III B. Tech. (CSE+IT), II Semester, 2022-23

Network Security (ECS-362)

I Class Test

Time : 1 Hour Max Marks : 15

Note : Attempt all questions.

1. Describe all steps encryption and decryption in S-DES with appropriate example. (4)

2. Describe security services, mechanisms and attacks. State X.800 standards. (4)

3. Attempt both parts: (4)

   (I) How encryption and decryption are performed in playfair cipher? Explain with suitable example.

   (II) Differentiate mono alphabetic and poly alphabetic ciphers with example.

4. Perform encryption and decryption using RSA algorithm – (3)
   P=7, q=11, e=17, m=8.

HARCOURT BUTLER TECHNICAL UNIVERSITY, KANPUR

MID SEMESTER EXAMINATION 2022-23

Entrepreneurship Development (HHS-352)

B.Tech 3rd year (ME/IT/CS/CE/EE/ET)

TOTAL MARKS–15 TIME: 1hr.

Note: Attempt all Questions.

1. Define the term 'Entrepreneurship'? Explain Schumpeter's innovation theory in detail. [5]
2. Briefly explain partnership and its features. [5]
3. Describe the concept of marketing mix and its various characteristic. [5]

H.B.T.U KANPUR
I MID SEM EXAM: 2022-23
B.TECH (CS/IT) IIIrd Year

Subject: INTERNET OF THINGS **Subject Code: ECS-360**
Time: 1 hours **MM: 15**

Note: Attempt all questions. All questions carry equal marks.

1. Explain IOTWF architecture in detail with diagram?
2. Define IOT and enlist the various advantages and disadvantages of IOT with building blocks of IOT in detail?
3. Explain various key IOT technologies in detail?
4. Draw the neat diagram of IOT ecosystem and also elaborate it?
5. Explain various structural aspects of IOT in brief?

Harcourt Butler Technical University, Kanpur

Mid-Semester Examination 2022-2023

Third Year (CSE /IT)

OBJECT ORIENTED SYSTEM(ECS-354)

MM: 15 **Time: 1 Hour**

Note: All questions are compulsory

Q1. What is multiplicity of an association? Explain with suitable examples. (2)

Q2 Explain with suitable example how an association can be implemented as a class. Discuss the possible benefits of this design. (2)

Q3. Develop class diagram of the banking system. A bank has many branches. In each zone, one branch is designated as the zonal head office that supervises the other branches in that zone. Each branch can have multiple accounts and loans. An account may be either a savings account or a current account. A customer may open both a savings account and a current account. However, a customer must not have more than one savings account or current account. A customer may also procure loans from the bank. (4)

Q4. Explain Unified Process. How it is similar or different to Structural approach of Software Development. (2)

Q5. Draw the Use-case diagram for the Bank ATM System. (3)

Q.6. Explain, why Java is a suitable programming language for Internet. (2)

1st MID Semester Examination-2022-23

Computer Graphics (ECS-356)

III (CSE+IT)

Time: 1 hour **Max. Marks: 15**

Note: Attempt all questions.

Q.1: Explain Raster Scan and Random Scan Display Systems. Discuss the advantages & disadvantages of both display systems. (5)

Q.2: Explain the MID Point Circle algorithms. (5)

Q.3: Explain the translation, scaling, rotation, shear and reflection transformations. (5) 20,10 30,13

Harcourt Butler Technical University, Kanpur
First Mid-Semester Examination 2022-2023
Branch Third Year CS&IT
Soft Computing (ECS-358)

MM: 15 **Time: 1 Hour**

Note: All questions are compulsory

Q1. What do you mean by soft computing? Explain the differences between soft computing and hard computing. (3)

Q2. Explain an evolutionary computing with help of an example. (3)

Q3. Consider the given fuzzy sets (3)

$$A = ((2, 1), (4, 0.3), (6, 0.5), (8, 0.2))$$

$$B = ((2, 0.5), (4, 0.4), (6, 0.1), (8, 1))$$

Perform union, intersection, difference over fuzzy sets A and B.

Q4. What do you mean by intelligent system? What an intelligent system composed of? (3)

Q5. Explain following in context of fuzzy set A (3)

I. Core (A)

II. Crossover Point (A)

III. $\alpha\ Cut -$ (A)

Compiler Design (ECS-352)

MM: 15 **Time: 1 Hour**

Note: All questions are compulsory

Q1. What do you mean by compiler and define all the phases of compiler in detail. (3)

Q2. Explain Tokens, Patterns and Lexemes with suitable example. (3)

Q3. Compute the First and Follow for the given grammar. (3)

$$S \rightarrow ABCDE$$

$$A \rightarrow a/\in$$

$$B \rightarrow b/\in$$

$$C \rightarrow c$$

$$D \rightarrow d/\in$$

$$E \rightarrow e/\in$$

Q4. Consider the following grammar (3)

$$A \rightarrow ABd/Aa/a$$

$$B \rightarrow Be/b$$

remove the left recursion. → Make Parse Tree

Q5. Consider the following grammar (3)

$$S \rightarrow iCtSA/a$$

$$A \rightarrow eS/\in$$

$$C \rightarrow b$$

whether it is LL(1) grammar ?

**********Good Luck**********