14CS IT 601

Hall Ticket Number:

III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April, 2018 **Common to CSE & IT**

Sixth Semester **Introduction to Data Analytics**

Time: Three Hours **Maximum:** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1. Answer all questions (1X12=12 Marks)
   a) What is the significance of R?
   b) How do we call a function in R?
   c) What is the need of a frame?
   d) Illustrate rbind() function.
   e) Which package has the rename() function.
   f) What is the use of merge() function?
   g) What is linear regression?
   h) List the applications of ANOVA.
   i) Why is T-test needed.
   j) What is classification?
   k) Write any one formulae for calculating distances in clustering.
   l) Why do we need logistic regression?

UNIT I

2. a) Discuss with an example how a function is defined and called in R. 6M
   b) Write the program for matrix multiplication in R. 6M

(OR)

3. a) Explain how to read data from CSV files in R. 6M
   b) Write a R program to read & write a Excel file. 6M

UNIT II

4. a) List and write the descriptions of the character functions. 6M
   b) Illustrate dot plots and kernel density plots. 6M

(OR)

5. a) Discuss aggregating and reconstructing. 6M
   b) Exemplify the subset() function in detail. 6M

UNIT III

6. a) Explain binomial distribution. 6M
   b) Illustrate correlation and covariance with an example. 6M

(OR)

7. a) Demonstrate paste and sprintf with examples. 6M
   b) Discuss linear regression in detail. 6M

UNIT IV

8. a) Demonstrate partitioning cluster analysis. 6M
   b) Illustrate the methods involved in preparing the data. 6M

(OR)

9. a) Explain decision tree approach for classification. 6M
   b) Discuss SVM in detail. 6M

Time: 3 hours

Max. Marks: 60

PART - A 60 Marks

Answer all questions

1x12M=12Marks
4X12M=48 Marks

1.

a) What is the significance of R?
b) How do we call a function in R?
c) What is the need of a frame?
d) Illustrate rbind() function.
e) Which package has the rename() function.
f) What is the use of merge() function?
g) What is linear regression?
h) List the applications of ANOVA.
i) Why is T-test needed.
j) What is classification?
k) Write any one formulae for calculating distances in clustering.
l) Why do we need logistic regression?

UNIT- I

2a. Discuss with an example how a function is defined and called in R.
b. Write the program for matrix multiplication in R.

(OR)

3a. Explain how to read data from CSV files in R.
b. Write a R program to read & write a Excel file.

UNIT-II

4a. List and write the descriptions of the character functions.
b. Illustrate dot plots and kernel density plots.

(OR)

5a. Discuss aggregating and reconstructing.
b. Exemplify the subset() function in detail.

UNIT-III

6a. Explain binomial distribution.
b. Illustrate correlation and covariance with an example.

(OR)

7a. Demonstrate paste and sprintf with examples.

b. Discuss linear regression in detail.

UNIT-IV

8a. Demonstrate partitioning cluster analysis.

b. Illustrate the methods involved in preparing the data.

(OR)

9a. Explain decision tree approach for classification.

b. Discuss SVM in detail.

14IT602

Hall Ticket Number:

II/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April, 2018 **Information Technology**

Sixth Semester **Wireless Networks**

Time: Three Hours **Maximum :** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1. Answer all questions (1X12=12 Marks)
   a) What are location aware services?
   b) What is frequency domain?
   c) What is Path Loss?
   d) What is the difference between HDB & VDB
   e) What are Transparent Bearer Services in GSM
   f) What are the Functionalities of MAC Layer
   g) What is PPDU
   h) What is Traffic Indication Map
   i) What is beacon frame
   j) What is congestion window
   k) List any two advantages of M-TCP
   l) List three classes of libraries defined by WML

UNIT I

2. a) What are the main benefits of a spread spectrum system? How can spreading be achieved? How can DSSS systems benefit from multi-path propagation? 6M
   b) Which of the MAC schemes can give hard guarantees related to bandwidth and access delay? 6M

(OR)

3. a) What are the main reasons for using cellular systems? How is SDM typically realized and combined with FDM? How does DCA influence the frequencies available in other cells? 6M
   b) What are benefits of reservation schemes? How are collisions avoided during data transmission, why is the probability of collisions lower compared to classical Aloha? What are disadvantages of reservation schemes? 6M

UNIT II

4. a) Name the main elements of the GSM system architecture and describe their functions. What are the advantages of specifying not only the radio interface but also all internal interfaces of the GSM system? 6M
   b) Name basic applications for satellite communication and describe the trends. 6M

(OR)

5. a) What are the functions of authentication and encryption in GSM? How is system security maintained? 6M
   b) How could location based services and broadcast systems work together? 6M

UNIT III

6. a) What are the basic differences between wireless WANs and WLANs, and what are the common features? Consider mode of operation, administration, frequencies, capabilities of nodes, services, national/international regulations. 6M
   b) What is the basic purpose of DHCP? Name the entities of DHCP 6M

(OR)

7. a) Discuss in detail about IEEE 802.11 architecture. 6M
   b) Show the steps required for a handover from one foreign agent to another foreign agent including layer 2 and layer 3. 6M

UNIT IV

8. a) How and why does I-TCP isolate problems on the wireless link? What are the main drawbacks of this solution? 6M
   b) Discuss in detail about WAP architecture. 6M

(OR)

9. a) Show the interaction of mobile IP with standard TCP. Draw the packet flow from a fixed host to a mobile host via a foreign agent. Then a handover takes place. What are the following actions of mobile IP and how does TCP react? 6M
   b) Explain in detail about Wireless Markup Language. (WML) 6M

Scheme of Valuation

14IT602

Hall Ticket Number:

II/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April 2018 — **Information Technology**

Sixth Semester — **Wireless Networks**

Time: Three Hours — **Maximum :** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1	Answer all questions		(1X12=12 Marks)
	a)	What are location aware services?	
	b)	What is frequency domain?	
	c)	What is Path Loss?	
	d)	What is the difference between HDB & VDB	
	e)	What are Transparent Bearer Services in GSM	
	f)	What are the Functionalities of MAC Layer	
	g)	What is PPDU	
	h)	What is Traffic Indication Map	
	i)	What is beacon frame	
	j)	What is congestion window	
	k)	List any two advantages of M-TCP	
	l)	List three classes of libraries defined by WML	
		UNIT I	
2	a)	What are the main benefits of a spread spectrum system? How can spreading be achieved? How can DSSS systems benefit from multi-path propagation? Benefits of SSS-2m Explanation and reasoning about DSSS-4m	6 M
	b)	Which of the MAC schemes can give hard guarantees related to bandwidth and access delay? Schemes – 6m	6 M
		(OR)	
3	a)	What are the main reasons for using cellular systems? How is SDM typically realized and combined with FDM? How does DCA influence the frequencies available in other cells? Reason for using cellular systems – 2M SDM & FDM – 3m DCA-1M	6 M
	b)	What are benefits of reservation schemes? How are collisions avoided during data transmission, why is the probability of collisions lower compared to classical Aloha? What are disadvantages of reservation schemes? Benifits-2m Reason for collisions – 2m Disadvantages – 2m	6 M
		UNIT II	
4	a)	Name the main elements of the GSM system architecture and describe their functions. GSM elements – 6M	6 M
	b)	Name basic applications for satellite communication and describe the trends. Applications - 6 M	6 M
		(OR)	
5	a)	What are the functions of authentication and encryption in GSM? How is system security maintained? Functions – 6 M	6 M
	b)	How could location based services and broadcast systems work together? Explanation – 6M	6 M

		UNIT III	
6	a)	What are the basic differences between wireless WANs and WLANs, and what are the common features? Consider mode of operation, administration, frequencies, capabilities of nodes, services, national/international regulations. Features - 6M	6 M
	b)	What is the basic purpose of DHCP? Name the entities of DHCP Entities & Explanation - 6m	6 M
		(OR)	
7	a)	Why is routing in multi-hop ad-hoc networks complicated, what are the special challenges? Challenges – 6M	6 M
	b)	Show the steps required for a handover from one foreign agent to another foreign agent including layer 2 and layer 3. Steps – 6 M	6 M
		UNIT IV	
8	a)	How and why does I-TCP isolate problems on the wireless link? What are the main drawbacks of this solution? I TCP- 3M Drawbacks – 3M	6 M
	b)	Name mechanisms to improve web access for handheld devices. What is their common problem and what led finally to the development of WAP? Mechanisms – 6M	6 M
		(OR)	
9	a)	Show the interaction of mobile IP with standard TCP. Draw the packet flow from a fixed host to a mobile host via a foreign agent. Then a handover takes place. What are the following actions of mobile IP and how does TCP react? Diagram – 3M Actions – 3M	6 M

14CS602/ CS IT 322

Hall Ticket Number:

III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April, 2018 — **Computer Science and Engineering**

Sixth Semester — **Compiler Design**

Time: Three Hours — **Maximum :** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1. Answer all questions (1X12=12 Marks)
   a) Differentiate between phase and pass?
   b) What is the classification of parsing?
   c) What are the additional functionalities of Lexical analyzer?
   d) Define handle pruning?
   e) What are the advantages of CLR parsing over SLR parsing?
   f) Define syntax directed definition?
   g) Define scope of a variable?
   h) What are the benefits of simple stack allocation scheme?
   i) What is self organizing list?
   j) Define a basic block?
   k) Where Makelist() is used?
   l) What is Next use information?

UNIT I

2. a) What are the two parts of compilation? What is the need and role of Lexical Analyzer? 6M
   b) Check whether the given grammar is LL(1) or not using predictive parsing?
   $S \rightarrow iCtS \quad S \rightarrow iCtSeS \quad S \rightarrow a \quad C \rightarrow b$ 6M

(OR)

3. a) Define Lex? Implement the lexical analyzer for the following Lex program
   AUXILIARY DEFINITIONS
   None
   TRANSLATION RULES
   a {}
   abb {}
   a^*b^+ {} 6M
   b) What are the difficulties with Top-Down parsing? Eliminate the left recursion from the grammar S $\rightarrow$ Aa | b A $\rightarrow$ Ac | Sd |e 6M

UNIT II

4. a) Compare and contrast SLR, CLR and LALR Parsers? 5M
   b) Construct the CLR Parsing table for the grammar $S \rightarrow CC \quad C \rightarrow cC \mid d$ 7M

(OR)

5. a) What is the difference between synthesized attributes and inherited attributes? 4M
   b) Describe the implementation of syntax directed translation? 8M

UNIT III

6. a) List out different storage allocation strategies? Compare and contrast? 6M
   b) Describe the accessing of non local names in block structured languages? 6M

(OR)

7. a) What are the contents of symbol table? What are the different kinds of operations to be performed on symbol table? 4M
   b) How to represent scope information in block structured languages? Describe with neat sketch? 8M

UNIT IV

8. a) Generate the SDT for declaration statements? 6M
   b) Generate the SDT for Boolean expressions using control flow representation? 6M

(OR)

9. a) What are the challenges to be faced for generating machine code? 4M
   b) Write the simple code generation algorithm using Getreg() and generate the machine code for the expression W:= (A-B)+(A-C)+(A-C) using 2 registers R_0, R_1 8M

14CS602

III/IV B.Tech (Regular) DEGREE EXAMINATION

APRIL, 2018 — **Computer Science and Engineering**

Sixth Semester — **Compiler Design**

Time: Three Hours — **Maximum :** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

Scheme

1	Answer all questions		(1X12=12 Marks)
	a)	Differentiate between phase and pass? One difference	1M
	b)	What is the classification of parsing? Bottom – Up and Top – Down	1M
	c)	What are the additional functionalities of Lexical analyzer? Atleast two functions	1M
	d)	Define handle pruning? Definition	1M
	e)	What are the advantages of CLR parsing over SLR parsing? Atleast ne advantage	1M
	f)	Define syntax directed definition? Definition	1M
	g)	Define scope of a variable? Definition	1M
	h)	What are the benefits of simple stack allocation scheme? Atleast one benefit	1M
	i)	What is self organizing list? Definition	1M
	j)	Define a basic block? Definition	1M
	k)	Where Makelist() is used? One usage	1M
	l)	What is Next use information? Definition	1M
		UNIT I	
2	a)	What are the two parts of compilation? What is the need and role of Lexical Analyzer? Analysis phase and synthesis phase - 2M Need of Lexical Analyzer - 2M Role of Lexical Analyser - 2M	6M
	b)	Check whether the given grammar is LL(1) or not using predictive parsing? S → iCtS S → iCtSeS S → a C → b Left factoring – 1M FIRST, FOLLOW – 2M Table - 2M Verification – 1M	6M
		(OR)	
3	a)	Define Lex? Implement the lexical analyzer for the following Lex program AUXILIARY DEFINITIONS None TRANSLATION RULES a {} abb {} a^*b^+ {} definition – 1M	6M

		DFA – 2M Identifying tokens – 3M	
	b)	What are the difficulties with Top-Down parsing? Eliminate the left recursion from the grammar S → Aa | b A → Ac | Sd |e Difficulties – 2M Elimination – 4M	6M
		UNIT II	
4	a)	Compare and contrast SLR, CLR and LALR Parsers? Comparison - 5M	5M
	b)	Construct the CLR Parsing table for the grammar S → CC C → cC | d Augmented grammar – 1M LR(1) items – 4M Table – 2M	7M
		(OR)	
5	a)	What is the difference between synthesized attributes and inherited attributes? 2 Differences - 4M	4M
	b)	Describe the implementation of syntax directed translation? Implementation – 8M	8M
		UNIT III	
6	a)	List out different storage allocation strategies? Compare and contrast? Different strategies – 2M Comparison – 4M	6M
	b)	Describe the accessing of non local names in block structured languages? Explanation – 6M	6M
		(OR)	
7	a)	What are the contents of symbol table? What are the different kinds of operations to be performed on symbol table? Contents – 2M Operations – 2M	4M
	b)	How to represent scope information in block structured languages? Describe with neat sketch? Diagram – 3M Explanation – 5M	8M
		UNIT IV	
8	a)	Generate the SDT for declaration statements? Grammar – 2M SDT – 3M	5M
	b)	Generate the SDT for Boolean expressions using control flow representation? Grammar – 2M SDT – 5M	7M
		(OR)	
9	a)	What are the challenges to be faced for generating machine code? Challenges – 4M	4M
	b)	Write the simple code generation algorithm using Getreg() and generate the machine code for the expression W:= (A-B)+(A-C)+(A-C) using 2 registers R_0, R_1 Algorithm – 3M GETREG() – 2M Machine Code – 3M	8M

14IT603

Hall Ticket Number:

III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April, 2018 **Information Technology**

Sixth Semester **Software Engineering**

Time: Three Hours **Maximum:** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1. Answer all questions (1X12=12 Marks)
   a) Discuss about Agile process?.
   b) Explain any one characteristic of software.
   c) What is CASE?
   d) What is requirement analysis.
   e) Write any two planning practices in software engineering practice.
   f) Write any two deployment practices in software engineering practice.
   g) Define design engineering?
   h) What is an architectural design?
   i) Define component level design?
   j) What are project domains?
   k) What is SQA Plan?
   l) What is system testing?.

UNIT I

2. a) Explain the software myths. 6M
   b) What type of changes is made to legacy systems if it exhibits poor quality?. 6M

(OR)

3. a) What is CMMI? Discuss how various maturity levels of CMMI can be measured. 6M
   b) Explain in detail the process patterns. Give few examples of it. 6M

UNIT II

4. a) Define use cases and explain their purpose. 6M
   b) Analyse requirements elicitation and analysis process in detail. 6M

(OR)

5. a) Discuss about modelling practices. 6M
   b) Explain building the analysis model in requirement engineering. 6M

UNIT III

6. a) Analyse Design concepts in design engineering? 6M
   b) What is design process in design engineering? 6M

(OR)

7. a) Discuss about designing class-based components. 6M
   b) Explain the golden rules?. 6M

UNIT IV

8. a) Explain metrics for maintenance? 6M
   b) Analyse object-oriented testing methods. 6M

(OR)

9. a) Explain metrics for source code in product metrics. 6M
   b) Discuss test strategies for object oriented software. 6M

14IT604

Hall Ticket Number:

III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April, 2018 **Information Technology**

Sixth Semester **ENTERPRISE PROGRAMMIG-I**

Time: Three Hours **Maximum:** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1. Answer all questions (1X12=12 Marks)
   a) Which component of the .NET framework provide an extensible set of classes that can be used by any .NET compliant programming language?
   b) Code that targets the Common Language Runtime is known as
   c) What is the name of the Page object's property that determines if a Web page is being requested without data being submitted to server?
   d) What is State management in ASP.NET?
   e) When does ViewState restoration happens?
   f) How can we apply themes in ASP.NET application?
   g) What are two important objects of ADO.Net?
   h) What is DataReader Object?
   i) Define web serice.
   j) What is Application pool in IIS?
   k) What is Default Route in MVC?
   l) List any 2 web components of Web Services.

UNIT I

2. a) Explain the basic workflow that takes between source code, .net compiler and mscore.dll. 6M
   b) Write an ASP.net application to create a registration form to demonstrate web controls. 6M

(OR)

3. a) Explain in detail about the building blocks of .NET? 8M
   b) What is JIT? What are its advantages? 4M

UNIT II

4. a) What are the State Management Techniques used in ASP.NET? Explain View State as State Management Technique? 8M
   b) What is the Difference between Label Control and Literal Control? 6M

(OR)

5. a) What is the master page? Explain the procedure to create nested master pages in asp.net? 6M
   b) List any 4 Rich controls in asp.net. Explain the procedure to add calendar control. 6M

UNIT III

6. a) List the various data providers available in ADO.NET? 6M
   b) Explain about Data Binding in ASP.NET 6M

(OR)

7. a) List the differences between Datareader and Dataset? 4M
   b) What are the different execute methods of Ado.Net give an example program. 8M

UNIT IV

8. a) List different ways of deployment that are supported by .NET Framework 4.5. What is the difference between deploying and publishing an application? 6M
   b) Explain the .NET Framework deployment features. 6M

(OR)

9. a) What is ViewStart Page in ASP.Net MVC? List the Non Action methods in ASP.Net MVC? 4M
   b) What do you mean by Interoperability of Web Services? What are the behavioral characteristics of web services? 8M

14IT604

III/IV B.Tech. (Supplementary) DEGREE EXAMINATION
March/April, 2018
(Second Semester)
ENTERPRISE PROGRAMMIG-I
(IT)

Time: Three Hours **Maximum : 60 Marks**

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48)

1. Define the following: (12X1=12 Marks)

a) Which component of the .NET framework provide an extensible set of classes that can be used by any .NET compliant programming language?
b) Code that targets the Common Language Runtime is known as
c) What is the name of the Page object's property that determines if a Web page is being requested without data being submitted to server?
d) What is State management in ASP.NET?
e) When does ViewState restoration happens?
f) How can we apply themes in ASP.NET application?
g) What are two important objects of ADO.Net?
h) What is DataReader Object?
i) How to stop a running thread?
j) What is Application pool in IIS?
k) What is Default Route in MVC?
l) List any 2 web components of Web Services.

UNIT – I

2. a) Explain the basic workflow that takes between source code, .net compiler and mscore.dll. 8M
b) Explain about i) Assembly ii) Manifest 4M

OR

3. a) Explain in detail about the building blocks of .NET? 8M
b) What is JIT? What are its advantages? 4M

UNIT-II

4. a) What are the State Management Techniques used in ASP.NET? Explain ViewState as State Management Technique? 8M
b) What is the Difference between Label Control and Literal Control? 4M

OR

5. a) What is the master page? Explain the procedure to create nested master pages in asp.net? 6M
b) List any 4 Rich controls in asp.net. Explain the procedure to add calendar control. 6M

UNIT-III

6. a) List the various data providers available in ADO.NET? 6M
b) Explain about Data Binding in ASP.NET 6M

OR

7. a) List the the differences between Datareader and Dataset? 4M
b) What are the different execute methods of Ado.Net give an example program. 8M

UNIT-IV

8. a) List different ways of deployment that are supported by .NET Framework 4.5. What is the difference between deploying and publishing an application? 6M
b) Explain the .NET Framework deployment features. 6M

OR

9. a) What is ViewStart Page in ASP.Net MVC? List the Non Action methods in ASP.Net MVC?
b) What do you mean by Interoperability of Web Services? What are the behavioral characteristics of web services? 4M+8M

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14IT605

Hall Ticket Number:

III/IV B.Tech (Regular) DEGREE EXAMINATION

April, 2018 — **INFORMATION TECHNOLOGY**

Sixth Semester — **INTRODUCTION TO CYBER SECURITY**

Time: Three Hours — **Maximum :** 60 Marks

Answer Question No.1 compulsorily. — (1X12 = 12 Marks)

Answer ONE question from each unit. — (4X12=48 Marks)

1 Answer all questions **(1X12=12 Marks)**

a) Distinguish between Cryptography and Cryptanalysis.
b) What is a Ceaser Cipher?
c) What is meant by Public – Key Cryptography?
d) Give any two NIST security metrics.
e) What is avalanche effect in AES algorithm.
f) What are the challenges for effective vulnerability management.
g) Where do you use Nessus tool?
h) What is metasploit?
i) Encrypt the work "examination" using Caesar cipher with offset 4.
j) What is a malware?
k) What is a firewall?
l) Define cyber security.

UNIT I

2	**a)**	Briefly discuss the Model for Network Security.	6M
	b)	Explain in – detail essential ingredients of a symmetric cipher?	6M

(OR)

3	**a)**	What is a transposition cipher? Discuss row – transposition technique with suitable example.	6M
	b)	Explain in - detail general depiction of DES Encryption Algorithm.	6M

UNIT II

4	**a)**	Define IT audit. Write the steps for IT audit.	6M
	b)	Where do you use settollkit.	6M

(OR)

5	**a)**	Give an over view of AES algorithm.	6M
	b)	Give a note on ip tables.	6M

UNIT III

6	**a)**	Discuss RSA algorithm.	6M
	b)	Apply RSA algorithm to the following data: p =3, q= 11, e= 7, m=5.	6 M

(OR)

7	**a)**	What is the need for Vulnerability?	6 M
	b)	How do you use N-map tool in mapping networkd?	6 M

UNIT IV

8	**a)**	How do you manage security configuration?	6 M
	b)	What is the role of MBSA?	6 M

(OR)

9	**a)**	Discuss different modes in which snort operates.	6 M
	b)	How do you implement security configurations.	6 M

14IT605

Hall Ticket Number:

III/IV B.Tech (Regular) DEGREE EXAMINATION

April, 2018 — **INFORMATION TECHNOLOGY**

Sixth Semester — **INTRODUCTION TO CYBER SECURITY**

Time: Three Hours — **Maximum :** 60 Marks

Answer Question No.1 compulsorily. — (1X12 = 12 Marks)

Answer ONE question from each unit. — (4X12=48 Marks)

1 Answer all questions **(1X12=12 Marks)**

a) Distinguish between Cryptography and Cryptanalysis.
b) What is a Ceaser Cipher?
c) What is meant by Public – Key Cryptography?
d) How to solve Meet – in – the - Middle attack?
e) Define Message Digest?
f) What is a Digital Signature?
g) What characteristics are needed in a secure hash function?
h) What is a nonce?
i) What four requirements were defined for Kerberos?
j) In the context of Kerberos, what is a realm?
k) List three design goals for a firewall.
l) What is the difference between statistical anomaly detection and rule-based intrusion detection?

UNIT I

2	**a)**	Briefly discuss the Model for Network Security.	6 M
	b)	Explain in – detail essential ingredients of a symmetric cipher?	6 M
		(OR)	
3	**a)**	What is a transposition cipher? Discuss row – transposition technique with suitable example.	6 M
	b)	Explain in - detail general depiction of DES Encryption Algorithm.	6 M

UNIT II

4	**a)**	Describe and discuss the RSA Algorithm.	6 M
	b)	Perform encryption and decryption using the RSA algorithm for the following: p = 3; q = 11, e = 7;M = 5	6 M
		(OR)	
5	**a)**	Explain the Diffie-Hellman Key Exchange Algorithm	6 M
	b)	How to solve Man – in – the Middle attack using Diffie-Hellman Key Exchange?	6 M

UNIT III

6	**a)**	What is a Hash function? Discuss two – simple hash functions.	6 M
	b)	Discuss different types of attacks are addressed by message authentication?	6 M
		(OR)	
7	**a)**	Discuss in –detail two types of digital signatures approaches.	6 M
	b)	Describe and discuss the DSS Standard.	6 M

UNIT IV

8	**a)**	Explain different distribution of public key approaches.	6 M
	b)	Briefly discuss the different intruder's classifications.	6 M
		(OR)	
9	**a)**	What is Kerbero? Briefly discuss the Overview of Kerberos.	6 M
	b)	Explain Different types of Firewalls.	6 M

14IT606/B

Hall Ticket Number:

III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION

April, 2018 **Department of Information Technology**

Sixth Semester **Bioinformatics**

Time: Three Hours **Maximum :** 60 Marks

Answer Question No.1 compulsorily. (1X12 = 12 Marks)

Answer ONE question from each unit. (4X12=48 Marks)

1. Answer all questions (1X12=12 Marks)
   a) Define Bioinformatics
   b) What is Genome Project?
   c) List the difference between Homology and Analogy
   d) What is EST?
   e) What is Dynamic programming
   f) Describe scoring Matrices
   g) What is pair wise alignment?
   h) List the secondary databases in Bioinformatics
   i) Describe Phylogentic analysis
   j) What is Microarrays?
   k) List the names of packages in DNA analysis
   l) What do you mean by commercial software?

UNIT I

2. a) Describe the central Dogma of Molecular Biology 4M
   b) Discuss about Biological databases and Primary Sequence databases 8M

(OR)

3. a) Describe the Applications of Bioinformatics 4M
   b) Explain Structure classification databases and specialized genomic resources 8M

UNIT II

4 a) Discuss importance of DNA analysis 4M
   b) Explain Dot plot and Global similarity algorithm with example 8M

(OR)

5. a) Explain different approaches to EST Analysis 4M
   b) Describe the Smith- Waterman algorithm with example 8M

UNIT III

6. a) Discuss about PSI-BLAST 6M
   b) Explain the methods of Phylogenetic Analysis 6M

(OR)

7. a) Discuss tools for Phylogenetic Analysis 4M
   b) Describe Fingerprints and Blocks of Secondary Database 8M

UNIT IV

8. a) How to analyse gene expression profile? Explain 6M
   b) Write applications and tools of Microarray analysis 6M

(OR)

9. a) Describe the packages of DNA analysis 6M
   b) Explain Difference between Intranet and Internet packages 6M