHITECTURE

(Common to DECS, E&CE and DECE)

Time: 3 Hours **Max Marks: 60**

Answer any FIVE questions

All questions carry EQUAL marks

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1. (a) Write about Amdahl's Law with relevant example.
   (b) Explain about Quantitative principles of computer design.

2. (a) Describe about Alpha 21264 data cache with a neat sketch.
   (b) Write about reducing cache miss penalty

3. (a) Describe briefly about Dynamic Scheduling.
   (b) Write about Branch target buffers.

4. (a) Write about the taxonomy of parallel architectures.
   (b) Describe about Synchronization.

5. (a) Explain about generic interconnection network.
   (b) Describe briefly about Clusters with examples.

6. (a) Explain about Virtual memory.
   (b) Write the difference between SRAM and DRAM Technologies.

7. (a) Describe about Static branch prediction.
   (b) Write about the Compiler level techniques.

8. (a) Describe about the operands for media and signal process.
   (b) Explain about Trimedia TM 32 CPU with a neat sketch.

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Subject Code: H4307/R13

M. Tech –II Semester Regular/ Supply Examinations, October, 2015

ELECTRICAL DISTRIBUTION SYSTEMS

(Common to PE, P&ID, PE&ED, PE&D, EM&D)

Time: 3 Hours **Max Marks: 60**

Answer any FIVE questions

All questions carry EQUAL marks

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1. (a) Explain the following terms:
   (i) Utilization Factor (ii) Contribution factor (iii) Diversity Factor
   (b) Discuss in detail about residential, commercial and agricultural loads and their respective characteristics.

2. Draw a block diagram in flow chart form for a typical distribution system planning process and explain the techniques for distribution planning.

3. (a) How do you optimally locate the substations and explain the benefits derived from optimal location.
   (b) Explain how to decide the rating of a distribution substation.

4. (a) Explain the design aspects of secondary distribution systems.
   (b) Explain various types of radial primary feeders with diagrams.

5. (a) Derive an expression for voltage drop and power loss for uniformly radial type distribution load.
   (b) Consider a three phase, 3 wire 240V secondary system with balanced loads at A, B and C as shown in Figure (1) Determine:
   (i) The voltage drop in one phase of lateral
   (ii) The real power per phase for each load
   (iii) The reactive power per phase for each load.

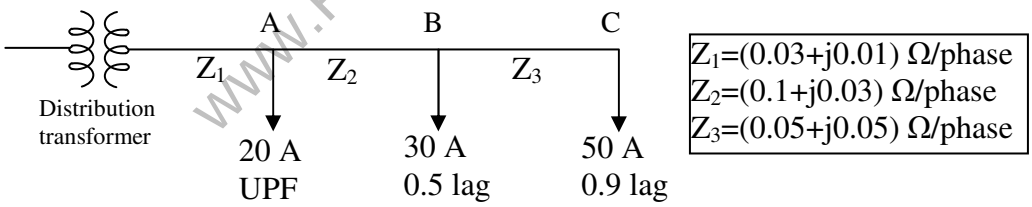

Figure (1)

6. (a) Derive equations for the calculation of fault current for line to line fault and three phase fault.
   (b) What are the main objectives of distribution protection? Discuss.

7. (a) Explain the coordination procedure between fuse and circuit breaker.
   (b) Explain the principle of operation of line sectionalizer.

8. (a) How do you determine the best capacitor location? Explain.
   (b) How an AVB can control voltage? With the aid of suitable diagram explain its function.

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Subject Code:H5801/R13

M. Tech –II Semester Regular/ Supply Examinations, October, 2015

COMPUTER NETWORKS

(Computer Science & Engineering)

Time: 3 Hours **Max Marks: 60**

Answer any FIVE questions

All questions carry EQUAL marks

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1. a) Explain the OSI reference model
   b) Compare OSI reference model with TCP/IP reference model

2. Explain various transmission media in detail

3. a) What is ALOHA? Explain different ALOHA protocols
   b) What is CSMA? Explain different CSMA protocols

4. a) What is routing algorithm? Explain shortest path routing algorithm
   b) What is congestion? Explain choke packet and loading shedding algorithms

5. a) What is fragmentation? Explain transparent and non-transparent fragmentation
   b) Explain classful IP addressing system in detail

6. a) Explain TCP segment format
   b) Explain the TCP three way handshake protocols for connection establishment

7. a) Explain RSA algorithm with suitable example
   b) What is Firewall? Explain different types of Firewalls

8. Explain the following
   a) DNS
   b) WWW

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