

**UG-486**

**BSCS-15**

**B.Sc. DEGREE EXAMINATION –  
DECEMBER, 2018.**

**Third Year**

**DATA COMMUNICATIONS AND NETWORKING**

Time : 3 hours

Maximum marks : 75

**SECTION A — (5 × 5 = 25 marks)**

Answer any FIVE questions.

1. What are the components needed in Data communication?
2. Briefly write about the Data flow.
3. Give short notes on layered tasks.
4. Pen down about “Analog and digital signals”.
5. “Transmission media” – Explain.
6. Write in simple words about the microwaves.
7. Elucidate the Network device – repeaters?

SECTION B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the different types of Networks.
  9. Describe the various protocols and standards in Networks.
  10. Draw a neat diagram and discuss about the OSI reference Models.
  11. Explain the periodic analog signals.
  12. Discuss the role of Twisted pair cable in transmitting data.
  13. Is fiber optic cable is advantages? Explain its usage?
  14. IPv6 – Describe in detail.
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**BSCS-16**

**B.Sc. DEGREE EXAMINATION –  
DECEMBER, 2018.**

**Third Year**

**INTRODUCTION TO OPERATING SYSTEMS**

Time : 3 hours

Maximum marks : 75

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. What is an operating system? Enumerate.
2. Explain about the operating system structure.
3. Give short notes on Race conditions.
4. Write about the basic concepts in scheduling.
5. How is the deadlock detected? Explain.
6. “Multiprogramming without swapping or paging”- Explain?
7. List the basics of file in file management.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Elaborate the History of operating systems.
  9. Describe the system calls.
  10. What is mutual exclusion? Explain its features?
  11. “Message passing”-enumerate.
  12. Explain the techniques to Avoid deadlocks.
  13. How can be the deadlock prevented? Explain.
  14. Discuss the importance of directories?
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**BSCS-17**

**B.Sc. DEGREE EXAMINATION –  
DECEMBER, 2018.**

**Third Year**

**JAVA PROGRAMMING**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Give a brief description of bitwise operators in java.
2. Discuss the working method of if...else statement in Java with example.
3. What is the use of final keyword? Explain.
4. Explain the concept of applet creation in Java.
5. List out any five built-in packages.
6. Write a program to find whether the given number is Prime or not.
7. Explain the concept of Java Virtual Machine (JVM).

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the various data type of Java in detail with example.
9. What is constructor? Explain the working of constructor in Java.
10. Explain the types of inheritance with examples.
11. Explain the concept of interface in detail with example.
12. Explain the concept of wrapper classes with example.
13. Explain the life cycle of a thread with a neat diagram.
14. Discuss the concept of class and object in detail with example program.

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**BSCS-18**

**B.Sc. DEGREE EXAMINATION –  
DECEMBER, 2018.**

**Third Year**

**Computer Science**

**HTML AND WEB DESIGN**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Explain the structure of HTML document with example.
2. Explain Height and Width of an image with example.
3. Explain rowspan and colspan attribute with example.
4. Explain the method of creating a FrontPage web.
5. Write short notes on cell alignment in Table with example.
6. Write short notes on Tools menu options in HTML editor.
7. List out the rules of HTML.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the concept of advanced text formatting.
9. Explain hspace and Vspace in <img> with example.
10. Explain the process of creating table in HTML.
11. Discuss in detail about Edit Menu option in HTML editor.
12. What are the different types of lists? Explain.
13. Explain in detail about the channels push technology.
14. Explain about absolute and relative URL.

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**BSCS-19**

**B.Sc. DEGREE EXAMINATION –  
DECEMBER, 2018.**

**Third Year**

**Computer Science**

**INTRODUCTION TO SOFTWARE ENGINEERING**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Write a brief note on formal methods.
2. Explain the RAD model in detail
3. Write a detailed note on mitigation.
4. Discuss briefly about test plans in software design.
5. Explain about the resources in detail.
6. Write short notes on user interface design.
7. What is meant by software scope? Explain.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain software quality assurance in detail.
  9. Explain in detail about white box testing.
  10. Discuss in detail, software reviews.
  11. Explain spiral model in detail with advantages and disadvantages in details.
  12. Discuss in detail about modular design.
  13. Explain in detail about ISO 9000 quality standards.
  14. Explain about the Software configuration management.
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**BSCS-20**

**B.Sc. DEGREE EXAMINATION –  
DECEMBER, 2018.**

**Third Year**

**NETWORK SECURITY**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Explain passive attack with neat sketch.
2. Demonstrate steganography techniques with example.
3. Classify stream and block cipher.
4. Mention any five ingredients involved in public – key encryption and define each one of them.
5. Explain the types of attacks on encrypted messages.
6. State the reasons, why hash function can be used?
7. Enumerate the attack procedure of man-in-the-middle attack.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain the techniques involved in substitution
    - (a) Ceaser cipher (5)
    - (b) One-Time pad (5)
  9. Elucidate DES encryption with diagrammatic representation.
  10. Illuminate RSA algorithm with example and diagram.
  11. Briefly explain Euler's theorem in number theory with example.
  12. Explain Diffie-Hellman key exchange algorithm.
  13. Give detailed explanation on security of hash function and MACs.
  14. Bring the substitution technique followed in
    - (a) Monoalphabetic cipher (5)
    - (b) Polyfair cipher. (5)
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**BSCS-21**

**B.Sc. DEGREE EXAMINATION —  
DECEMBER 2018.**

**Third Year**

**SOFTWARE TESTING**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Explain software quality.
2. Explain
  - (a) Verification
  - (b) Validation
3. Summarize testing principles / Guidelines.
4. Briefly explain about debugging.
5. List Non-functional techniques.
6. Discuss about Alpha testing.
7. Describe about Load testing.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain about Software quality Assurance.
  9. State the difference between Inspection and Testing.
  10. Discuss about Software testing lifecycle.
  11. Diagrammatically explain about V-model for testing phases.
  12. Explain functional testing techniques.
  13. Give detailed explanation on test Management.
  14. Explain types of automated testing.
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**BSCS-22**

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**Third Year**

**COMPILER DESIGN**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Explain reserved words.
2. Briefly describe about syntax tree.
3. Describe the role of passes.
4. Draw a model for predictive five passes
5. Discuss about
  - (a) Infix notation. (2½)
  - (b) Postfix notation. (2½)
6. State about quadruples.
7. Give brief explanation on loop jamming.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain about the phases of compiler.
  9. Give detailed explanation on deterministic automata.
  10. Bring detailed explanation about top down parser tree.
  11. Explain about the optimization.
  12. Describe about symbol table.
  13. Discuss about Regular expression to finite automata.
  14. Detail it-shift-Reduce passing.
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**BSCS-23**

**B.Sc. DEGREE EXAMINATION –  
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**Third Year**

**TCP/IP Programming**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Write short note on DNS Message format.
2. Write briefly about internet address structure and components.
3. Give brief discussion about TCP header.
4. Write short note on UDP features.
5. Write short note on address format and classes with neat diagram.
6. Discuss in brief about link state protocol.
7. Write note on the Two ATM connection paradigms.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain TCP/IP protocol suite with neat architecture diagram.
  9. Give discussion on IP features and mechanisms in detail.
  10. Discuss TCP concepts in detail.
  11. Explain Protocol independent multicast.
  12. Discuss multicast forwarding and routing information in detail.
  13. Explain the following.
    - (a) Features of TCP.
    - (b) Closing a TCP connection.
  14. Give an elaborate discussion about ATMARP packet format.
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**BSCS-24**

**B.Sc. DEGREE EXAMINATION –  
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**Third Year**

**Computer Science**

**INTRANET ADMINISTRATION**

**Time : 3 hours**

**Maximum marks : 75**

**PART A — (5 × 5 = 25 marks)**

**Answer any FIVE questions.**

1. Write down the advantages of intranet.
2. What are protocol supporting tools?
3. Write brief note on database connectivity.
4. Discuss briefly on web graphics.
5. What are permission and restriction?
6. Briefly discuss about Internet Protocols.
7. Briefly explain Web server specific protocols.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. How does intranet works? Give elaborate discussion on it.
9. Give elaborate note on intranet security.
10. Discuss the following.
  - (a) Operating system. (3)
  - (b) Groupware. (3)
  - (c) Database connectivity. (4)
11. Give discussion on web-based tools.
12. Explain the following
  - (a) Account policy. (3)
  - (b) Networks and security. (4)
  - (c) Tuning application over intranet. (3)
13. Give discussion on intranet authoring tools.
14. Explain communication protocols in detail.
15. Describe the following.
  - (a) FTP. (5)
  - (b) UDP. (5)