

UG-400

BCA-13

**B.C.A. DEGREE EXAMINATION –
DECEMBER 2019.**

Third Year

TCP/IP PROGRAMMING

Time : 3 hours

Maximum marks : 75

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE of the following.

1. Explain briefly about DNS message format.
2. Explain formats and classes for Internet protocols.
3. Explain the features of TCP.
4. What is internet multi casting and explain?
5. Explain about IP routing.
6. Write in detail about TCP/IP layering
7. Explain characteristics of UDP.

SECTION B — (5 × 10 = 50 marks)

Answer any FIVE of the following.

8. What is Internet Addressing and brief about TCP/IP?
 9. Discuss in detail about IP subnet addressing.
 10. Explain the concept of TCP header and Structure.
 11. Write brief note on client server model of interaction socket interface.
 12. Discuss in detail about TCP/IP over ATM networks.
 13. Explain in detail about IP Address components.
 14. Write in detail about UDP Header and Structure.
-

B.C.A. DEGREE EXAMINATION –
DECEMBER, 2019.

Third Year

C++ AND OBJECT ORIENTED PROGRAMMING

Time : 3 hours

Maximum marks : 75

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE of the following.

1. Write a note on Constants and Variables.
2. Explain switch case with example
3. Write a C++ program to read a set of numbers and find out the sum of all elements of the given array using a function
4. Describe function overloading with examples.
5. Write a C++ program to find factorial of N numbers.
6. Explain break and continue statement with example.
7. Write short notes on Macro definitions with example.

SECTION B — (5 × 10 = 50 marks)

Answer any FIVE of the following.

8. Describe the basic concepts of object oriented programming.
 9. Discuss various operators in C++ with example.
 10. What is array? Also explain their types.
 11. Describe various types of inheritance in detail.
 12. Explain friend function in detail.
 13. Describe storage classes in detail.
 14. Explain binary operator overloading with an example C++ program.
-

B.C.A. DEGREE EXAMINATION —
DECEMBER, 2019.

Third Year

THEORY OF COMPUTER SCIENCE

Time : 3 hours

Maximum marks : 75

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE of the following.

1. Define disjoint sets and mutually disjoint sets with examples.
2. Obtain the truth table for $\alpha = (P \vee Q) \wedge (P \Rightarrow Q) \wedge (Q \Rightarrow P)$.
3. Construct a DFA accepting all strings w over $\{0, 1\}$ such that the number of 1's in w is $3 \pmod{4}$.
4. Explain graph with an example.
5. Construct a context-free grammar G generating all integers (with sign).

6. Construct a DFA accepting all strings over $\{ a, b \}$ ending in ab .
7. Explain Conditional statement with an example.

SECTION B — (5 × 10 = 50 marks)

Answer any FIVE of the following.

8. Explain the types of relations with examples.
9. Show that $(P \Rightarrow (Q \vee R)) \equiv ((P \Rightarrow Q) \vee (P \Rightarrow R))$.
10. Construct a deterministic finite automaton equivalent to

$M = (\{q_0, q_1, q_2, q_3\}, \{0, 1\}, \delta, q_0, \{q_3\})$ where δ is give by the table.

State/ Σ	a	b
$\rightarrow q_0$	q_0, q_1	q_0
q_1	q_2	q_1
q_2	q_3	q_3
$\textcircled{q_3}$	q_2	

11. Design a Turing machine to recognize all strings consisting of an even number of 1's.
12. Briefly discuss about matrix representation of graphs.

13. Explain briefly regular grammar and give an example.
 14. What is Turing machine? Discuss briefly on its construction and uses.
-

UG-403

BCA-16

**B.C.A. DEGREE EXAMINATION —
DECEMBER, 2019.**

Third Year

**INTRODUCTION TO INTERNET
PROGRAMMING**

Time : 3 hours

Maximum marks : 75

SECTION A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. What do you mean by data types? Explain.
2. List any five important Features of Java.
3. Explain about the if else statement give example.
4. Discuss the constructor and two type constructor.
5. Describe about the abstract class with example.
6. Write a program to find average two numbers in Java.
7. Explain the steps taken by the designing layouts.

SECTION B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain about the Operators give example.
 9. Discuss about the Fundamentals of java.
 10. Write a note on Switch case with example.
 11. Explain in detail Wrapper class.
 12. Describe about the try and catch give example.
 13. Explain briefly about the package and interface.
 14. Explain the Object Oriented programming in Java.
-

UG-404

BCA-17

**B.C.A. DEGREE EXAMINATION —
DECEMBER, 2019.**

Third Year

INTRANET ADMINISTRATION

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Write short notes advantages of intranet.
2. Explain the Encryption/Decryption methods.
3. Discuss about the Security systems.
4. Explain about the Virtual private network.
5. Show that permissions and restrictions.
6. Explain the about Networks and Security.
7. Describe the ARP and SMTP.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain about the types of Intranet.
 9. Discuss about the Software and Hardware requirement for intranet.
 10. Describe about the Database connectivity.
 11. Discuss about the Network installation and Administration.
 12. Explain about the Supporting applications for service.
 13. Discuss about the protocols for E-Commerce.
 14. Briefly explain the Service protocols in detail.
-

UG-405

BCA-18

**B.C.A. DEGREE EXAMINATION —
DECEMBER, 2019.**

Third Year

**MANAGEMENT PRINCIPLES AND
TECHNIQUES**

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Discuss about the decision making of management.
2. Describe about delegation in management.
3. Explain about the principles of modeling.
4. Write short notes on dual simplex algorithm.
5. Discuss about time estimation of PERT.
6. Summarize about resource leveling in CPM.
7. Explain about the group replacement policy.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain in detail about the basic concepts of management.
9. Describe in detail about the leadership and control of management.
10. Briefly discuss about algebraic solutions of linear programming.
11. Elaborate about the transportation problems with example.
12. Explain in detail about construction of time chart in PERT/CPM.
13. Describe in detail about probability and cost consideration in project scheduling.
14. Briefly discuss about variable maintenance cost with fixed money value.
