Code No.: **405C1** MR14

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad.

IVB.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER - 2017

SUBJECT: **ADVANCED COMPUTER ARCHITECTURE**

(BRANCH: **CSE**)

Time: **3 Hours** Max Marks:75

PART-A

I. Answer all the questions **5 x1=5M**

1. Find the Cost of a die, if the Cost of wafer, number of Dies per wafer and Die yield are given as $200, 8 and 0.73cm respectively.
2. List out Memory Addressing Modes in Computer Design?
3. Define loop-level parallelism
4. What is Multi-threading?
5. Describe Polling?

II Answer all the questions **10 x 2=20M**

1. Compare MTBF and MTTR
2. Write briefly about Cost, Price and their Trends.
3. Explain the classification of instruction set?
4. What are instructions set principles?
5. Explain the role of the compiler?
6. Define RAW, WAR and WAW
7. Write about Memory mapped I/O?
8. Write the advantages of Virtual Memory?
9. Distinguish between Block-Interleaved Parity and Distributed Block-Interleaved Parity
10. Define cluster? What is the role this in the Storage system?

PART-B

Answer all the questions **5 x 10=50M**

1. a. Explain the different methods for predicting CPU Performance. Use the mathematical equations relating various factors for your answer.
   b. Compare the two design alternatives using the CPU performance equation.

1. Explain the various

OR

2. Technology Trends influenced on the Computer Design?

3. a. Explain with neat diagram the Operand locations for four instruction set architecture classes.
   b. What is addressing mode? Explain the various types of addressing modes and the Selection of addressing modes with examples, meaning, and usage

OR

4. With the help of neat diagram show the implementation of MIPS data path that allows every instruction to be executed in 4 or 5 clock cycles

5. a. Describe the hardware support for ILP at compile time?
   b. Explain Instruction Level Parallelism(ILP). What are the limitations of ILP?

OR

6. a. Consider a loop branch whose behavior is taken nine times in a row, then not taken once. What is the prediction accuracy for this branch, assuming the prediction bit for this branch remains in the prediction buffer?
   b. Suppose we have a VLIW that could issue two memory references, two FP operations, and one integer operation or branch in every clock cycle. Show an unrolled version of the loop x[i] = x[i] +s (see page 223 for the MIPS ode) for such a processor. Unroll as many times as necessary to eliminate any stalls. Ignore the branch-delay slot.

7. a. Explain Cache performance in detailed manner?
   b. Give four categories of multiprocessors?

OR

8. a. Explain Directory-Based Cache-Coherence Protocols with examples.
   b. Name the three facts considered for supporting multithreading. Explain the four main components of MXP processor.

9. a. Explain generic types of interconnection networks?
   b. Briefly write about the performance parameters of interconnection networks?

OR

10. Explain RAID fault tolerance mechanism

Code No.: **405C3** MR14

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IVB.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER - 2017

SUBJECT: **ADVANCED DATABASES**

(BRANCH: **CSE**)

Time: **3 Hours** Max Marks:75

PART-A

I. Answer all the questions **5 x1=5M**

1. Mention the five fundamental operations in relational algebra
2. What is fragmentation? And list out the different types of fragmentation?
3. List the layers of query processing
4. What do mean by cardinality of selection operation?
5. Define deadlock?

II Answer all the questions **10 x 2=20M**

1. Define relational database with an example?
2. Explain about Normalization?
3. What do you mean by heterogeneity in a distributed system?
4. List Out the rules for defining fragments
5. Give an example of operation tree
6. Give an example for join graph of distributed query.
7. What is cyclic quarries?
8. What is distributed query optimization?
9. What is concurrency control in databases?
10. Discuss about Distributed concurrency control.

PART-B

Answer all the questions **5 x 10=50M**

1. a) What are integrity rules? Why are they needed?
   b) Explain the following concepts with the help of an example: (i) Natural Join (ii) Semi Join

OR

2. Explain central data base on a network.
3. Explain MDBS architecture with and without a global conceptual schema.

OR

4. a) Explain MDBS architecture without GCS
   b) What do you mean by DBMS standardization? Give an example.
5. a) What is query processing and discuss about query processing problems.
   b) Explain clustering algorithm using matrices

OR

6. Write the diagram of layering scheme for query processing. Explain in brief, the various layers in layering scheme.
7. Explain distributed cost model with an example.

OR

8. Explain centralized query optimization.
9. a) Explain serializability theory with an example.
   b) Explain the mechanism of taxonomy of concurrency control

OR

10. Given example for formulization of transaction concepts

Code No.: **40529**

MR 14

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IV B.Tech I Sem Regular End Examinations, NOVEMBER-2017

SUBJECT: **LINUX PROGRAMMING**

(Branch: **CSE**)

Time: **3 Hours** Max Marks: **75 Marks**

PART-A

I. Answer all the questions **5 x1=5M**

1. What is the use of Tar Command?
2. Write a command to know various shells running in LINUX OS?
3. What is exit() function?
4. What is IPC?
5. What are the types of socket system calls?

II Answer all the questions **10 x 2=20M**

1. Explain three types of access permissions of UNIX?
2. What are the differences between the commands "cmp" and comm"?
3. Discuss about bornshell.
4. List out the shell responsibilities?
5. Describe open ( ) function in Linux with examples.
6. What are the differences between wait() and waitpid()?
7. Illustrate to transfer data between two unrelated processes using shared memory.
8. Write about the structure ipc_perm?
9. Write the difference between socket and file I/O?
10. Define socket function call with syntax?

PART-B

Answer all the questions **5 x 10=50M**

1. a) Explain control structures in AWK?

   b) How does SED work? Explain different SED commands?

OR

2. a) Consider that marks.txt is a file that contains one record per line (comma separated fields) of the student data in the form of studentid, student name,Telugu marks, English marks, Maths marks, Science marks, Social marks.Write an awk script to generate result for every student in the form of studentid, student name, Total marks and result. Result is PASS if marks is >= 30 in Telugu and English , and if marks >= 40 in other subjects. Result is FAIL otherwise.

   b) Write briefly on sed, chmod, df, comm, fgrep and sort commands with examples.

3. Differentiate between different types of shells available in UNIX.

OR

4. a) Write a shell script to accept the name of the file from standard input and perform the following tests on it: i)File executable ii) File readable iii) File writable iv) Both readable & writable

   b) Write a shell script for concatenation of two strings.

5. a) Explain getc ( ) and fgetc ( ) with examples?

   b) Describe the characteristics of Unix File System

OR

6. Explain the following

   i) process creation
   ii) Wait process
   iii) Process termination

7. Discuss the following signal functions

   a) SIGABRT b) SIGALRM c) SIGUSR1 d) SIGUSR2 e) SIGSTOP

OR

8. a) Explain about system calls used for semaphores.

   b) Write a program to lock a memory region using semaphore.

9. Demonstrate echo server and echo client using 6666 port in tcp style?

OR

10. Explain the sequence of steps to process various socket functions using TCP socket system calls.

Code No: **405B1**

MR14

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IVB.TECH I SEMESTER REGULAR END EXAMINATIONS, OCTOBER - 2017

SUBJECT: **MOBILE APPLICATION DEVELOPMENT**

(BRANCH: **CSE**)

Time: **3 Hours** Max Marks: **75 Marks**

PART-A

I. Answer all the questions **5 x1=5M**

1. What is the micro wave technology?
2. What is Android ADT Bundle?
3. Differentiate between interface and user interface
4. Define interface?
5. Explain how Boolean values in SQ Lite are stored?

II. Answer all the questions **10 x 2=20M**

1. Discuss about the advantages of smart phones over the small screen devices?
2. What do you mean by Mobile Ecosystem
3. What are the different types of Android development tools.
4. What are the advantages of android?
5. Differentiate paint() and repaint() methods.
6. Write about Activity Lifecycle?
7. What are the types of user interfaces in android?
8. What is DDMS? What can it do?
9. What is difference between database and SQ Lite database?
10. How do you insert and retreive the data with database?

PART-B

Answer all the questions **5 x 10=50M**

1. Explain in detail about hello world application using wireless tool kit?

OR

2. Draw J2ME architecture and explain each layer.
3. What is android and explain in detail about Android Architecture?

OR

4. Explain in detail about activities and views in android?
5. Develop an Android application for employee registration form. (Explain each step clearly)

OR

6. How do you install ADT Plugin for Eclipse? Briefly explain
7. Write a short notes on: A) Form widgets B) Toggle buttons

OR

8. Explain in detail about
   a) any 5 widgets in android and its implementation b) activity lifecycle.
9. a. List out the areas where SQLite works well?
   b. Explain SQLite transactions?

OR

10. Write in detail about the SQ Lite Database?

Code No: **405B2**

MR14

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IVB.TECH I SEMESTER REGULAR END EXAMINATIONS, OCTOBER - 2017

SUBJECT: **BIG DATA ANALYTICS**

(BRANCH: **CSE**)

Time: **3 Hours** Max Marks: **75 Marks**

PART-A

I. Answer all the questions **5 x1=5M**

1. Define overfitting
2. List the Big data analytics methods
3. What do you mean stem-and-leaf display
4. What is Hive.
5. Define Machine Learning

II. Answer all the questions **10 x 2=20M**

1. Classify the term extraction of big data
2. How big data is perceived? Briefly explain
3. Describe the special consideration data search in theory.
4. What is gene-counting? Give example.
5. Explain Data reduction and normalizing?
6. What is query output adequacy.
7. Classify the types of scatterplots
8. What is Logistic regression model? Give example
9. What is Data modeling in R?
10. Write any two points of hadoop security.

PART-B

Answer all the questions **5 x 10=50M**

1. a. Explain about bad identifier methods
   b. List the principles of classification and explain.

OR

2. a. Explain various common pitfalls in Ontology development.
   b. Write the characteristics of EDA. Explain its importance in statistical data mining.
3. Write about Data Integration and software interoperability?

OR

4. a. Describe about standard trajectory
   b. How can you achieve speed and scalability in big-data software? Explain.
5. Explain about theory in search of data and data in search of theory

OR

6. a. What is bigness bias? Explain its importance in bid-data analysis
   b. Discuss importance of " Formulate a question".
7. Write short notes on below terms
   a) Variable Assessment b) Paired variable assessment

OR

8. Explain in detail Box and Whiskers plot with example
9. Explain automatic data processing with OOZIE

OR

10. Explain work flow of map reduce program with example.

Code No.: **40528**

MR14

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, OCTOBER- 2017

SUBJECT: **APPLICATION PROGRAMMING**

(BRANCH: **CSE**)

Time: **3 Hours** Max Marks: **75 Marks**

PART-A

I. Answer all the questions **5 x1=5M**

1. List out the types of JIT Compiler
2. Give four examples of value type data types?
3. Discuss the difference between try and catch keywords?
4. Define Multifile Assembly?
5. Differentiate between data reader and data set?

II. Answer all questions **10 x 2=20M**

1. Explain the buildings of a C# application using csc.exe.
2. What is the role of .NET type Meta data?
3. List out the functions of System. Enum class.
4. What are the different control statement are used in .NET?
5. List out the various ways of enforcing encapsulation in C # language.
6. Write down 2 differences between Static Binding and Dynamic Binding
7. Briefly discuss about the Assembly Manifest in .NET assembly.
8. What are the different types of .NET Assemblies?
9. What is the use of connection object in ADO.NET?
10. What is the difference between ADO and ADO.NET?

PART-B

Answer any 5 questions. **5 x 10=50M**

1. a. Explain with a neat diagram the Building Blocks of .Net platform.

   b. Illustrate the workflow that takes place between source code, .Net compiler and .Net execution engine.

OR

2. Explain with a neat diagram, the relationship between .NET runtime layer and the base class library.

3. a. Explain the Method Parameter modifiers. Demonstrate each modifier with an Example.
   b. What are different variations possible on main () method?

OR

4. a. What are the categories of data types used in .NET?
   b. With an example define Boxing and Unboxing.

5. a. List and explain the String format character and Access Modifiers available in C#.
   b. Write a C# program that demonstrates the concept of reimplementation of a method.

OR

6. a. Explain the difference between read only and write only properties with an example for each.
   b. Write a C# program to demonstrate the use of try and catch blocks in handling exceptions in C#.

7. a. A delegate type maintains three important pieces of information. Briefly explain.
   b. List and explain the .NET assembly elements.

OR

8. a. Explain with an example how to build and consume a single file assembly in C#.
   b. Illustrate the process of strongly naming an assembly.

9. a. Explain briefly .NET data provider model.
   b. What is connected layer of ADO.NET? What are the steps to be followed to connect to a database and read the records using a data reader object?

OR

10. a. Explain the working of Data rows and Data tables with an example?
    b. Explain disconnected layer briefly.

Code No.: **40B02**

MR14

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IVB.TECH I SEMESTER REGULAR END EXAMINATIONS, OCTOBER - 2017

SUBJECT: **MANAGEMENT SCIENCE**

BRANCH: **CSE**

Time: **3 Hours** Max Marks: 75

PART-A

I. Answer all the questions **5 x 1 = 5 Marks**

1. Explain authority and responsibility?
2. Define the word 'Organizing'.
3. Define method study.
4. What do you understand by grievance handling?
5. Define strategy.

II. Answer all the questions **10 x 2 = 20 Marks**

1. Write the Elements of Scientific Management.
2. List out the functions of Management.
3. Write any two differences between flat and tall organizational structures
4. Define matrix organization?
5. Define Work study.
6. Write the difference between Market and Marketing?
7. Explain Vision and Mission.
8. Define critical path.
9. What is BPR?
10. Define Just In Time (JIT).

PART-B

Answer all the questions **5 x 10 = 50 Marks**

1. Explain the 14 principles of Henxi Fayol?

OR

2. Define management. What are the social responsibilities of management?

3. Define Matrix Organizational structure. Explain its merits and demerits.

OR

4. Discuss the utility of organizational structure in an organization.
5. Explain the important factors to be considered for selection of good plant location

OR

6. Determine Stock levels of maximum, minimum, Reorder level with diagram

7. The particulars of cost and duration are given in the following table:

Activity	Normal cost		Crash cost	
	Days	Cost (RS)	Days	Cost (RS)
1-2	3	500	2	1,000
1-3	2	750	1	1,500
1-4	6	1,400	4	2,600
2-4	5	1,000	3	1,800
2-5	7	1,150	6	1,450
3-4	2	800	2	800
4-5	4	1,000	2	2,400

Show the calculations of total cost at every stage of crashing.

OR

8. Discuss on wage and salary administration?
9. Explain the concept of corporate planning. Discuss the essential steps in corporate planning.

OR

10. Explain in detail about Business Process Outsourcing.

Code No.: **40530** MR14

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IVB.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER – 2017

SUBJECT: **CLOUD COMPUTING**

(BRANCH: **CSE**)

Time: **3 Hours** Max Marks: **75 Marks**

PART-A

I. Answer all the questions **5 x1=5M**

1. Give main difference between peer-to-peer computing and distributed computing?
2. What are the disadvantages of PAAS?
3. List two general issues in cloud computing?
4. What is cloud collaboration?
5. Define share point service.

II Answer all the questions **10 x 2=20M**

1. List the key properties of Cloud computing.
2. How to use cloud in companies today's?
3. List the features of IBM Cloud
4. What are the advantages of Software as a service?
5. List the types of attacks in cloud security.
6. Describe about security in the cloud?
7. How to use the cloud computing for the corporation.
8. List the websites for collaborating on contact list ?
9. What is the micro soft dynamic CRM?
10. What is the main purpose of App Exchange?

PART-B

Answer all the questions **5 x 10=50M**

1. List and explain the disadvantages of cloud computing

OR

2. a) Explain about the cloud services.
   b) Explain the cloud storage.
3. Explain various types of cloud service development with examples.

OR

4. a)Write the Pros and Cons of Cloud Service Development
   b) Discover Cloud Services Development Services and Tools
5. What are the general issues that influence and directly affect the cloud security architecture? Explain.

OR

6. a) Explain in detail about Cloud security fundamentals.
   b) Explain about Architectural Considerations

7. a) Explain about contacts list management on cloud environment.
   b) Explain the impact of cloud computing on group projects and events.

OR

8. Write notes on the following: i) Collaborating on Schedules ii) Collaborating on budgets iii) Collaborating on financial statements.

9. Explain the following clouds briefly
   a) Salesforce.com b) Visual force

OR

10. Write short notes on cloud computing case studies.
    a) Elastic block storage b) Force.Com