**Code: 1G175**

*IV B.Tech. I Semester Supplementary Examinations May 2017*
## Advanced Computer Architecture
( Computer Science and Engineering )

Max. Marks: 70                                                                            Time: 3 Hours

Answer any **five** questions
All Questions carry equal marks (14 Marks each)
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1.  a)  Explain in brief Flynn's classification of various architectures based on notations of instruction and data streams.                                                        9M

    b)  Write in brief control flow Vs data flow mechanism                                 5M

2.  a)  Write in brief parallel processing applications.                                   9M

    b)  Explain in detail hierarchical memory technology.                                  5M

3.  a)  Explain in brief set-associate memory organization.                               9M

    b)  Write in brief pipelined instruction processing.                                  5M

4.  a)  Explain in detail the routing in omega network.                                    9M

    b)  Write in brief message routing schemes.                                           5M

5.  a)  Explain in detail the S-access memory organization.                               7M

    b)  Write in detail the SIMD shared memory model.                                     7M

6.  a)  Write in detail the multithreading issues and solutions.                           9M

    b)  Explain in detail static versus dynamic dataflow.                                 5M

7.  a)  Explain in detail the basic design issues in instruction level parallelism.        7M

    b)  Discuss in brief About Tomasulo's algorithm.                                      7M

8.  a)  Write in brief the different forms of parallelism.                                 8M

    b)  Explain in brief a parallel system case study.                                    6M

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**Code: 1G171**

*IV B.Tech. I Semester Supplementary Examinations May 2017*
# Data Warehousing and Mining
( Computer Science and Engineering )

Max. Marks: 70 Time: 3 Hours

Answer any **Five** questions
All Questions carry equal marks (**14 Marks** each)
*********

| | | |
|---|---|---|
| 1. | List and explain the different types of Data Attributes with suitable examples | 14M |
| 2. | Calculate and present the following distance matrices for the points A(1,0), B(3,2), C(2,1), D(0,3)<br>City Block Distance, Euclidean Distance, $L_1$ and $L$ norm distances | 14M |
| 3. a) | Differentiate between OLAP and OLTP | 4M |
| b) | Describe in detail about the conceptual modeling of Data Warehouses | 10M |
| 4. a) | Explain the algorithm for induction of decision tree | 7M |
| b) | List and describe different methods used for evaluation of performance of a classifier with examples | 7M |
| 5. a) | Explain the Bayes theorem | 7M |
| b) | Illustrate how the Bayesian theorem is used in the Bayesian classifier | 7M |
| 6. | Derive the set of association rules for the following dataset using FP Growth algorithm | |

| Transaction ID | List of Items purchased |
|---|---|
| T1 | G1,G2,G5 |
| T2 | G2,G4 |
| T3 | G2,G3 |
| T4 | G1,G2,G4 |
| T5 | G1,G3 |
| T6 | G2,G3 |
| T7 | G1,G3 |
| T8 | G1,G2,G3,G5 |
| T9 | G1,G2,G3 |

14M

| | | |
|---|---|---|
| 7. | Describe in detail the issues in the k-means clustering algorithm | 14M |
| 8. a) | Explain a simple agglomerative clustering algorithm with example | 7M |
| b) | Explain a simple divisive clustering algorithm with example | 7M |

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*IV B.Tech. I Semester Supplementary Examinations May 2017*
## High Performance Computing
( Computer Science & Engineering )

Max. Marks: 70                                                                                    Time: 3 Hours

Answer any *five* questions
All Questions carry equal marks (14 Marks each)
*********

1.  Identify the Operating System concepts relevant to distributed computing.          14M

2.  a)  Justify the necessity of parallel computing.                                    7M

    b)  Classify the parallel programming paradigms.                                    7M

3.  Elaborate the applications of clusters.                                             14M

4.  Develop the relationship of grid computing to other distributed technologies.      14M

5.  Explain Grid Services architecture in detail.                                      14M

6.  a)  Summarize the OGSA platform components.                                         7M

    b)  Outline the goal of OGSA.                                                       7M

7.  Explain the Globus GT3 toolkit architecture in detail.                             14M

8.  Explain high level services in detail.                                             14M

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*IV B.Tech. I Semester Supplementary Examinations May 2017*
## Mobile Communications
( Common to CSE & IT )

Max. Marks: 70                                                                                              Time: 3 Hours

Answer *any **five*** questions
All Questions carry equal marks (**14 Marks** each)
*********

| | | | |
|---|---|---|---|
| 1. | a) | Discuss in detail the various handover scenarios in GSM. | 6M |
| | b) | Describe the reliability and delay classes in GPRS. Also explain the GPRS procedures. | 8M |
| 2. | a) | Describe the functions of MAC & physical layer of IEEE802.16n in detail | 8M |
| | b) | Compare & contrast TDMA,FDMA and CDMA | 6M |
| 3. | a) | What is Mobile IP? Explain agent recovery, registration and encapsulation. | 10M |
| | b) | Describe the client server configuration of DHCP. | 4M |
| 4. | a) | What happens in the case of I-TCP if the mobile is disconnected? Discuss. | 7M |
| | b) | Discuss how snooping TCP acts as transparent TCP and explain the role of foreign agent in it in detail. | 7M |
| 5. | a) | What is MANET? Give examples of MANETS? | 4M |
| | b) | Describe spectrum of MANET applications in detail. | 10M |
| 6. | a) | Mention the primary goals of WAP? Discuss. | 6M |
| | b) | Explain in detail the components and interfaces of the WAP architecture. | 8M |
| 7. | a) | What are different database hoarding techniques? Explain in detail | 7M |
| | b) | Explain caching invalidation mechanisms in database? | 7M |
| 8. | a) | Illustrate classification of new data delivery mechanisms? | 7M |
| | b) | Discuss selective indexing techniques with suitable examples? | 7M |

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**Code: 1GA71**

**R-11 / R-13**

*IV B.Tech. I Semester Supplementary Examinations May 2017*
## Management Science
*( Common to EEE & CSE )*

Max. Marks: 70                                                                                     Time: 3 Hours

Answer any **five** questions
All Questions carry equal marks (**14 Marks** each)
*********

1. a) Write any six principles of management, as given by Fayol, in brief.                     7M

   b) What are the elements of scientific management?                                           7M

2. a) Explain the factors influencing plant location.                                          4M

   b) Construct $\bar{X}$ and R charts for the following data of a process and identify whether the process is in control. The sample size is 5 units and drawn at an interval of 30 min from a manufacturing process.

   | Sample | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
   |--------|----|----|----|----|----|----|----|----|----|----|
   | $\bar{X}$ | 20 | 34 | 45 | 39 | 26 | 30 | 15 | 40 | 37 | 23 |
   | R | 20 | 39 | 15 | 5 | 20 | 15 | 15 | 11 | 30 | 10 |

   10M

3. What is marketing mix? How does it influences decisions of a marketing manager?     14M

4. a) What is the difference between job evaluation and merit rating?                          7M

   b) Discuss selection and induction functions of Human Resource Management.          7M

5. Identify the critical path for the network and how far the project can be crashed.

   | Activity | Preceding activity | Time (in weeks) | | Cost (Rs) | |
   |----------|--------------------|-----------------|------|-----------|------|
   | | | Normal | Crash | Normal | Crash |
   | A | - | 6 | 4 | 5000 | 6200 |
   | B | - | 4 | 2 | 3000 | 3900 |
   | C | A | 7 | 6 | 6500 | 6800 |
   | D | A | 3 | 2 | 4000 | 4500 |
   | E | B,C | 5 | 3 | 8500 | 10000 |

   14M

6. a) What is the significance of SWOT Analysis?

   b) Explain the stages in the strategy formulation and implementation process.

7. Discuss in brief any three of the approaches:
   i. Just-in-Time
   ii. Supply Chain Management
   iii. Enterprise Resource Planning
   iv. Value Analysis
   v. Total Quality Management                                                                14M

8. a) How can an organization's culture influence the ethics of its members?                   5M

   b) Discuss in brief ethical issues in an organization and characteristics of an ethical organization                                                                            9M

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*IV B.Tech. I Semester Supplementary Examinations May 2017*
# Software Project Management
(Computer Science and Engineering)

Max. Marks: 70                                           Time: 3 Hours

Answer any **Five** questions
All Questions carry equal marks (**14 Marks** each)
*********

1.  a) Explain Waterfall model in practice.                                    7M
    b) How to estimate cost in software economics? Explain the three generations
       of software economics.                                                  7M

2.  a) What are the three levels of software processes and their attributes?   7M
    b) Write short notes on peer inspections.                                  7M

3.  a) What are the primary objectives and essential activities of an Inception phase?   7M
    b) What are the modern process approaches for solving conventional problems?         7M

4.  a) Explain the artifacts of the implementation set.                        7M
    b) Write short notes on pragmatic artifacts.                               7M

5.  a) Draw and explain the workflow of an iteration in workflows of the process.    7M
    b) What are the major milestones of a software project?                    7M

6.  a) What is the default project organizations of software engineering?      7M
    b) Map the project level roles and responsibilities for the default project organizations.   7M

7.  a) Write short notes on Pragmatic software metrics.                        7M
    b) Write short notes on process discriminators.                            7M

8.  a) Discuss the next generation cost models of the engineering stage.       7M
    b) Describe about modern process transitions in detail.                    7M

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