C 83754 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Computer Science Engineering

CS/IT 14 705 B—E-COMMERCE

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Discuss how E-Commerce is helpful to business success.
2. Discuss the benefits and limitations of E-Commerce.
3. What are the advantages and disadvantages of a Smart Card ?
4. What do you understand by Electronic Funds Transfer ?
5. Write in short about Features of an e-payment system.
6. What is EDI ? Discuss its layered structure.
7. Write notes on ethical, social and political issues in EC.
8. Discuss any two passive and active advertising methods.
9. What are the desirable characteristics of an Electronic Market Place ?
10. Explain the role and support of E-Commerce in travel applications.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 *marks.*

11 a) Compare and contrast the traditional business with electronic commerce in a book shop business.

Or

b) Explain the framework and components of E-Commerce architecture.

12 a) Describe the functional requirements for online selling and what specialized services and servers perform these functions.

Or

Turn over

b) Describe the characteristics of the types of payment system and give an application example for each type.

13. a) Discuss in detail about the security issues for which electronic cash is transferred over internet with an example.

Or

b) Explain the role of EC in supply chain management and retailing.

14. a) Write about the major methods of Internet advertisement and discuss how product comparison process can be used as on opportunity of advertisement.

Or

b) Explain the security measures to be considered for any B2B E-Commerce system.

(4 × 15 = 60 marks)

C 83757 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Information Technology

IT 14 703—INTERNET TECHNOLOGIES

Time : Three Hours Maximum : 100 Marks

Part A (Short Questions)

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Discuss the various interactions of Client and Server model.
2. Define RPC and mention its usage.
3. What is meant by VoIP ?
4. List the various types of differentiated services.
5. Describe the procedure for streaming audio and video.
6. Discuss about internet telephony.
7. Describe about unique features of E-commerce.
8. Mention the role of Net Marketers.
9. Write the principle of operation involved in implementing Digital payments.
10. Explain about the trends in Supply Chain Management and collaborative commerce.

(8 × 5 = 40 marks)

Part B (Descriptive Questions)

Answer **all** *questions.*
Each question carries 15 *marks.*

11. Write in detail about E-mail representation and transfer mechanism.

Or

12. Explain the following ; i) Middleware ii) Remote File Access.
13. Explain briefly about Stored Audio and Video telephony system.

Or

14. Explain the internet network management framework in detail.

Turn over

15. Give a detailed comparison of E-commerce and E-business.

Or

16. Explain the procedure involved in building an E-Commerce website.

17. Explain the operations involved in E-commerce B2C payment systems.

Or

18. Write short notes on B2B Payment Systems.

(4 × 15 = 60 marks)

C 83748 (Pages : 2) Name Hasna. H.

Reg. No. IEAPCIT016

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Computer Science Engineering

CS/IT 14 702—CRYPTOGRAPHY AND NETWORK SECURITY

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Use Caesar cipher with key = 15, to encrypt the message "Welcome".
2. Distinguish between streams and block ciphers.
3. What are the weaknesses of DES ?
4. Give any four names of substitution techniques.
5. Highlight the differences between diffusion and confusion.
6. Write a note on PGP in detail.
7. Explain about S/MIME in detail.
8. Distinguish between message integrity and message authentication.
9. List the features of X509 authentication service.
10. List the IP security features.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 *marks.*

11. Discuss in detail about the types of attacks in detail.

Or

12. Discuss in detail about Transposition and substitution cipher mechanism with examples.
13. Explain the Diffie - Hellman Key Exchange protocol in detail.

Or

14. Explain in detail about Elliptic Curve Cryptography with neat diagram.

Turn over

15. Explain the working of Kerberos in detail.

Or

16. Why does PGP compress the message ? What are the reasons for compressing the signature but before encryption ?

17. Explain the firewall mechanism in detail.

Or

18. Describe in detail about Socket layer and transport layer security with neat diagram.

(4 × 15 = 60 marks)

C 83747 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] (SUPPLEMENTARY) EXAMINATION, APRIL 2020

Computer Science Engineering

CS/IT 14 701—DESIGN AND ANALYSIS OF ALGORITHM

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. If $f(n) = n^3 + 3n^2 + n$, find O,Ω and ∅.
2. Solve the recurrence relation

$$T(n) = \begin{cases} 3T(n/2) + kn & n > 1 \\ 1 & n = 1 \end{cases}$$

3. Define Subset Paradigm of Greedy method. Give an example.
4. Draw the state space tree generated by Backtracking approach for sum of subsets problem using variable tuple size formulation.
5. Write the algorithm for LC Branch and Bound method.
6. When can we say that a problem belongs to NP class ? Give an example.
7. Show that clique problem is NP-complete.
8. For the following graph Fig. 1, find the chromatic number (m). How many solutions exist with exactly m colors ? Draw the state space tree :

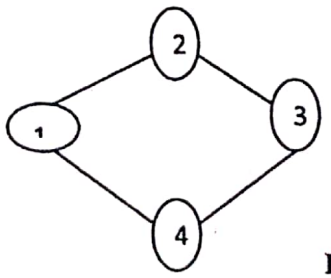


Fig: 1

9. Explain les vegas algorithm.
10. Give a randomised solution to solve 8-queen's problem.

(8 × 5 = 40 marks)

Turn over

Part B

*Answer **all** questions.*

Each question carries 15 marks.

11. a) What do you mean by efficiency of an algorithm ? How can you compare the efficiency of 2 algorithms ? Explain the concept of best case, average case and worst case time complexity.

Or

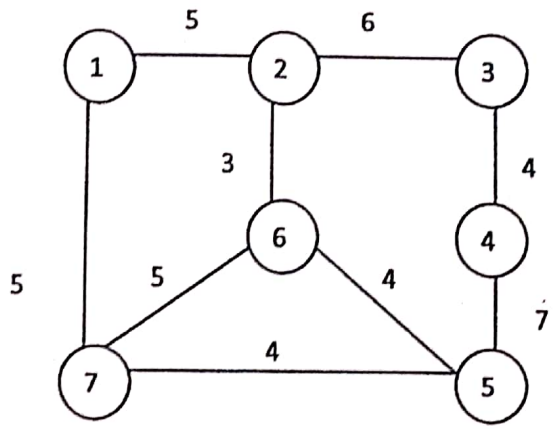
b) Write a program to find the nth power of a number x (x power n) using recursion. Find the recurrence relation and solve the same.

12. a) Find the minimum cost tour for the following Travelling Salesman Problem using Branch and Bound method.

	A	B	C	D	E
A	∞	11	10	9	6
B	9	∞	7	3	4
C	6	4	∞	4	8
D	11	10	5	∞	5
E	6	9	5	2	∞

Or

b) For the following graph, construct a minimum cost spanning tree using Prim's method. Also write the algorithm.



13. a) Given an undirected graph, how will you find minimum size vertex cover. Explain with an example.

Or

b) With an example, explain the Hamiltonian cycle problem.

14. a) Explain Pollard's rho heuristic in detail with procedures and illustrations.

Or

b) Describe randomised sorting with an example.

(4 × 15 = 60 marks)

C 83759 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Information Technology

IT 14 704E—SOFTWARE QUALITY MANAGEMENT

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Detail the need for Quality Function Deployment and Benchmarking in software process Management.
2. Write the role of software quality Assurance.
3. Explain about the types of baselines and questions that a software configuration management should answer.
4. List the Software Configuration Management support Functions.
5. Enumerate the reason for software standard and its benefit.
6. Briefly explain how inspections are conducted in software development process ?
7. How will you establish a software quality program ?
8. What is the role of management in defect prevention ?
9. Explain path selection in unit and functional testing.
10. List the steps in establishing software quality program.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 *marks.*

11. (a) Explain the software assessment process in detail.

Or

(b) Describe how the cost of quality is calculated ? Also write a note on seven quality control tools.

Turn over

12. (a) What are the SCM audits that are conducted before each phase of software development and specify the ground rules for it. Explain in detail.

Or

(b) Give an account of basic configuration management in detail.

13. (a) Explicate the steps in establishing software standards.

Or

(b) Explain the need for quality standards. Explain CMM and ISO 9000 series.

14. (a) Describe the testcase design guidelines and how these test cases are executed and reported.

Or

(b) Write a note on process changes required in order to incorporate defect prevention. Also describe the defect prevention considerations.

(4 × 15 = 60 marks)

C 83747 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] (SUPPLEMENTARY) EXAMINATION, APRIL 2020

Computer Science Engineering

CS/IT 14 701—DESIGN AND ANALYSIS OF ALGORITHM

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. If $f(n) = n^3 + 3n^2 + n$, find O,Ω and ∅.
2. Solve the recurrence relation

$$T(n) = \begin{cases} 3T(n/2) + kn & n > 1 \\ 1 & n = 1 \end{cases}$$

3. Define Subset Paradigm of Greedy method. Give an example.
4. Draw the state space tree generated by Backtracking approach for sum of subsets problem using variable tuple size formulation.
5. Write the algorithm for LC Branch and Bound method.
6. When can we say that a problem belongs to NP class ? Give an example.
7. Show that clique problem is NP-complete.
8. For the following graph Fig. 1, find the chromatic number (m). How many solutions exist with exactly m colors ? Draw the state space tree :

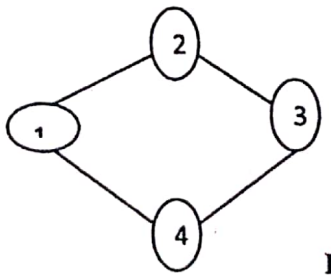


Fig: 1

9. Explain les vegas algorithm.
10. Give a randomised solution to solve 8-queen's problem.

(8 × 5 = 40 marks)

Turn over

Part B

*Answer **all** questions.*

Each question carries 15 marks.

11. a) What do you mean by efficiency of an algorithm ? How can you compare the efficiency of 2 algorithms ? Explain the concept of best case, average case and worst case time complexity.

Or

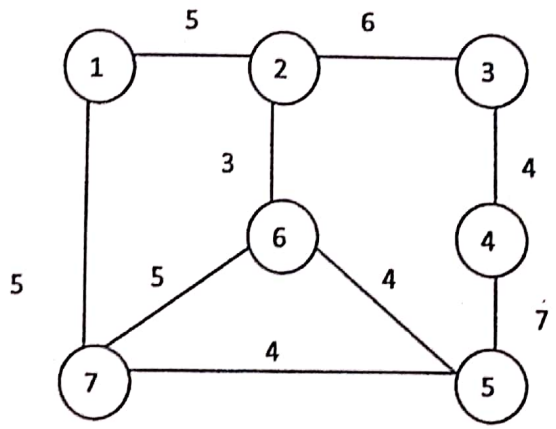
b) Write a program to find the nth power of a number x (x power n) using recursion. Find the recurrence relation and solve the same.

12. a) Find the minimum cost tour for the following Travelling Salesman Problem using Branch and Bound method.

	A	B	C	D	E
A	∞	11	10	9	6
B	9	∞	7	3	4
C	6	4	∞	4	8
D	11	10	5	∞	5
E	6	9	5	2	∞

Or

b) For the following graph, construct a minimum cost spanning tree using Prim's method. Also write the algorithm.



13. a) Given an undirected graph, how will you find minimum size vertex cover. Explain with an example.

Or

b) With an example, explain the Hamiltonian cycle problem.

14. a) Explain Pollard's rho heuristic in detail with procedures and illustrations.

Or

b) Describe randomised sorting with an example.

(4 × 15 = 60 marks)

C 83748 (Pages : 2) Name Hasna. H.

Reg. No. IEAPCIT016

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Computer Science Engineering

CS/IT 14 702—CRYPTOGRAPHY AND NETWORK SECURITY

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Use Caesar cipher with key = 15, to encrypt the message "Welcome".
2. Distinguish between streams and block ciphers.
3. What are the weaknesses of DES ?
4. Give any four names of substitution techniques.
5. Highlight the differences between diffusion and confusion.
6. Write a note on PGP in detail.
7. Explain about S/MIME in detail.
8. Distinguish between message integrity and message authentication.
9. List the features of X509 authentication service.
10. List the IP security features.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 *marks.*

11. Discuss in detail about the types of attacks in detail.

Or

12. Discuss in detail about Transposition and substitution cipher mechanism with examples.
13. Explain the Diffie - Hellman Key Exchange protocol in detail.

Or

14. Explain in detail about Elliptic Curve Cryptography with neat diagram.

Turn over

15. Explain the working of Kerberos in detail.

Or

16. Why does PGP compress the message ? What are the reasons for compressing the signature but before encryption ?

17. Explain the firewall mechanism in detail.

Or

18. Describe in detail about Socket layer and transport layer security with neat diagram.

(4 × 15 = 60 marks)

C 83757 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Information Technology

IT 14 703—INTERNET TECHNOLOGIES

Time : Three Hours Maximum : 100 Marks

Part A (Short Questions)

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Discuss the various interactions of Client and Server model.
2. Define RPC and mention its usage.
3. What is meant by VoIP ?
4. List the various types of differentiated services.
5. Describe the procedure for streaming audio and video.
6. Discuss about internet telephony.
7. Describe about unique features of E-commerce.
8. Mention the role of Net Marketers.
9. Write the principle of operation involved in implementing Digital payments.
10. Explain about the trends in Supply Chain Management and collaborative commerce.

(8 × 5 = 40 marks)

Part B (Descriptive Questions)

Answer **all** *questions.*
Each question carries 15 *marks.*

11. Write in detail about E-mail representation and transfer mechanism.

Or

12. Explain the following ; i) Middleware ii) Remote File Access.
13. Explain briefly about Stored Audio and Video telephony system.

Or

14. Explain the internet network management framework in detail.

Turn over

15. Give a detailed comparison of E-commerce and E-business.

Or

16. Explain the procedure involved in building an E-Commerce website.

17. Explain the operations involved in E-commerce B2C payment systems.

Or

18. Write short notes on B2B Payment Systems.

(4 × 15 = 60 marks)

C 83759 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Information Technology

IT 14 704E—SOFTWARE QUALITY MANAGEMENT

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Detail the need for Quality Function Deployment and Benchmarking in software process Management.
2. Write the role of software quality Assurance.
3. Explain about the types of baselines and questions that a software configuration management should answer.
4. List the Software Configuration Management support Functions.
5. Enumerate the reason for software standard and its benefit.
6. Briefly explain how inspections are conducted in software development process ?
7. How will you establish a software quality program ?
8. What is the role of management in defect prevention ?
9. Explain path selection in unit and functional testing.
10. List the steps in establishing software quality program.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 *marks.*

11. (a) Explain the software assessment process in detail.

Or

(b) Describe how the cost of quality is calculated ? Also write a note on seven quality control tools.

Turn over

12. (a) What are the SCM audits that are conducted before each phase of software development and specify the ground rules for it. Explain in detail.

Or

(b) Give an account of basic configuration management in detail.

13. (a) Explicate the steps in establishing software standards.

Or

(b) Explain the need for quality standards. Explain CMM and ISO 9000 series.

14. (a) Describe the testcase design guidelines and how these test cases are executed and reported.

Or

(b) Write a note on process changes required in order to incorporate defect prevention. Also describe the defect prevention considerations.

(4 × 15 = 60 marks)

C 83754 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME] {SUPPLEMENTARY} EXAMINATION, APRIL 2020

Computer Science Engineering

CS/IT 14 705 B—E-COMMERCE

Time : Three Hours Maximum : 100 Marks

Part A

Answer any **eight** *questions.*
Each question carries 5 *marks.*

1. Discuss how E-Commerce is helpful to business success.
2. Discuss the benefits and limitations of E-Commerce.
3. What are the advantages and disadvantages of a Smart Card ?
4. What do you understand by Electronic Funds Transfer ?
5. Write in short about Features of an e-payment system.
6. What is EDI ? Discuss its layered structure.
7. Write notes on ethical, social and political issues in EC.
8. Discuss any two passive and active advertising methods.
9. What are the desirable characteristics of an Electronic Market Place ?
10. Explain the role and support of E-Commerce in travel applications.

(8 × 5 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 15 *marks.*

11 a) Compare and contrast the traditional business with electronic commerce in a book shop business.

Or

b) Explain the framework and components of E-Commerce architecture.

12 a) Describe the functional requirements for online selling and what specialized services and servers perform these functions.

Or

Turn over

b) Describe the characteristics of the types of payment system and give an application example for each type.

13. a) Discuss in detail about the security issues for which electronic cash is transferred over internet with an example.

Or

b) Explain the role of EC in supply chain management and retailing.

14. a) Write about the major methods of Internet advertisement and discuss how product comparison process can be used as on opportunity of advertisement.

Or

b) Explain the security measures to be considered for any B2B E-Commerce system.

(4 × 15 = 60 marks)