

TH- 1 **Cryptography and Network security**

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Define Brute-force attack.
 - b. What is masquerade?
 - c. Compare Substitution and Transposition techniques.
 - d. Convert the Given Text "ALL THE BEST" into cipher text using Rail fence Technique.
 - e. What is Tiny Fragment attack?
 - f. Define static and dynamic webpage.
 - g. Define digital envelop.
 - h. Define CRL.
 - i. Write the name of participants in the SET system.
 - j. Write the problem associated with clear text password.
2. Answer **Any Six** Questions 6 x 5
 - a. Differentiate between symmetric key and asymmetric key cryptography.
 - b. Explain briefly about SSL protocol.
 - c. Discuss different types of attacks.
 - d. Define authentication token and illustrate how Challenge/Response Tokens works.
 - e. Write the mechanism to protect private keys.
 - f. Define digital certificate and the different process to revoke a digital certificate
 - g Explain the followings:
(a) Caesar cipher (b) Polygram substitution cipher.
- 3 Write the RSA algorithm and explain it with example 10
- 4 Encrypt "SWARAJ IS MY BIRTH RIGHT" by play fair cipher using the keyword MONARCHY. 10
- 5 Briefly Discuss about key principle of network security 10
- 6 Explain in detail about architecture of IP Security 10
- 7 Write short notes on any two 10
 - a) PKIX Services.
 - b) VPN
 - c) Biometric Authentication.
 - d) Encryption and Decryption

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TH-2 INTERNET OF THINGS

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Define RFID?
 - b. Name the different connectivity layers of IoT.
 - c. What is 6LoWPAN?
 - d. What is a sensor? Name its types.
 - e. Name the challenges involved in IoT.
 - f. What is Open Flow Protocol?
 - g. List the various versions of Raspberry Pi.
 - h. Write down any two differences between IoT LAN and IoT WAN..
 - i. Define interoperability.
 - j. What is sensor web enablement?
2. Answer **Any Six** Questions 6 x 5
 - a. Discuss about different components of IoT.
 - b. Define multi-homing. Discuss briefly about multi-homing.
 - c. Portray the architecture of ZigBee.
 - d. Define HAN. Write the advantages & disadvantages of HAN.
 - e. What is IDE? Explain the various basic components of Arduino Board.
 - f. Explain the different types of sensor detection modes with suitable diagram.
 - g. Explain the components of sensor node used in WSN.
3. What is the role of actuator in IoT? Explain about the various types of actuator in IoT. 10
4. Define IIoT. How does IIoT work? Outline the benefits of IIoT. 10
5. Define smart parking. Why we need smart parking system? Discuss the technologies used in smart parking. 10
6. Define SDN. Portray the architecture of SDN. 10
7. Explain the pin configuration of Raspberry Pi. 10

TH-3 Cloud Computing

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Differentiate between encryption and decryption?
 - b. What does RPO&RTO stand for?
 - c. Write down the basic components of cloud computing?
 - d. What is cloud federation?
 - e. Name three companies that provide PAAS?
 - f. Mention the name of various types of VPM?
 - g. What is storage networking?
 - h. What is Google app engine?
 - i. What is scalability and fault tolerance in cloud computing?
 - j. What is the role of disaster recovery in cloud computing?
2. Answer **Any Six** Questions 6 x 5
 - a. Explain service models of cloud computing?
 - b. What are the different types of virtualisation in cloud computing?
 - c. Explain the concept of cloud security. What are the challenges associated with cloud security and how can they can be addressed?
 - d. Write down various applications in cloud computing.
 - e. Differentiate between VLAN and VSAN.
 - f. Explain digital certificate briefly.
 - g. What are the characteristics of cloud computing?
3. What is cloud interoperability? Discuss the need for interoperability in cloud environment. 10
4. What is Hadoop? Illustrate the layers of Hadoop architecture? 10
5. What are the types of clouds in cloud computing architecture? 10
State the advantages and disadvantages of each type?
6. Define data center in cloud computing. Write down the various components of data center .Explain the cisco data center network architecture? 10
7. Describe the role of standards in cloud computing environment. 10
How do standards help in achieving interoperability and portability of cloud services?

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TH4 E-Commerce

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Define WWW.
 - b. List any two examples of E-Commerce.
 - c. Define EDI.
 - d. What do you mean by cryptography?
 - e. Differentiate between Internet & Intranet?
 - f. Define FTP.
 - g. What is Telnet?
 - h. List out of the cards available in e-commerce.
 - i. What do you mean by electronics market?
 - j. Name some companies that support secure transmission.
2. Answer **Any Six** Questions 6 x 5
 - a. Compare between HTML & XML.
 - b. Write down the various features of e-commerce.
 - c. Briefly explain the various electronics payment system.
 - d. What is the difference between traditional commerce & e-commerce?
 - e. Explain digital certificate.
 - f. Discuss briefly the supply chain management.
 - g. Explain E-Waste.
3. Explain briefly all the business models of e-commerce. 10
4. Discus about the risks involved in e-Payment. 10
5. How SSL works. Describe it with a suitable diagram. 10
6. Define firewall. Explain the different types of firewall. 10
7. Explain how DES works. 10