Roll No. : .....

Total No. of Questions : 9] [Total No. of Pages : 3

22672

M.Tech. (CSE) 3rd Semester Examination, March-2021 (CBCS Scheme)

NETWORK SECURITY

Paper-16CSE23C2

Time : Three Hours] *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :- Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is compulsory. All questions carry equal marks.

1. Write short notes on the following :
   (a) Steganography
   (b) Cipher
   (c) SHTTP
   (d) Firewall 4×5=20

Unit–I 20 each

2. Give a complete description about the OSI security architecture.
3. Describe in detail about Classical Encryption Techniques.

Unit–II 20 each

4. Explain the following :
   (i) RCS algorithm
   (ii) Blowfish algorithm
5. Describe the following :
   (i) Diffie Hellman Key Exchange Algorithm
   (ii) The RSA Algorithm

Unit–III 20 each

6. Describe the following :
   (i) Secure Electronic Transaction (SET)
   (ii) Transport Layer Security (TLS)
7. (a) What do you mean by electronic money ? Describe it. 10
   (b) Give a brief description about e-mail security. 10

Roll No. : .....

Total No. of Questions : **9**] [Total No. of Pages : **4**

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M.Tech. (CSE) 3rd Semester
Examination, March-2021
(CBCS Scheme)

KNOWLEDGE BASED SYSTEM

Paper-16CSE23C1

*Time : **Three** Hours]* *[Maximum Marks : **100***

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :- Attempt *five* questions in total and Question No. **1** being compulsory and selecting *one* question from each Unit. Each question carries equal marks.

1. (a) Explain Resolution in Predicate Logic.
   (b) Explain Rule Based System.
   (c) Differentiate Informed and Uninformed Search Techniques.

Unit-IV

20 each

8. Explain the following :
   (i) Kerberos
   (ii) Firewall Design
9. Describe the following :
   (i) SET for e-commerce Transactions
   (ii) Virus

(d) What do you mean by Fuzzy Reasoning ?

(e) Define the following :

(i) Semantic Tableaux

(ii) Common Sense Reasoning

(iii) Heuristic

(iv) Agents in AI 4×5=20

Unit–I

2. (a) Define an appropriate language and formulize the following sentences using First Order Logic :

(i) Bill is a student.

(ii) Bill takes either Analysis or Geometry (but not both)

(iii) Bill takes Analysis and Geometry.

(iv) Bill does not take Analysis.

(v) No Students love Bill.

(b) Reduce to Conjunctive Normal Form (CNF) the formula :

(i) $\neg(\neg p \vee q) \vee (r \rightarrow \neg s)$

(ii) $(\neg p \rightarrow q) \rightarrow (q \rightarrow \neg r)$ 10,10

3. Three boxes are presented to you. One contains gold, the other two are empty. Each box has imprinted on it a clue as to its contents. The clues are :

Box1 : "The gold is not here"

Box2 : "The gold is not here"

Box3 : "The gold is in the Box 2"

Only one message is true; other two are false. Which box has the gold ? Formalize the puzzle in Propositional Logic and find the solution using a truth table. 20

Unit–II

4. (a) Explain the concept of Semantic Nets using example.

(b) Draw a Semantic Frame for changing tyre of car. 10,10

5. (a) What are the characteristics of good representation techniques ?

(b) Differentiate between forward chaining and backward chaining using example. 10,10