**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

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|  | **2BC3158** | Roll No. | Total Printed Pages: 1 |
| **2BC3158** |  |
| BCA II Year III- Semester (Main)End Semester Examination, November 2022  **(Mobile)** | |
| **BCM03104 :Cryptography Fundamental** | | | |

# Time: **3**Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | What are the few major applications of cryptography in the modern world? | **(6)** | **Evaluation** |
|  | **(b)** | In case a Cryptography tool is not available and you need to send secret information, would you proceed or wait till the presence of the tool? | **(6)** | **Analysis** |
|  |  | **OR** |  |  |
| **Q.2** | **(a)** | How Hash Functions are different from Public Key Cryptography and Secret Key Cryptography? | **(6)** | **Understanding and remembering** |
|  | **(b)** | What do you mean by Secret Key Cryptography and Public Key Cryptography? How they are different from one another | **(6)** | **Application** |
|  |  | **UNIT-II (CO2)** |  |  |
| **Q.3** | **(a)** | In a system in RSA algorithm with p=7,q=13,is implemented for data security. What value of decryption key if the value of encryption key is 5? | **(6)** | **Analysis and application** |
|  | **(b)** | **What is SSL and why is it not enough when it comes to encryption?** | **(6)** | **Remembering and analysing** |
|  |  | **OR** |  |  |
| **Q.4** | **(a)** | **What is Message Authentication Code (MAC)?** | **(6)** | **Application** |
|  | **(b)** | **How is RSA used for authentication in practice? What are RSA digital signatures?** | **(6)** | **Analysis** |
|  |  | **UNIT-III (CO3)** |  |  |
| **Q.5** | **(a)** | Explain key management in cryptography. | **(6)** | **Application** |
|  | **(b)** | How to explain life cycle of key management with example? | **(6)** | **Creating and understanding** |
|  |  | **OR** |  |  |
| **Q.6** | **(a)** | How would you describe the encryption key payload as retrieved from the key server?  Is it simple or complex? | **(6)** | **evaluating** |
|  | **(b)** | What platforms do you support for key retrieval?  (Note any gaps in platform coverage for your company) | **(6)** | **analysing** |
|  |  | **UNIT-IV (CO4)** |  |  |
| **Q.7** | **(a)** | Are There Applications or Environments in Which VPNs Would Really Be Detrimental? | **(6)** | **Knowledge** |
|  | **(b)** | **Enlist a few advantages of web services?** | **(6)** | **Knowledge** |
|  |  | **OR** |  |  |
| **Q.8** | **(a)** | What are the different components of Web Services? | **(6)** | **Analysis** |
|  | **(b)** | **Explain web service architecture?** | **(6)** | **Analysis** |
|  |  | **UNITV (CO5)** |  |  |
| **Q.9** | **(a)** | **How you define web service protocol stack?** | **(6)** | **Understanding and evaluating** |
|  | **(b)** | **Do you have any idea about cloud security services?** | **(6)** | **knowledge** |
|  |  | **OR** |  |  |
| **Q.10** | **(a)** | Why not use symmetric encryption? Explain symmetric encryption. | **(6)** | **Analysis and understanding** |
|  | **(b)** | How does SSL/TLS work? | **(6)** | **Evaluate** |