**ANNEXURE 2.2.2** 

# **K.S. INSTITUTE OF TECHNOLOGY**

#14, Raghuvanahalli, Kanakapura main Road, Bengaluru – 560 109



# **Department of Computer Science & Engineering**

# QUALITY OF INTERNAL QUESTION PAPERS AND ASSIGNMENTS



### K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109 SECOND INTERNAL TEST QUESTION PAPER 2023-24 ODD SEMESTER

| USN |
|-----|
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#### SET-A

| Degree              | : BE                               |
|---------------------|------------------------------------|
| Branch              | : Computer Science and Engineering |
| <b>Course Title</b> | : Cryptography                     |
| Duration            | : 90 Minutes                       |

Semester: VII/A/B Course Code: 18CS744 Date: 24-11-2023 Max Marks: 30

| Note: Answer | ONE full | question | from each | part. |
|--------------|----------|----------|-----------|-------|
|--------------|----------|----------|-----------|-------|

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

| Q No. | Question   | Marks | CO<br>map<br>ping | K-Level |
|-------|--|-------|-------------------|---------|
|       | PART-A   |       |                   |         |
| 1(a)  | <b>Construct</b> elliptic curve encryption and decryption process using ECC Diffie –Hellman key exchange.  | 6     | CO3               | К3      |
| (b)   | Apply Elliptic curve arithmetic on the elliptic curve $E_{23}(1,1)$ , P=(3, 10) and Q= (9,7). Find: i) P+Q ii) 2P  | 6     | CO3               | К3      |
| (c)   | Build Pseudo random number generator using RSA.  | 6     | CO3               | K3      |
|       | OR   |       |                   |         |
| 2(a)  | Make use of symmetric encryption and explain key distribution scenario.  | 6     | CO3               | К3      |
| (b)   | (b) Apply Elliptic curve arithmetic on the elliptic curve $E_{11}$ (1, 6) for the curve defined by $y^2=x^3+1x+6$ with modulus of $p=11$ . Determine all the points in $E_{11}(1,6)$ .                         |       |                   | К3      |
| (c)   | <ul> <li>Make use of neat diagram and explain the following in distribution of public keys.</li> <li>i) Public Announcement</li> <li>ii) Public Key Authority.</li> </ul>                                      | 6     | CO3               | К3      |
|       | PART-B   |       |                   |         |
| 3(a)  | Apply Elgamal cryptosystem algorithm for $q= 13$ , its primitive root $\alpha=10$ . A's private key is 5, B's private key is 6 and M=17. Perform encryption and decryption.                                    | 6     | CO2               | K3      |
| (b)   | Make use of neat daigram; explain the general format of X.509 certificate.   | 6     | CO4               | К3      |
|       | OR   |       |                   |         |
| 4(a)  | Apply Diffie –Hellman key exchange algorithm for $q=71$ , its primitive<br>root $\alpha=7$ . A's private key is 5, B's private key is 12. Find i) A's Public<br>Key ii) B's Public Key iii) Shared Secret Key. |       | CO2               | К3      |
| (b)   | Utilize an example and explain hierarchy of X.509.   | 6     | CO4               | К3      |

Name and Signature of **Course In charge** 

()2 ucatap 11/23 Dr. REKHA B. VENKATA write Name and Signature of **HOD CSE Module coordinator** 

Principal



### K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109 SECOND INTERNAL TEST QUESTION PAPER 2023-24 ODD SEMESTER



#### SET-B

| Degree              | : BE                               |
|---------------------|------------------------------------|
| Branch              | : Computer Science and Engineering |
| <b>Course Title</b> | : Cryptography                     |
| Duration            | : 90 Minutes                       |

| Semester:          | VII/A/B  |
|--------------------|----------|
| <b>Course Code</b> | :18CS744 |
| Date: 24-11-2      | 2023     |
| MaxMarks:          | 30       |

Note: Answer ONE full question from each part.

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

| Q No. |   | Marks | CO<br>map<br>ping | K-Level |
|-------|---|-------|-------------------|---------|
|       | PART-A  |       | ſ                 |         |
| 1(a)  | Identify the characteristics of elliptic curve over real numbers  | 6     | CO3               | K3      |
| (b)   | <b>Apply</b> Elliptic curve arithmetic on the elliptic curve $E_{13}(6, -9)$ for the curve defined by $y^2=x^3+6x-9$ with modulus of P=11. Determine all the points in $E_{13}(6, -9)$ .                          | 6     | CO3               | К3      |
| (c)   | <b>Construct</b> ECC Diffie –Hellman key exchange mechanism with neat diagram.  | 6     | CO3               | К3      |
|       | OR  |       |                   |         |
| 2(a)  | <b>Illustrate</b> the working of Micali-Schnorr pseudorandom bit generator using Elliptic Curve Cryptography.   | 6     | CO3               | К3      |
| (b)   | Apply Elliptic curve arithmetic on the elliptic curve $y^2=x^3-36x$ where $P = (-3,9)$ and $Q = (-2,8)$ . Find: i) P+Q ii) 2P   | 6     | CO3               | К3      |
| (c)   | <ul> <li>Make use of neat diagram and explain the following in distribution of public keys.</li> <li>i) Public available directory</li> <li>ii) Public Key certificates.</li> </ul>                               | 6     | CO3               | К3      |
|       | PART-B  |       |                   |         |
|       | Apply Diffie –Hellman key exchange algorithm for prime no. $q=11$ , its primitive root $\alpha=2$ . A's private key is 9, B's private key is 3. Find i) A's Public Key ii) B's Public Key iii) Shared Secret Key. | 6     | CO2               | К3      |
|       | <b>Make use</b> of a neat diagram, explain the fields of X.509 Certificate along with its application.  | 6     | CO4               | К3      |
|       | OR  |       |                   |         |
| 4(a)  | <b>Apply</b> Elgamal cryptosystem algorithm for Prime No. $q= 13$ , its primitive root $\alpha=2$ . A's private key is 3, B's private key is 7 and M=4. Perform encryption and decryption.                        | 6     | CO2               | К3      |
| (b)   | Utilize an example and explain hierarchy of X.509.  | 6     | CO4               | К3      |

Name and Signature of Course In charge

2014/23

Name and Signature of **Module coordinator** Dr. REKHA B. VENKATAPUR

HOD CSE

FUD

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Principal



K S INSTITUTE OF TECHNOLOGY

Bengaluru - 560109

### **DEPARTMENT OFCOMPUTER SCIENCE & ENGINEERING**

### **CIE Question paper Scrutiny format**

| C N   |                                   |
|---|-----------------------------------|
| Course Name   | User Interface Design             |
| Course Code   | 18CS734                           |
| Course Incharge   | Mrs. Pallavi K N                  |
| Academic year   | 2023-2024 [Odd]                   |
| Semester  | 7                                 |
| CIE #   | Internal Assessment-I             |
| Set   |                                   |
| S   | crutiny parameters                |
| Whether questions are according to assessment plan?         | Yes □ No□ ; If No, Suggestions:   |
| Whether questions prepared are within the covered syllabus? | Yes. ☐ No □ ; If No, Suggestions: |
| Whether all questions are mapped to CO/PO properly?         | Yes                               |
| Whether questions framed are according to Blooms level?     | Yes D No D; If No, Suggestions:   |
| Whether marks distribution for each question are correct?   | Yes 	☐ No □ ; If No, Suggestions: |
| Whether questions paper follows the format displayed?       | Yes ☑ No □ ; If No, Suggestions:  |
| Difficulty level  | Very High 🗆 High 🗆 Moderate 🖵 Low |
| Percentage of Similarity<br>questions in Set A & B          | 30%                               |
| Final decision  | Accepted without corrections      |
|   | Accepted with minor corrections□  |
|   | Not accepted□                     |

Signature with date of CIE Question paper setter

11.1 () ( In R I ho (m R & thow) Name and Signature with date of CIE Question paper Scrutiniser



## K S INSTITUTE OF TECHNOLOGY

Bangalore - 560109

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

| Course Name   | CRYPTOGRAPHY                      |  |
|---|-----------------------------------|--|
| Course Code   | 18CS744                           |  |
| Course Incharge   | Mrs. Pallavi R                    |  |
| Academic year   | 2023-2024                         |  |
| Semester  | 7 <sup>th</sup>                   |  |
| CIE #   | IA - 1                            |  |
| Set   |                                   |  |
| S   | Scrutiny parameters               |  |
| Whether questions are according to assessment plan?         | Yest No□ ; If No, Suggestions:    |  |
| Whether questions prepared are within the covered syllabus? | Yes Ø No □ ; If No, Suggestions:  |  |
| Whether all questions are mapped to CO/PO properly?         | Yes 🖉 No 🗆 ; If No, Suggestions:  |  |
| Whether questions framed are according to Blooms level?     | Yes                               |  |
| Whether marks distribution for each question are correct?   | Yes Ø No□; If No, Suggestions:    |  |
| Whether questions paper<br>follows the format displayed?    | Yes ☑ No □ ; If No, Suggestions:  |  |
| Difficulty level  | Very High 🗆 High 🗹 Moderate 🗆 Low |  |
| ercentage of Similarity<br>uestions in Set A & B            | 10%                               |  |
| inal decision   | Accepted without corrections□     |  |
|   | Accepted with minor corrections□  |  |
|   | Not accepted□                     |  |

### CIE Question paper Scrutiny format

Signature with date

of CIE Question paper setter

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Name and Signature with date of CIE Question paper Scrutiniser

Dr. REKHA B. VENKATAPUR



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# K.S. Institute of Technology, Bangalore-560109.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ASSIGNMENT QUESTIONS-3

| Academic Year          | 2022-23  |      |     |
|------------------------|--|------|-----|
| Batch                  | 2020-24  |      |     |
| Year/Semester/section  | III/V/A &B   |      |     |
| Subject Code-Title     | 18CS51- Management and<br>Entrepreneurship for IT Industry |      |     |
| Name of the Instructor | SUPREETHA<br>GANESH  | Dept | CSE |

#### Assignment No: 3 Date of Issue:09-1-2023

### Total marks:10 Date of Submission: 17-11-2023

| SI.<br>No | Assignment Questions   | K<br>Level | CO  | Marks |
|-----------|--|------------|-----|-------|
| 1.        | What is ERP? Give the importance and need of ERP in the organization?  | Apply (K4) | CO4 | 1     |
| 2.        | Write a note on importance of management finance, accounting and Supply chain management in ERP software.  | Apply (K4) | CO4 | 1     |
| 3.        | Make use of project planning methodologies, briefly explain the steps involved in report writing.  | Apply (K4) | CO4 | 1     |
| 4.        | Research an ERP system or an ERP software application, and address<br>the following:<br>In your own words, define enterprise resource planning (ERP).<br>Provide the name of the ERP system or the ERP software application<br>you researched<br>Briefly discuss the ERP system or the ERP software application and<br>include how this resource can help an organization manage important<br>aspects of its business. (Q & Solution – Cheggstudy) | Apply (K4) | CO4 | 1     |
| 5.        | Write a note on<br>i) Different types of patents.<br>ii) MSME and its characteristics  | Apply (K4) | C05 | 1     |
| 6         | Describe the steps involved in the setting up of Small Scale industries  | Apply (K4) | CO5 | 1     |
| 7         | Making use of concepts of IPR explain the following<br>i)Patent ii) Trade secret iii) Trademark iv) industrial Design  | Apply (K4) | CO5 | 1     |
| 8         | What is term industrial policy? How do governments create comparative advantage in different sectors of the economy?   | Apply (K4) | CO5 | 1     |
| 9         | Describe the Case study of i)Microsoft ii)Air Decaan G.R Gopinath  | Apply (K4) | CO5 | 1     |
| 10        | Write a note on KIADB, KSSIDC ,DIC and NSIC ,TEKSOK  | Apply (K4) | CO5 | 1     |

531 22 Signature of Course In charge

Signature of module coordinator

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Head of the Departme Dept. of Computer Science K.S. Institute of Testinol Bengaluru -560 109