

P.G. DIPLOMA DEGREE EXAMINATION- DECEMBER -2020**SOFTWARE QUALITY MANAGEMENT****FUNDAMENTALS OF INFORMATION TECHNOLOGY****Time: 3 Hours****Maximum Marks: 75****PART-A****(5 × 5 = 25 Marks)****Answer any FIVE questions.**

1. What is Memory Unit?
2. Give a short note on Software tools?
3. Routers – Elucidate?
4. What is the role of Gateways in Networking?
5. Explain the types of networks?
6. Illustrate the Problems on the Internet?
7. Write a note on web browsers?

PART -B**(5 × 10 = 50 Marks)****Answer any FIVE questions.**

8. Portray the Classification of Software?
9. Explain in detail about the Operating Systems?
10. Categorize the General purpose and Special purpose Application software?
11. Demonstrate the Repeaters and Bridges?
12. Describe the Network Operating System?
13. Give a detailed note on Internet?
14. Explain the Components of network and its standard topologies?

P.G. DIPLOMA DEGREE EXAMINATION- DECEMBER -2020**INFORMATION SECURITY****C# AND .NET****Time: 3 Hours****Maximum Marks: 75****PART-A****(5 × 5 = 25 Marks)****Answer any FIVE questions.**

1. What is unboxing in *c#*?
2. What is the difference between dynamic type variables and object type variables?
3. What is the purpose of *as* operator in *c#*?
4. What is the purpose of an access specifier with example?
5. Explain common language run time.
6. What is ADO.net?
7. Write about get and post methods.

PART -B**(5 × 10 = 50 Marks)****Answer any FIVE questions.**

8. Describe structure of *c#* with suitable examples.
9. Explain any five methods of the string class with example.
10. Discuss the types of inheritance with examples.
11. Write short note on garbage collection.
12. Describe .net frame work.
13. Discuss the advantages of .net over the other languages.
14. Explain how to create *c#* web application.

P.G. DIPLOMA EXAMINATION
DECEMBER 2020

Software Quality Management

INTRODUCTION TO DATABASE
MANAGEMENT SYSTEMS

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. What is an instance? What is a schema?
Explain with examples.
2. Brief the drawbacks of file management systems.
3. What is DBA? Mention the functionalities of DBA.

4. Write a short note on sequential file management.
5. State BCNF. How does it differ from 3NF?
6. List and explain the common data types available in SQL.
7. Compare and contrast natural, inner and outer join with suitable examples.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

8. Explain insertion, deletion and modification anomalies with suitable examples.
9. Discuss the main characteristics of the database approach and specify how it differs from traditional file system. Also explain in detail about the three tier schema architecture of DBMS.
10. What is 2-phase locking protocol? How does it guarantee serializability?

11. State 1NF, 2NF, 3NF and PJNF and explain with examples.
12. Discuss in detail about Direct and Index Sequential file organization techniques.
13. Explain the various relational algebraic operations with suitable examples.
14. Suppose you are given the following requirements for a simple database for the National Football League (NFL) :
 - the NFL has many teams.
 - each team has a name, a city, a coach, a captain, and a set of players,
 - each player belongs to only one team,
 - each player has a name, a position (such as left wing or goalie), a skill level, and a set of injury records,
 - a team captain is also a player.
 - a game is played between two teams (referred to as host_team and guest_team) and has a date (such as May 11th, 2018) and a score (such as 4 to 2).

Construct a clean and concise ER diagram for the NFL database. List your assumptions and

clearly indicate the cardinality mappings as well as any role indicators in your ER diagram.

**P.G. DIPLOMA EXAMINATION- DECEMBER -2020
INFORMATION SECURITY**

INTRODUCTION TO INFORMATION SECURITY

Time: 3 Hours

Maximum Marks: 75

PART-A

(5 × 5 = 25 Marks)

Answer any FIVE questions.

1. What are the limitations of firewalls?
2. What do you mean by vulnerability?
3. What are the characteristics of Information Security?
4. What is virtual private network?
5. What Security Vulnerabilities are addressed by VPN?
6. What is the function of security filters? Discuss.
7. Write about any two Unix security issues.

PART- B

(5 X 10 = 50 Marks)

Answer any FIVE questions.

8. What is Intrusion? Discuss Intrusion detection system with neat diagram.
9. What are the limitations of firewalls? Discuss.
10. Explain how VPN works and describe its benefits.
11. Write short on data base machines and architecture.
12. Discuss security in Knowledge based Systems.
13. Discuss Windows NT security issues.
14. Describe Internet Architecture.

P.G. DIPLOMA DEGREE EXAMINATION- DECEMBER -2020**INFORMATION SECURITY****NETWORK SECURITY****Time: 3 Hours****Maximum Marks: 75****PART-A****(5 × 5 = 25 Marks)****Answer any FIVE questions.**

1. List and define categories of security services.
2. Describe the Model for Network Security with the basic tasks in designing a particular security service.
3. What is the purpose of the S-boxes in DES?
4. Discuss is the difference between differential and linear cryptanalysis.
5. List the principal elements of a public-key cryptosystem?
6. What is the zero point of an elliptic curve?
7. What do you mean by meet-in-the-middle attack?

PART- B**(5 X 10 = 50 Marks)****Answer any FIVE questions.**

8. Explain any two substitution techniques for cryptanalysis with example.
9. Discuss Playfair cipher.
10. Describe how to encrypt message in DES.
11. Explain RSA Algorithm.
12. Write and explain Diffie-Hellman Algorithm.
13. Write about Message Authentication Code Based on DES.
14. Describe attacks on hash functions and MAC.

PG-C-850

PGDIS-06

**P.G. DIPLOMA EXAMINATION –
DECEMBER 2020**

Information Security

CYBER LAW AND CYBER SECURITY

Time : 3 hours

Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. What is meant by Cyber Security?
2. What is meant by Digital Contract?
3. What is the purpose of Cyber Crimes and Cyber Laws?
4. Define Server Security.
5. What is meant by Cyber Forensics?
6. List out the issues of Credit Card Fraud.
7. Define Email Scam.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Write short note on Digital Signature.
 9. Explain in detail about public key Cryptography.
 10. Discuss the issues of Cyber World.
 11. Highlight the features of Cyber Forensics.
 12. Write short note on Electronic Email Security.
 13. Explain Password breaking.
 14. Discuss about investigating email headers.
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