



Subject Code: R16CS2201

II B.Tech II Semester Regular Examinations, April - 2018

STATISTICAL PROGRAMMING WITH R

(CSE)

Time: 3 hours

Max Marks: 60

Question Paper Consists of **Part-A** and **Part-B**.

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from **Part-B**

All questions carry equal marks of 12.

PART-A

1. (a) What are the different modes of working with R.
(b) What are Type-I and Type-II errors?
(c) Explain different matrix operation function in R.
(d) Write about nested functions in R.
(e) What is ANOVA test?
(f) Write any 3 math functions in R.

[2+2+2+2+2+2]

PART - B

2. a) The probability density function of a random variable is given by $f(x)=k(1-x^2)$ for $0 < x < 1$ and $f(x)=0$ otherwise. find the value of k and the probabilities i) between 0.1 and 0.2 ii) greater than 0.5
b) A random sample of size 100 is taken from an infinite population having mean 76 and variance 256 .What is the probability that \bar{X} will be between 75 and 78
3. (a) From a random sample of 10 pigs fed on diet A, the increases in weight in a certain period were 10, 6, 16, 17, 13, 12, 8, 14, 15, 9 lbs. For another random sample of 12 pigs fed on diet B, the increases in the same period were 7, 13, 22, 15, 12, 14, 18, 8, 21, 23, 10, 17lbs. Test whether diets A and B differ significantly as regards their effect on increases in weight?
(b) Two samples of sizes 9 and 8 give the sum of squares of deviations from their respective means equal to 160 square inches and 91 square inches respectively. Can these be regarded as drawn from the same normal population?
4. a) What is a vector in R? Explain operations on vectors.
b) Explain about Variables, constants and Data Types in R Programming
5. a) Write about control statements in R
b) How to create user defined function in R? How to define default values in R? Write syntax and examples?
6. (a) Write about Arithmetic and Boolean operators in R programming?
(b) Describe R functions for Reading a Matrix or Data Frame from a File
7. (a) Write about math functions in R.
(b) Explain functions for accessing the keyboard and monitor, Reading and writing files



Subject Code: R16CS2202

II B.Tech II Semester Regular Examinations, April - 2018
OPERATING SYSTEMS
(CSE)

Time: 3 hours

Max Marks: 60

Question Paper Consists of Part-A and Part-B.

Answering the question in Part-A is Compulsory & Four Questions should be answered from Part-B
All questions carry equal marks of 12.

PART-A

1. a) Write various registers used in computer system. [2+2+2+2+2+2]
b) Identify the situations for preemption of a process.
c) Define Busy Waiting? How to overcome busy waiting using Semaphore operations.
d) Why segmentation and paging are sometimes combined into one scheme?
e) What is the usage of Resource-Allocation Graph?
f) Explain the information associated with an open file.

PART-B

2. a) Briefly explain typical functions of an Operating-System Kernel. [6]
b) Explain different categories of System calls with suitable examples. [6]
3. a) Name five major activities of an OS with respect to process management and briefly describe why each is required. [6]
b) Explain preemptive and non-preemptive versions of SJF scheduling algorithm. [6]
4. What is a monitor? Explain how dining philosopher's problem is solved using monitors with example pseudo code.
5. a) Consider the reference string: 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1 for a memory with three frames. Trace FIFO and LRU page replacement algorithms.
b) Discuss in detail about various page table structures [6M+6M]
6. a) What is Deadlock? What are the necessary conditions for deadlock?
b) Explain resource allocation graph algorithm for deadlock detection with relevant diagrams.
7. a) Write in detail about file attributes, operations and types. [6M+6M]
b) Discuss about SSTF and FCFS disk scheduling with an example.



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Subject Code: R16CS2203

II B.Tech II Semester Regular Examinations, April-2018.

FRONT END WEB TECHNOLOGIES

(CSE)

Time: 3 hours

Max Marks: 60

Question Paper Consists of Part-A and Part-B.

Answering the question in Part-A is Compulsory & Four Questions should be answered from Part-B
All questions carry equal marks of 12.

PART-A

1. a) What are multimedia elements in HTML5?
b) Write any two pseudo classes in CSS3.
c) What are different types of DTD?
d) Write about prompt ().
e) Write any two array utility methods.
f) Write a JQuery program for Date Picker.

[2+2+2+2+2+2]

PART-B

2. a) Create a HTML form with five basic features.
b) Write HTML5 code which creates circles, rectangles using Canvas.
3. a) Explain inline, internal and external and embedded style sheets with examples.
b) Explain how basic and nested tables are created using HTML
4. a) Write a JavaScript program for form validation
b) Explain predefined objects in JavaScript.
5. a) Explain the various types of XML schema data types used.
b) Show how SAX is an alternative method for parsing XML documents. Write its advantages.
6. a) What are selectors in jQuery and how many types of selectors are there?
b) Explain how to attach and detach handlers to many events.
7. What is jQuery UI? What are the methods used to provide effects?



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Subject Code: R16CS2204

II B.Tech II Semester Regular Examinations, April-2018.

DATABASE MANAGEMENT SYSTEMS

(CSE)

Time: 3 hours

Max Marks: 60

Question Paper Consists of **Part-A** and **Part-B**.

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. a) Differentiate between schema and instance. [2+2+2+2+2+2]
b) What is the importance of handling null values in a relation?
c) Describe entities and relationships with examples.
d) Define 3 NF (Fourth Normal Form).
e) What is Serializability?
f) What is multilevel indexing?

PART-B

2. a) Mention various groups of database users. Explain about their roles in detail. [7]
b) Explain the client - server architecture of a DBMS. [5]
3. a) What is ER model? Explain its concepts. [6]
b) What is DML? Explain DML operations with examples. [6]
4. a) Illustrate the usage of SQL GROUP BY, ORDER BY and HAVING clauses. [6]
b) What are the various types of SQL joins? [6]
5. a) Explain Armstrong rules of Functional dependencies. [5]
b) Explain Third-Normal form (3NF) with appropriate example. [7]
6. a) Discuss in detail about timestamp based concurrency control techniques. [8]
b) What is serialization? Explain it. [4]
7. a) What is an index? Explain its role in improving database access. [5]
b) Define dynamic multilevel indexing how to implement it with the help of B+ trees? [7]



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Subject Code: R16CS2205

II B.Tech II Semester Regular Examinations, April-2018.

SOFTWARE ENGINEERING

(CSE)

Time: 3 hours

Max Marks: 60

Question Paper Consists of **Part-A** and **Part-B**.

Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B

All questions carry equal marks of 12.

PART-A

1. a) What is software process? Explain process classification.
- b) Describe the phases of SDLC.
- c) Explain characteristics of good software design.
- d) Explain black box testing.
- e) What is verification and validation?
- f) List the software quality factors.

[2+2+2+2+2+2]

PART-B

2. a) Explain briefly Software development lifecycle. [7]
b) Explain about evaluation of software engineering methodologies. [5]
3. a) What are software requirements? How to analysis the requirements? [6]
b) Explain prototyping analysis? [6]
4. a) What are the design principles? Explain in detail. [7]
b) Explain about structured design methodology. [5]
5. a) Explain coding documentation. [6]
b) What are the levels of testing? Explain in detail. [6]
6. a) What is project management? Explain in detail. [7]
b) What are software metrics and measurements? [5]
7. a) Explain the Capability Maturity Model [6]
b) What are the maintenance process models? [6]



Subject Code: R16CS2206

II B.Tech II Semester Regular Examinations, April-2018.
PROFESSIONAL ETHICS, VALUES AND PATENTS
(CSE)

Time: 3 hours

Max Marks: 60

Question Paper Consists of **Part-A** and **Part-B**.
Answering the question in **Part-A** is Compulsory & Four Questions should be answered from Part-B
All questions carry equal marks of 12.

SET 1

PART-A

1. (a) What is empathy?
- (b) Who is a leader?
- (c) What is whistle blowing?
- (d) What is intellectual property law?
- (e) Define patent?
- (f) What are trademarks?

[2+2+2+2+2+2]

PART-B

4 X 12 = 48

2. (a) what are work ethics? What is their need?
- (b) What is character? Explain?
3. (a) Engineers are good managers. Substantiate this statement?
- (b) Discuss about professional ethics of engineers?
4. (a) what are the rights of engineers?
- b) what are cross cultural issues and occupational crimes?
5. (a) Discuss the ethical obligations in IP law?
6. (a) What are the various types of Intellectual Property rights?
- (b) what are the rights of patent holder?
7. (a) What is the procedure for registration of a trademark?
- (b) When information is called confidential information?
