

DATABASE SECURITY QUESTIONS BANK

- 1. Write about web security its problems and risk analysis with example?**
- 2. Write in details about cryptography and web security?**
- 3. Elaborate about working cryptographic systems and protocols?**
- 4. Explain in detail about Digital Identification?**
- 5. Write about web server security with an example?**
- 6. Write about Privacy Protecting Techniques?**
- 7. Discuss in detail about Backups and Antitheft?**
- 8. Write about Host server and computer security?**
- 9. Write in detail about recent advances in Access control?**
- 10. Elaborate Rolls of Cryptography with an example?**
- 11. Explain about Access control models for XML?**
- 12. Explain in detail about Security in Data Warehouse and OLAP Systems?**
- 13. Explain in detail about Database Watermarking for copyright protection?**
- 14. Write in detail about DQR in processing systems with an example?**
- 15. Write about View based publishing - A Bayesian Perspective?**
- 16. Write about Generalization based publishing - A Bayesian Perspective?**
- 17. Explain in detail about Security and Privacy policies in a Mobile Environment?**
- 18. Explain about Privacy-enhanced location based Access Control?**
- 19. Explain in detail with a diagram about Hippocratic Databases?**
- 20. Write in detail about Trust worthy record retention (TRR)?**

Code No: R20A1202

R20

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution - UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, May/June 2023
Automata and Compiler Design
(CSE-CS & CSE-DS)

Roll No

Time: 3 hours

Max. Marks: 70

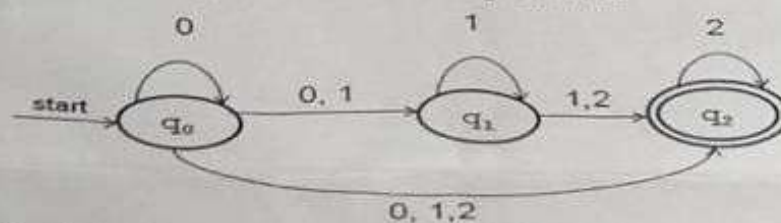
Note: This question paper consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 A Convert the regular expression $(0+1)^*1(0+1)^*$ to an NFA-c [8M]
B Define the following with suitable examples. [2M]
i. Parsing [2M]
ii. Derivation [2M]
iii. Parse trees

OR

- 2 A Construct an equivalent DFA for the given NFA. [7M]



- B Consider the grammar $E \rightarrow +EE \mid *EE \mid -EE \mid x \mid y$ [7M]
Find the leftmost and rightmost derivation for the string $'+-xyxy'$ and draw parse tree.

SECTION-II

- 3 A Explain the working model of LR parser with neat diagram. [7M]
B Obtain SDD for the following grammar using top-down approach [7M]
 $S \rightarrow En$
 $E \rightarrow E+T \mid T$
 $T \rightarrow T * F \mid F$
 $F \rightarrow (E) \mid \text{digit}$

OR

- 4 A How to solve handle pruning in bottom up parsing? Explain with an example. [7M]
B Explain various Syntax directed translation schemes with examples. [7M]

SECTION-III

- 5 A Explain the translation of simple statements and control flow statements with examples. [7M]
B Explain the importance of equivalence of type expressions with examples. [7M]
OR
6 A Describe the role of Intermediate code generator in compilation process with suitable diagram. [7M]

B What is type checker? Explain the specification of a simple type checker [7M]

SECTION-IV

7 A Explain the run-time storage management with neat diagram. [7M]

B How to optimize basic blocks? Explain with an example. [7M]

OR

8 A How is stack storage allocation strategy different from heap allocation strategy? Describe them with their merits and demerits. [7M]

B Why code optimization is optional phase in phases of compiler? Justify. [7M]

SECTION-V

9 A Describe about Machine dependent code generation with its merits and demerits. [7M]

B Explain different methods for register allocation and assignment [7M]

OR

10 A Discuss various object code forms? [7M]

B What is the role of DAG representation in code generation? Explain with an example. [7M]

Code No: **R20A1202****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022**Automata and Compiler Design****(CSE-CS & CSE-DS)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

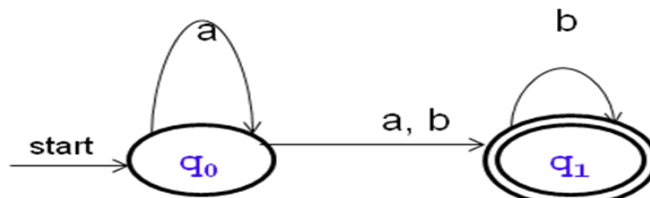
Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 **A** Construct a DFA for the regular expression $(0+1)^*(00+11)(0+1)^*$ [7M]
 B Consider the given below CFG for arithmetic expressions. [7M]
 $E \rightarrow E + E$
 $E \rightarrow E - E$
 $E \rightarrow E * E$
 $E \rightarrow E / E$
 $E \rightarrow id$
 Obtain the string $id+id*id$ using leftmost and rightmost derivations?

OR

- 2 **A** Construct an equivalent DFA for the given NFA. [7M]



- B** Define Context Free grammar formally with an example and derivations using a grammar. [7M]

SECTION-II

- 3 **A** What are the different phases of the compiler? Explain with the block diagram? [7M]
 B Differentiate Synthesized and Inherited attributes with example. [7M]

OR

- 4 **A** Explain YACC with an example program? [7M]
 B Consider the following grammar: [7M]
 $D \rightarrow TL$
 $T \rightarrow int \mid float$
 $L \rightarrow L, id \mid id$
 Write the Syntax Directed Definitions (SDD) to add the type of each identifier to its entry in the symbol table during semantic analysis?

SECTION-III

- 5 **A** Explain the Chomsky hierarchy of languages and recognizers. [7M]
 B Explain overloading of functions and operations with examples. [7M]

OR

- 6 *A* What is an abstract syntax tree? Explain with an example? [7M]
 B Explain the Type checking and type conversions. [7M]

SECTION-IV

- 7 *A* Explain various storage allocation strategies with an example. [7M]
 B Explain various techniques of peephole optimization. [7M]

OR

- 8 *A* Explain the scope access to now local names with an example. [7M]
 B Explain the Principal sources of code optimization. [7M]

SECTION-V

- 9 *A* Describe the issues and object code forms of code generation. [7M]
 B Explain DAG representation of Block with an example. [7M]

OR

- 10 *A* Write the steps in Generic code generation algorithm. [7M]
 B Describe the importance of Register allocation and assignment. [7M]

Code No: R18A1202**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, February 2022****Automata and Compiler Design****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 (a) Draw NFA for recognizing the language generated by $(0+1)^*(010)^*(01+1)$. [7M]
Convert it into DFA. Check the acceptance of 1011 by both FAs.
(b) Compare and contrast DFA and NFA. Explain them with examples. [7M]
- OR
- 2 (a) Design DFA to accept strings with 0's and 1's such that the string ending with 00. [7M]
(b) Design an NFA to accept strings with 0's and 1's such that strings contains two consecutive 0's or two consecutive 1's. [7M]

SECTION-II

- 3 Consider the following CFG [14M]

$$S \rightarrow (L) | a$$

$$L \rightarrow L, S | S$$
 Design Predictive parser for the above grammar
 OR
- 4 (a) Explain different phases of compiler. [7M]
(b) Construct a LALR Parser for the Grammar: [7M]

$$S \rightarrow CC,$$

$$C \rightarrow CC,$$

$$C \rightarrow c/d$$

SECTION-III

- 5 (a) Explain the specification of a simple type checker. [7M]
(b) Explain about Type checking of overloaded functions and operators. [7M]
- OR
- 6 (a) Define type checking. Explain the static checking and dynamic checking. [7M]
(b) Explain the context free and context sensitive languages with their recognizers. [7M]

SECTION-IV

- 7 (a) Define Basic block? Explain in brief about optimization of basic blocks. [7M]
(b) Briefly explain about Loop Optimization. [7M]

OR

8 Define Symbol table? Discuss various symbol table organization techniques. **[14M]**

SECTION-V

9 (a) Discuss briefly about DAG with examples. **[7M]**

(b) Explain about machine dependent code generation. **[7M]**

OR

10 Discuss various Register Allocation Strategies with example. **[14M]**

Code No: R18A1202**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, February 2021****Automata and Compiler Design****(IT)**

Roll No									
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Time: 2 hours 30 min**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a) How do you recognize the tokens? Explain it. [7M]
b) Illustrate the construction of Non Deterministic Finite Automata for the Regular Expression: $(a+b)^*a$. [7M]
- 2 Explain about Chomsky hierarchy of languages and recognizer. [14M]
- 3 a) Identify the rule to eliminate left recursion in a grammar. Prepare and eliminate the left recursion for the grammar.
 $S \rightarrow Aa \mid b$ [5M]
 $A \rightarrow Ac \mid Sd \mid \epsilon$ [5M]
b) Compute FIRST and FOLLOW for the following grammar. [4M]
 $S \rightarrow A, A \rightarrow aB \mid Ad \ B \rightarrow bBC \mid f \ C \rightarrow g$
- c) Analyze the Errors in phases of the compiler.
- 4 a) Write syntax directed definition for simple desk calculator. Using this definition draw annotated parse tree for $3*5+4n$. [7M]
b) Interpret the method of generating intermediate code for flow control statements. [7M]
- 5 a) Outline the type-checking rule for overloaded functions with example. [8M]
b) Explain the unification algorithm by us type checking concepts. [6M]
- 6 Describe the specification of simple type checker for statements, expressions and functions. [14M]
- 7 a) List the features of copy restore linkage in passing arguments. [7M]
b) Describe in detail about dynamic storage allocation. [7M]
- 8 a) Discuss the following: [6M]
i. Copy propagation
ii. Dead code elimination and code motion. [8M]
b) Build the algorithm for the code generation from the three-address code.

Code No: R18A1202

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Regular/Supplementary Examinations, July 2021**Automata and Compiler Design****(IT)**

Roll No										
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 (a) Write the procedure to convert NFA to its equivalent DFA. [7M]
 (b) Minimize the following DFA (\rightarrow Start state, *End state) [7M]

	a	b
$\rightarrow A$	B	D
B	C	E
C	B	E
D	C	E
* E	E	E

- 2 (a) Design a DFA for the following language. [7M]
 $L = \{ 0^m 1^n \mid m \geq 0 \text{ and } n \geq 1 \}$
 (b) Design DFA to accept strings with **c** and **d** such that number **d**'s are divisible by 4. [7M]
- 3 (a) Explain about the different types of Three Address Statements. [7M]
 (b) Consider the Grammar. [7M]

 $E \rightarrow E + T$ $E \rightarrow T$ $T \rightarrow T * F$ $T \rightarrow F$ $F \rightarrow (E) / id$ Construct an LR parsing table for the above grammar. Give the moves of the LR parser on $id * id + id$

- 4 (a) Construct SLR parsing table [7M]
 $E \rightarrow E + T / T$
 $T \rightarrow T * F / F$
 $F \rightarrow (E) / id$

From the above grammar, show all moves for the parsing of input string " $id + id * id$ " using the table.

- (b) Explain the structure of YACC program with a suitable example. [7M]
- 5 (a) Explain in brief about Type checking and Type Conversion. [7M]
 (b) Explain about the procedure for checking polymorphic functions. [7M]
- 6 (a) Explain in detail about Polymorphism. [7M]
 (b) Explain in brief about Chomsky hierarchy of languages. [7M]
- 7 Write briefly about various loop optimization techniques with examples. [14M]
- 8 Explain in detail register allocation and assignment. [14M]

Code No: **R18A1202****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Regular Examinations, October/November 2020**Automata and Compiler Design****(IT)**

Roll No									
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Time: 2 hours**Max. Marks: 70**Answer Any **Four** Questions

All Questions carries equal marks.

- 1 a) How do you organize NFA from Regular expression? Ideate NFA for the given regular expression $(a/b)^*a$.

b) Construct a DFA, which accepts set of all string over $\{0,1\}$ which when interpreted as binary number is divisible by '3'

- 2 a) Relate the lexical analysis with parsing.

b) Compose a predictive parser for the following grammar:

$$E \rightarrow TE'$$

$$E' \rightarrow +TE' \mid \in$$

$$T \rightarrow FT'$$

$$T' \rightarrow *FT' \mid \in$$

$$F \rightarrow (E) \mid id$$

Consider the predictive parsing table and show the stack implementation for the input string: $id+id*id$.

- 3 a) Discover the rule to eliminate left recursion in a grammar. Prepare and eliminate the left recursion for the grammar.

$$S \rightarrow Aa \mid b$$

$$A \rightarrow Ac \mid Sd \mid \epsilon$$

b) Identify the advantages and disadvantages of LR Parser.

- 4 a) Criticize the syntax-Directed translation schemes.

b) Examine how the names can be looked up in the symbol table?

- 5 Explore about the context sensitive features and identify the relation between the recursive and context sensitive language.

- 6 Recognise the specification of simple type checker.

- 7 a) What is peephole optimization? Explain with example.

b) Consider the following loop, generate three address code and draw the flow graph

```
Begin
```

```
  Prod=0
```

```
  i=1
```

```
  do
```

```
    Begin
```

```
      Prod=Prod+a[i]*b[i]
```

```
      i=i+1
```

```
    End
```

```
  While (i≤20)
```

End

- 8**
- a) Discuss the code generation phase with simple code generation algorithm.
 - b) Formulate a code for the following expression and compute its cost
$$X = (a+b) * (c-d) + ((e/f) * (a+b)).$$

Code No: R18A1202

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, December 2022**Automata and Compiler Design****(IT)**

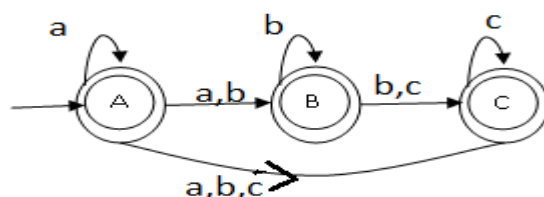
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 Convert the following NFA to DFA:

[14M]

OR

- 2 Construct the regular expressions for the languages over $\Sigma = \{a,b\}$ which contains set of all strings which: (i) Start and end with different symbols.
(ii) Start and end with same symbol.

[14M]**SECTION-II**

- 3 Construct SLR(1) parsing table for the following grammar.

[14M] $S \rightarrow AA$ $A \rightarrow aA \mid b$

OR

- 4 Construct the first() and follow() of the non-terminals in the following grammars for LL(1) parser:

[14M] $S \rightarrow Bb \mid Cd$ $B \rightarrow aB \mid \epsilon$ $C \rightarrow cC \mid \epsilon$ **SECTION-III**

- 5 Explain in brief about Chomsky hierarchy of languages

[14M]

OR

- 6 Explain about Type checking of overloaded functions and operators.

[14M]**SECTION-IV**

- 7 Explain the different storage allocation strategies.

[14M]

OR

- 8 Give the block diagram of organization of code optimizer. What are the advantages of the organization of code optimizer?

[14M]

SECTION-V

- 9** Explain reducible and non reducible flow graphs with examples. What is an Induction variable? Explain it with an example. **[14M]**

OR

- 10** Explain the various issues in the design of code generation. Explain in detail about DAG for register allocation with example. Construct the DAG for the following basic block. **[14M]**

$d := b * c$

$e := a + b$

$b := b * c$

$a := e - d$

Code No: **R17A1201****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, June 2022**Automata & Compiler Design**

(IT)

Roll No									
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 If L is accepted by an NFA with ϵ -transition then show that L is accepted by an NFA without ϵ -transition. [14M]
- 2 Consider the following grammar [14M]
 $E \rightarrow E \text{ or } T \mid T$
 $T \rightarrow T \text{ and } F \mid F$
 $F \rightarrow \text{not } F \mid (E) \mid \text{true} \mid \text{false}$
(i) Remove left recursion from the grammar.
(ii) Construct a predictive parsing table.
(iii) Justify the statement “ The grammar is LL (1)”.
- 3 Derive LALR (1) parsing algorithm for following grammar [14M]
 $S \rightarrow AS/b$
 $A \rightarrow SA/a$
- 4 Define S-attributed and L-attributed definitions. Give an example each. [14M]
- 5 Explain the chomsky hierarchy of languages and recognizers. [14M]
- 6 Write a note on simple type checker and list the different types of type checking. [14M]
- 7 How is storage organization and management done during runtime? [14M]
- 8 Explain the generic code generation algorithm with example. [14M]

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, November 2022

Automata & Compiler Design

(IT)

Roll No								
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- | | | | |
|----------|----------|---|--------------|
| 1 | A | Construct finite automata from the regular expression
(a+b)*ab | [10M] |
| | B | Write applications of finite automata | [4M] |
| | | OR | |
| 2 | | What is the ambiguity? Derive left most, right most derivation and construct parse tree from the given grammar | [14M] |
| | | $S \xrightarrow{\quad} aA/\epsilon$
$A \xrightarrow{\quad} bB/\epsilon, B \xrightarrow{\quad} Cc, C \xrightarrow{\quad} d$ | |

SECTION-II

- 3 **A** Consider the grammar $S \rightarrow TL; T \rightarrow \text{int}|\text{float}, L \rightarrow L, \text{id}|\text{id}$ parse the input string *int id,id*; using shift reduce parser. [7M]
- B** Explain in detail the role of syntax analyzer with neat labelled diagram. [7M]
- OR
- 4 Consider the grammar [14M]
- $E \rightarrow E + T$
- $E \rightarrow T$
- $T \rightarrow T * F$
- $T \rightarrow F$
- $F \rightarrow (E)$
- $F \rightarrow \text{id}$

Obtain the SLR parser and parse the input string $id*id+id$

SECTION-III

- 5 **A** Why is type information needed during type checker process? How is it processed using simple language? Explain. [7M]
- B** How are type casting rules applied for implicit type conversion. [7M]
- OR
- 6 **A** Find the most general unifier for each pair of expressions from the following list or determine that none exists. [7M]
- $a1 \rightarrow (a2 \rightarrow a1)$
- $y1 \rightarrow y2$
- $q1 \rightarrow (q1 \rightarrow q2)$

B How is translation scheme constructed in functions, statements and in expressions? [7M]

SECTION-IV

7 **A** List the major challenges faced by runtime environment. [7M]

B Describe the algorithm to construct basic blocks directly from source code. [7M]

OR

8 **A** List the factors affecting optimization. [7M]

B State two different classic methods of garbage collection? [7M]

SECTION-V

9 **A** Explain simple block diagram of code generator in detail? [7M]

B Explain how is register assignment executed in outer loops? [7M]

OR

10 **A** Create DAG for the statement given eliminating local common sub expression in it [7M]

$a=b+c$

$b=b-d$

$c=c+d$

$e=b+c$

B Discuss code generation algorithm in brief. [7M]

Code No: R17A1201

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, February 2021**Automata & Compiler Design**

(IT)

Roll No										
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Time: 2 hours 30 min**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 Explain the different phases of compiler, showing the output of each phase, using the given statement **position:= initial+rate*60** [14M]
- 2 Write the formal definition of an NFA. List the closure properties of regular expression. Convert the given regular expression to ϵ -NFA $a^*b^*+ab^*+a^*b$. [14M]
- 3 Considering the following grammar, remove left recursion and left factor and design LL(1) parsing table. [14M]

$$E \rightarrow E + T / T$$

$$T \rightarrow T * F / F$$

$$F \rightarrow (E) / id$$
- 4 Construct SLR parsing table for the grammar $S \rightarrow CC$, $C \rightarrow a | d$. [14M]
- 5 What is Type Expression? Write Type Expressions for the following Types.
 - a) An array of pointers to real, where the array index ranges from 1 to 100 [7M]
 - b) Function whose domains are functions from integers to pointers to integers and whose ranges are records consisting of an integer and a character. [7M]
- 6 What is Static Checking? List out some examples of Static Checks. [14M]
- 7 a) What do you mean by **loop optimization**? Illustrate with an example. [7M]
 - b) What is the use of **Frequency Reduction**? Give an example. [7M]
- 8 Write and explain about Peephole Optimization. [14M]

Code No: R17A1201

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, February 2021**Automata & Compiler Design**

(IT)

Roll No									
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Time: 2 hours 30 min**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 Explain the different phases of compiler, showing the output of each phase, using the given statement **position:= initial+rate*60** [14M]
- 2 Write the formal definition of an NFA. List the closure properties of regular expression. Convert the given regular expression to ϵ -NFA $a^*b^*+ab^*+a^*b$. [14M]
- 3 Considering the following grammar, remove left recursion and left factor and design LL(1) parsing table. [14M]

$$E \rightarrow E + T / T$$

$$T \rightarrow T * F / F$$

$$F \rightarrow (E) / id$$
- 4 Construct SLR parsing table for the grammar $S \rightarrow CC$, $C \rightarrow a | d$. [14M]
- 5 What is Type Expression? Write Type Expressions for the following Types. [7M]
 - a) An array of pointers to real, where the array index ranges from 1 to 100 [7M]
 - b) Function whose domains are functions from integers to pointers to integers and whose ranges are records consisting of an integer and a character.
- 6 What is Static Checking? List out some examples of Static Checks. [14M]
- 7 a) What do you mean by **loop optimization**? Illustrate with an example. [7M]
 - b) What is the use of **Frequency Reduction**? Give an example. [7M]
- 8 Write and explain about Peephole Optimization. [14M]

Code No: **R17A1201****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021**Automata & Compiler Design****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a) Draw the transition diagram for NFA which accepts all strings with two consecutive 0's. [7M]
b) Construct DFA accepting the set of all strings containing 101 as a substring. [7M]
- 2 Explain the input buffer scheme for scanning the source program. How the use of sentinels can improve its performance? Describe in detail. [14M]
- 3 Consider the following grammar [14M]

$$S \rightarrow (L) \mid a$$

$$L \rightarrow L, S \mid S$$

Construct leftmost derivations and parse trees for the following sentences:
 $(a, (a, a))$
 $(a, ((a, a), (a, a)))$.
- 4 Construct Predictive Parsing table for the following Grammar [14M]

$$G:$$

$$S \rightarrow iCtSS^1 / a$$

$$S^1 \rightarrow eS / \epsilon$$

$$C \rightarrow b$$

Check the above grammar is LL(1) or not.
- 5 What are the limitations of Static Storage Allocation? Explain the problem of dangling references. [14M]
- 6 Give SDT Scheme to construct *Syntax Tree*. [14M]
- 7 a) Write and explain about organization for an optimizing compiler. [7M]
b) What are the applications of DAG? Explain how the following expression can be converted in a DAG. [7M]

$$a+b*(a+b)+c+d$$
- 8 a) Explain how copy propagation can be done using data flow equation. [7M]
b) Explain in detail about machine dependent code optimization. [7M]

Code No: R17A1201

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, November 2019**Automata & Compiler Design****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a). Difference between Compiler and Interpreter. [7M]
b). Define Tokens, Patterns and Lexemes. [7M]

OR

- 2 Construct the LL(1) Parsing for the following Grammar. [14M]
 $E \rightarrow TE^1$
 $E^1 \rightarrow +TE^1 / \epsilon$
 $T \rightarrow FT^1$
 $T^1 \rightarrow * FT^1 / \epsilon$
 $F \rightarrow (E) / id$

SECTION-II

- 3 Construct the CLR Parsing for the following Grammar. [14M]
 $S \rightarrow CC$
 $C \rightarrow cC / d$

OR

- 4 Define S-attribute, and also evaluate for input string $2 * 3 + 4$ with Parser Stack [14M]
using LR Parsing Method for the following Grammar.
 $S \rightarrow EN$
 $E \rightarrow E + T / E - T / T$
 $T \rightarrow T * F / T / F$
 $F \rightarrow (E) / digit$
 $N \rightarrow ;$

SECTION-III

- 5 What are the Intermediate Code forms of Source Programs? [14M]

OR

- 6 Explain Chomsky Hierarchy of Recognizers. [14M]

SECTION-IV

- 7 What are strategies of Storage allocation? Explain. [14M]

OR

- 8 What is Loop Optimization? Explain functions of Loop optimization with an example. [14M]

SECTION-V

- 9 a). Define Register allocation. [7M]
b). Explain the Strategies of Register allocation. [7M]

OR

- 10 a). Define DAG. [7M]
b). Explain Code Generation from DAG with an example [7M]

Code No: R20A6202

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Cyber Security

(CSE-CS)

Roll No								
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- | | | | |
|----------|----------|------------------------------------|-------------|
| 1 | A | Discuss about Internet Governance. | [7M] |
| | B | Illustrate about CIA Triad. | [7M] |

OR

- 2** **A** Distinguish between Software attacks and Hardware attacks. **[7M]**
- B** Explain about Security Models. **[7M]**

SECTION-II

- 3** **A** Discuss about the roles of International Law. **[7M]**
 B Describe the need for Computer Forensics. **[7M]**

OR

- 4** **A** Explain about the INDIAN Cyberspace. **[7M]**
 B Illustrate about various approaches that are used for e-mail forensic. **[7M]**

SECTION-III

- 5** **A** Explain about the trends in Mobility. **[7M]**
 B Illustrate about the attacks on Mobile-Cell Phones. **[7M]**

OR

- | | | | |
|----------|----------|--|-------------|
| 6 | A | Discuss about the Organizational Measures for Handling Mobile. | [7M] |
| | B | Describe about the Physical Security Countermeasures for protecting Laptops. | [7M] |

SECTION-IV

- 7**
- | | | |
|----------|---|-------------|
| A | Distinguish about various types of web threats for Organizations. | [7M] |
| B | Discuss about social computing and the associated challenges for organizations. | [7M] |

OR

- 8** **A** Explain about the ethical dimension of cybercrimes. **[7M]**
 B Describe the Psychology, mindset and skills of Hackers. **[7M]**

SECTION-V

- | | | | |
|----------|----------|---|-------------|
| 9 | A | Discuss about various Data Privacy attacks. | [7M] |
| | B | Explain about privacy in financial domain. | [7M] |

OR

- | | | | |
|-----------|----------|--|-------------|
| 10 | A | Illustrate about the Fundamental concepts in privacy issues. | [7M] |
| | B | Explain about Privacy policies in different languages. | [7M] |

Code No: R20A6202**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Regular Examinations, December 2022****Cyber Security****(CSE-CS)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 **A** Discuss about Internet Governance. [7M]
 B Illustrate about CIA Triad. [7M]

OR

- 2 **A** Distinguish between Software attacks and Hardware attacks. [7M]
 B Explain about Security Models. [7M]

SECTION-II

- 3 **A** Discuss about the roles of International Law. [7M]
 B Describe the need for Computer Forensics. [7M]

OR

- 4 **A** Explain about the INDIAN Cyberspace. [7M]
 B Illustrate about various approaches that are used for e-mail forensic. [7M]

SECTION-III

- 5 **A** Explain about the trends in Mobility. [7M]
 B Illustrate about the attacks on Mobile-Cell Phones. [7M]

OR

- 6 **A** Discuss about the Organizational Measures for Handling Mobile. [7M]
 B Describe about the Physical Security Countermeasures for protecting Laptops. [7M]

SECTION-IV

- 7 **A** Distinguish about various types of web threats for Organizations. [7M]
 B Discuss about social computing and the associated challenges for organizations. [7M]

OR

- 8 **A** Explain about the ethical dimension of cybercrimes. [7M]
 B Describe the Psychology, mindset and skills of Hackers. [7M]

SECTION-V

- 9 **A** Discuss about various Data Privacy attacks. [7M]
 B Explain about privacy in financial domain. [7M]

OR

- 10 **A** Illustrate about the Fundamental concepts in privacy issues. [7M]
 B Explain about Privacy policies in different languages. [7M]

Code No: R20A6202**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Regular Examinations, December 2022****Cyber Security-SET-2****(CSE-CS)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

		<u>SECTION-I</u>	
1	A	Discuss about the layers of security.	[7M]
	B	Illustrate about Challenges and Constraints in Cyber Security.	[7M]
		OR	
2	A	Explain about the taxonomy of various attacks.	[7M]
	B	Discuss about the reasons for IP spoofing and how to protect from IP Spoofing.	[7M]
		<u>SECTION-II</u>	
3	A	Illustrate about Cyber Security Regulations.	[7M]
	B	Discuss about challenges in Computer Forensics.	[7M]
		OR	
4	A	Describe about Forensics Investigation.	[7M]
	B	Explain about National Cyber Security Policy.	[7M]
		<u>SECTION-III</u>	
5	A	Explain about the Proliferation of mobile and wireless devices.	[7M]
	B	Illustrate about Credit Card Frauds in Mobile and Wireless Computing Era.	[7M]
		OR	
6	A	Discuss about Registry Settings for Mobile Devices.	[7M]
	B	Explain about Security Implications for Organizations.	[7M]
		<u>SECTION-IV</u>	
7	A	Explain about the cost of cybercrimes and IPR issues.	[7M]
	B	Discuss about security risks and perils for organizations.	[7M]
		OR	
8	A	Explain about the intellectual property in the cyberspace.	[7M]
	B	Describe about evils and perils involved in web threats for organizations.	[7M]
		<u>SECTION-V</u>	
9	A	Explain about Data linking and profiling.	[7M]
	B	Illustrate about the privacy policy languages.	[7M]
		OR	
10	A	Describe the privacy in medical domain.	[7M]
	B	Discuss the various types of attacks related to data privacy.	[7M]

Code No: R18A0521**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Regular Examinations, July 2021****Cyber Security****(CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a).Describe active attacks and passive attacks. [7M]
 b). Explain in detail about motive of attackers. [7M]

- 2 a).Explain briefly Cyber Threats-Cyber Warfare. [7M]
 b).Describe the overview of Internet Governance – Challenges and Constraints. [7M]

- 3 a).Explain briefly the concept of digital forensics with example. [7M]
 b). Describe the overview Cyber Security Regulations. [7M]

- 4 a).Write about Historical background of Cyber forensics. [7M]
 b).Explain briefly Digital Forensics Lifecycle. [7M]

- 5 a).Explain, Cybercrime in Mobile and Wireless Devices? [7M]
 b).Give a note on Attacks on Mobile/Cell Phones. [7M]

- 6 Give a note on Security Challenges Posed by Mobile Device. [14M]

- 7 Describe the overview cost of cybercrimes and IPR issues. [14M]

- 8 a). Explain in detail about Data Privacy Attacks. [7M]
 b).Elaborate Parliament Attack case. [7M]

Code No: R18A0521**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Regular Examinations, July 2021****Cyber Security****(CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a).Describe active attacks and passive attacks. [7M]
 b). Explain in detail about motive of attackers. [7M]

- 2 a).Explain briefly Cyber Threats-Cyber Warfare. [7M]
 b).Describe the overview of Internet Governance – Challenges and Constraints. [7M]

- 3 a).Explain briefly the concept of digital forensics with example. [7M]
 b). Describe the overview Cyber Security Regulations. [7M]

- 4 a).Write about Historical background of Cyber forensics. [7M]
 b).Explain briefly Digital Forensics Lifecycle. [7M]

- 5 a).Explain, Cybercrime in Mobile and Wireless Devices? [7M]
 b).Give a note on Attacks on Mobile/Cell Phones. [7M]

- 6 Give a note on Security Challenges Posed by Mobile Device. [14M]

- 7 Describe the overview cost of cybercrimes and IPR issues. [14M]

- 8 a). Explain in detail about Data Privacy Attacks. [7M]
 b).Elaborate Parliament Attack case. [7M]

Code No: R18A0521

R18

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester Supplementary Examinations, December 2022

Cyber Security

(CSE & IT)

Roll No									
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Time: 3 hours

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 Explain briefly the vulnerabilities, threats, and attacks. What is the relationship between them? [14M]

OR

- 2 Write short notes on
- i) Cyber Crime, [5M]
 - ii) Cyber terrorism, and [5M]
 - iii) Cyber Espionage [4M]

SECTION-II

- 3 What is the need for cyber forensics? Discuss briefly about the Digital Forensic Life Cycle. [14M]

OR

- 4 Explain the forensics analysis of Email with suitable example. Discuss briefly the historical background of Cyber forensics. [14M]

SECTION-III

- 5 Discuss the attacks on mobile/ cell phones. Write short notes on
- i) Smishing, [5M]
 - ii) Vishing and [5M]
 - iii) Mishing [4M]

OR

- 6 Discuss the popular types of attacks against mobile networks. Discuss the common attacks on Bluetooth devices. [14M]

SECTION-IV

- 7 Explain the organisational implications of software piracy. Compare between the security and privacy. [14M]

OR

- 8 Discuss the different web threats for the organisations. Discuss the social computing associated challenges for organisations. [14M]

SECTION-V

- 9 Discuss the privacy policy languages. Discuss the data privacy attacks. [14M]

OR

- 10 Explain the data linking and profiling. Explain the privacy in medical domain. [14M]

Code No: R18A0521

R18

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester Supplementary Examinations, December 2022

Cyber Security

(CSE & IT)

Roll No									
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Time: 3 hours

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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OR

- 2 Write short notes on
- i) Cyber Crime, [5M]
 - ii) Cyber terrorism, and [5M]
 - iii) Cyber Espionage [4M]

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- i) Smishing, [5M]
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 - iii) Mishing [4M]

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SECTION-IV

- 7 Explain the organisational implications of software piracy. Compare between the security and privacy. [14M]

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- 8 Discuss the different web threats for the organisations. Discuss the social computing associated challenges for organisations. [14M]

SECTION-V

- 9 Discuss the privacy policy languages. Discuss the data privacy attacks. [14M]

OR

- 10 Explain the data linking and profiling. Explain the privacy in medical domain. [14M]

Code No: R18A0521**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Supplementary Examinations, February 2022****Cyber Security****(CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

*********SECTION-I**

- 1 a).Write about layers of security. [7M]
b).Describe briefly Software attacks, hardware attacks. [7M]
OR
2 a).Give a note on Vulnerability, threat, Harmful acts. [7M]
b).Discuss about Cyber Crime. [7M]

SECTION-II

- 3 a).Write about Roles of International Law. [7M]
b). Explain in detail about Forensics Investigation. [7M]
OR
4 a).Explain briefly Forensics Analysis of Email. [7M]
b).Give a note on Challenges in Computer Forensics. [7M]

SECTION-III

- 5 Describe the overview Registry Settings for Mobile Devices. [14M]
OR
6 Discuss about Organizational security Policies and Measures in Mobile Computing Era, Laptops. [14M]

SECTION-IV

- 7 Explain in detail about web threats for organizations. [14M]
OR
8 Write about social computing and the associated challenges for organizations. [14M]

SECTION-V

- 9 a).Data linking and profiling. [7M]
b).Describe briefly Indian Banks Lose Millions of Rupees. [7M]
OR
10 a).Explain briefly privacy in different domains- medical, financial. [7M]
b).Describe the overview Pune City Police Bust Nigerian Racket case. [7M]

Code No: R18A0521**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Supplementary Examinations, February 2022****Cyber Security****(CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a).Write about layers of security. [7M]
b).Describe briefly Software attacks, hardware attacks. [7M]
OR
2 a).Give a note on Vulnerability, threat, Harmful acts. [7M]
b).Discuss about Cyber Crime. [7M]

SECTION-II

- 3 a).Write about Roles of International Law. [7M]
b). Explain in detail about Forensics Investigation. [7M]
OR
4 a).Explain briefly Forensics Analysis of Email. [7M]
b).Give a note on Challenges in Computer Forensics. [7M]

SECTION-III

- 5 Describe the overview Registry Settings for Mobile Devices. [14M]
OR
6 Discuss about Organizational security Policies and Measures in Mobile Computing Era, Laptops. [14M]

SECTION-IV

- 7 Explain in detail about web threats for organizations. [14M]
OR
8 Write about social computing and the associated challenges for organizations. [14M]

SECTION-V

- 9 a).Data linking and profiling. [7M]
b).Describe briefly Indian Banks Lose Millions of Rupees. [7M]
OR
10 a).Explain briefly privacy in different domains- medical, financial. [7M]
b).Describe the overview Pune City Police Bust Nigerian Racket case. [7M]

Code No: R18A0521**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Regular/Supplementary Examinations, June 2022****Cyber Security
(CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a) Describe briefly the CIA Triad and how to achieve it. [7M]
 b) Discuss the challenges and constraints of Internet governance. [7M]

- 2 Explain the types of attacks in cybersecurity. Compare between the software and hardware attacks. [14M]

- 3 Explain briefly about the digital forensics lifecycle. Discuss the challenges in computer forensics. [14M]

- 4 What are the roles of International Laws in cybersecurity? Discuss briefly any three cyber security regulations in India. [14M]

- 5 Explain the operating guidelines for implementing mobile device security policies. Discuss the countermeasures against the theft of laptops. [14M]

- 6 Discuss the security challenges posed by mobile devices. Explain the modern techniques of credit card frauds. [14M]

- 7 Discuss the best practices with use of social marketing tools. Discuss the different web threats for the organisations. [14M]

- 8 Discuss the privacy in financial domain. Explain the data linking and profiling. [14M]

Code No: R18A0521**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Regular/Supplementary Examinations, June 2022****Cyber Security****(CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a) Describe briefly the CIA Triad and how to achieve it. [7M]
 b) Discuss the challenges and constraints of Internet governance. [7M]

- 2 Explain the types of attacks in cybersecurity. Compare between the software and hardware attacks. [14M]

- 3 Explain briefly about the digital forensics lifecycle. Discuss the challenges in computer forensics. [14M]

- 4 What are the roles of International Laws in cybersecurity? Discuss briefly any three cyber security regulations in India. [14M]

- 5 Explain the operating guidelines for implementing mobile device security policies. Discuss the countermeasures against the theft of laptops. [14M]

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- 7 Discuss the best practices with use of social marketing tools. Discuss the different web threats for the organisations. [14M]

- 8 Discuss the privacy in financial domain. Explain the data linking and profiling. [14M]

III B. Tech II Semester Regular Examinations, April/May - 2019

CYBER SECURITY

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)

2. Answer **ALL** the question in **Part-A**

3. Answer any **FOUR** Questions from **Part-B**

PART –A

1.
 - a) What is Cyber Crime? List the types of cybercriminals. [2M]
 - b) Address the types of services provided by cloud computing. [2M]
 - c) What is cryptographically generated addresses(CGA)? [2M]
 - d) Write about Steganography with applications. [3M]
 - e) What are the weak areas of the ITA 2000? [3M]
 - f) What is a Rootkit? [2M]

PART -B

2. a) Explain the following terms related to cyber crimes: [7M]
 - i) Spamming
 - ii) Salami technique
 - iii) Hacking
 - iv) Password sniffing
- b) Discuss the global perspective on cybercrimes. [7M]
3. a) What is Cyber Stalking? Explain various types of Stalkers with a case study. [7M]
- b) Define Social Engineering? Describe the classification of Social Engineering with examples. [7M]
4. a) Explain the trends in mobile credit card frauds in wireless computing. [7M]
- b) Explain about Vishing and Smishing in detail. [7M]
5. a) Differentiate between computer Virus and Worms with two examples each. [6M]
- b) Explain about Trojan Horses and Backdoors in detail with examples. [8M]
6. a) Explain the following terms according to IT Act 2000: [10M]
 - i) Records as evidence
 - ii) Proof of electronic agreements
 - iii) Status of electronic.
- b) Explain about public key certificate. [4M]
7. a) Explain in detail the forensic analysis of E-mail. [7M]
- b) Explain various phases in computer forensics/digital forensics. [7M]

III B. Tech II Semester Regular Examinations, April/May - 2019

CYBER SECURITY

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)

2. Answer **ALL** the question in **Part-A**

3. Answer any **FOUR** Questions from **Part-B**

PART –A

1. a) A friend sends an electronic Hallmark greeting card (e-card) to your work email. You need to click on the attachment to see the card. What should you do? List major risks associated with this scenario? [2M]
- b) Define the different categories of cybercrimes? [2M]
- c) Define Mobile viruses and Mishing. [2M]
- d) How to prevent SQL Injection Attacks? [3M]
- e) Define the public key certificate. [3M]
- f) What is the need for Computer Forensics? [2M]

PART -B

2. a) Explain the following terms related to cyber crimes: [10M]
 - i) Cyber defamation
 - ii) Data Diddling
 - iii) Software Piracy
 - iv) Identity Theft
 - v) E-mail Bombing/ Mail Bombs
- b) Discuss the legal perspectives of cyber crime. [4M]
3. a) Discuss in detail about the Botnets. [7M]
- b) Write a short note on Attack Vector. How it alters the system state? [7M]
4. a) What are the organizational measures for handling mobile devices? [6M]
- b) Discuss cryptographic security for mobile devices. [8M]
5. a) What are the DDoS Attacks and explain how to protect from DDoS attacks. [7M]
- b) Explain about traditional techniques of attacks on Wireless Networks. [7M]
6. a) What are the positive aspects of the ITA 2000? Explain. [7M]
- b) Discuss the impact of Digital signatures in ITA 2000. [7M]
7. a) What is the Chain of Custody concept? How it is related to forensics? [7M]
- b) Write a short note on Network Forensics. [7M]

III B. Tech II Semester Regular Examinations, April/May - 2019**CYBER SECURITY**

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)2. Answer **ALL** the question in **Part-A**3. Answer any **FOUR** Questions from **Part-B**

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**PART -A**

1. a) Who are the Cyber criminals and classify them? [2M]
- b) What are the advantages of Cloud Computing? [2M]
- c) Define the terms Mobile phone theft, Mishing and Hacking Bluetooth. [2M]
- d) Explain the mechanism of how phishing works? [3M]
- e) List the positive aspects of the ITA 2000. [3M]
- f) What is a Rootkit? [2M]

**PART -B**

2. a) Explain the following terms related to cyber crimes: [10M]
  - i) Internet Time Theft
  - ii) Newsgroup Spam
  - iii) Industrial Spying
  - iv) Credit card Frauds
  - v) E-mail Bombing/ Mail Bombs
- b) Discuss about the Legal and Indian perspectives of cyber crimes. [4M]
3. a) What is Cyber stalking? How it works? Explain with real life example. [7M]
- b) What are the tips for safety and security while using the computer in a cybercafé? [7M]
4. a) What are the physical security countermeasures for laptops? [7M]
- b) What are the different types and techniques of Credit Card Frauds? [7M]
5. a) Discuss about the SQL Injection in detail. [7M]
- b) What is buffer overflow? Discuss how to minimize Buffer Overflow? [7M]
6. a) Discuss in detail about the Policy standards in information security. [7M]
- b) Explain the impact of oversights in ITA 2000 regarding digital signatures. [7M]
7. a) Explain the challenges in Computer forensics. [8M]
- b) Write a short note on Antiforensics. [6M]

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## III B. Tech II Semester Regular Examinations, April/May - 2019

## CYBER SECURITY

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)2. Answer **ALL** the question in **Part-A**3. Answer any **FOUR** Questions from **Part-B**

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PART -A

1. a) You receive the following email from the Help Desk: [2M]
 Dear XYZ Email User, Beginning next week, we will be deleting all inactive email accounts in order to create space for more users. You are required to send the following information in order to continue using your email account. If we do not receive this information from you by the end of the week, your email account will be closed. *Name (first and last): *Email Login: *Password: *Alternate email: Please contact the Webmail Team with any questions. Thank you for your immediate attention. What should you do? What type of cybercrime is it?
- b) Differentiate the passive attacks and active attacks. [2M]
- c) List the security challenges posed by Mobile devices. [2M]
- d) What are the different types of identity thefts? [3M]
- e) List the Weak areas of the ITA 2000. [3M]
- f) Define foot printing. [2M]

PART -B

2. a) Explain about global perspective on cybercrimes. [6M]
- b) Explain about any 8 types of cyber crimes. [8M]
3. a) Explain different types of Attacks. How they affect the system. [6M]
- b) Discuss in detail about the Botnets. [8M]
4. a) Why authentication services security is important? Explain about RAS security for mobile devices. [7M]
- b) Discuss the attacks on mobile phones in detail. [7M]
5. a) Explain the attacks on wireless networks. [7M]
- b) Discuss in detail about identity theft (ID theft). [7M]
6. a) Explain about public key certificate and implications for certifying authorities. [8M]
- b) Explain the legal challenges in computer forensics. [6M]
7. a) Explain the network hacking steps in OSI 7 layer model. [7M]
- b) Discuss the phases in Computer forensics/Digital forensics in detail. [7M]

Code No: R20A6202

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022**Cyber Security****(CSE-CS)**

Roll No	2	0	2	3	1	A	G	2	5	G
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 *A* Discuss about Internet Governance. [7M]
 B Illustrate about CIA Triad. [7M]

OR

- 2 *A* Distinguish between Software attacks and Hardware attacks. [7M]
 B Explain about Security Models. [7M]

SECTION-II

- 3 *A* Discuss about the roles of International Law. [7M]
 B Describe the need for Computer Forensics. [7M]

OR

- 4 *A* Explain about the INDIAN Cyberspace. [7M]
 B Illustrate about various approaches that are used for e-mail forensic. [7M]

SECTION-III

- 5 *A* Explain about the trends in Mobility. [7M]
 B Illustrate about the attacks on Mobile-Cell Phones. [7M]

OR

- 6 *A* Discuss about the Organizational Measures for Handling Mobile. [7M]
 B Describe about the Physical Security Countermeasures for protecting Laptops. [7M]

SECTION-IV

- A* Distinguish about various types of web threats for Organizations. [7M]
 B Discuss about social computing and the associated challenges for organizations. [7M]

OR

- A* Explain about the ethical dimension of cybercrimes. [7M]
 B Describe the Psychology, mindset and skills of Hackers. [7M]

SECTION-V

- A* Discuss about various Data Privacy attacks. [7M]
 B Explain about privacy in financial domain. [7M]

OR

- A* Illustrate about the Fundamental concepts in privacy issues. [7M]
 B Explain about Privacy policies in different languages. [7M]

Code No: R20A6202

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, May/June 2023**Cyber Security****(CSE-CS)**

Roll No										
	2	0	N	3	1	A	6	2	5	6

Time: 3 hours

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE question from each SECTION and each Question carries 14 marks

SECTION-I

A Discuss about Vulnerability and Threat. [7M]

B Illustrate about the Motive of attackers. [7M]

OR

A Distinguish between active attacks and passive attacks. [7M]

B Explain about Cyber Threats-Cyber Warfare. [7M]

SECTION-II

A Explain about NIST Compliance and the role of International Laws. [7M]

B Discuss about the historical background of Cyber Forensics. [7M]

OR

A Illustrate about Cyber Forensics and Digital evidence. [7M]

B Discuss about the vision, mission and objectives of Ministry of Communications and Information Technology (India). [7M]

SECTION-III

A Discuss about various types of attacks against 3G mobile networks. [7M]

B Explain about the Security Challenges posed by Mobile Devices. [7M]

OR

A Describe about the Authentication Service Security. [7M]

B Illustrate about Operating Guidelines for Implementing Mobile Device Security Policies. [7M]

SECTION-IV

A Illustrate about the security and privacy implications from cloud computing. [7M]

B Describe about Social Media Marketing. [7M]

OR

A Explain about the mindset and skills of hackers and other cyber criminals. [7M]

B Illustrate about ethical dimension of Cybercrimes. [7M]

SECTION-V

A Discuss about the privacy policies and their specifications. [7M]

B Explain about the Fundamental concepts in data privacy. [7M]

OR

A Distinguish about the various types of frauds in the Cyber Domain. [7M]

B Describe the psychology of cyber criminals. [7M]

Code No: R20A0511
MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
(Autonomous Institution – UGC, Govt. of India)
III B.Tech I Semester Regular Examinations, December 2022
Software Engineering-SET-1
(CSE, IT, CSE-CS, CSE-AIML, CSE-IOT)

Roll No									
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Time: 3 hours
Max. Marks: 70
Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

		<u>SECTION-I</u>	
1	A	Discuss about failure curves for hardware and software with a neat diagram.	[7M]
	B	Illustrate about generic process framework activities for software engineering.	[7M]
		OR	
2	A	Describe about software engineering layers with a neat diagram.	[7M]
	B	Differentiate between waterfall and incremental model.	[7M]
		<u>SECTION-II</u>	
3	A	Illustrate about Functional Requirements and Non-functional Requirements.	[7M]
	B	Interpret about the feasibility studies of requirements engineering process.	[7M]
		OR	
4	A	Describe about requirements validation and management.	[7M]
	B	Explain about the importance of sequence and activity diagrams in system design.	[7M]
		<u>SECTION-III</u>	
5	A	Describe about translating the requirements model into the design model.	[7M]
	B		[7M]
		OR	
6	A	Briefly explain about software design concepts.	[7M]
	B	Discuss about the 3 golden rules of performing user interface design.	[7M]
		<u>SECTION-IV</u>	
7	A	Analyze about flow graph notation and independent paths with an example	[7M]
	B	Briefly explain about different categories of risks in risk management.	[7M]
		OR	
8	A	Describe about graph-based testing methods with an example.	[7M]
	B	Elaborate about RMMM plan in software projects.	[7M]
		<u>SECTION-V</u>	
9	A	Discuss about the elements of software quality assurance.	[7M]
	B	Briefly explain about software reliability in software projects.	[7M]
		OR	
10	A	Describe about the software quality in software development.	[7M]
	B		[7M]

Code No: R20A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022**Software Engineering**

(CSE, IT, CSE-CS, CSE-AIML, CSE-IOT)

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 A Briefly explain about advantages of prototype model with a neat diagram. [7M]
 B Describe about different types of software myths. [7M]

OR

- 2 A Elaborate about the unified process model with a neat diagram. [7M]
 B Interpret about personal and team process models in software development. [7M]

SECTION-II

- 3 A Illustrate about software requirements document with an example. [7M]
 B Discuss about functional and non-functional requirements with an example. [7M]

OR

- 4 A Describe about structural and behavioral diagrams in uml. [7M]
 B Interpret about requirements elicitation and analysis in requirements engineering process [7M]

SECTION-III

- 5 A Describe architecture in software design. [7M]
 B Outline the different types of architectural styles used in developing a software product. [7M]

OR

- 6 A Briefly explain about importance of data-centered architecture with a neat diagram. [7M]
 B Elaborate about the user interface analysis and design in software development. [7M]

SECTION-IV

- 7 A Analyze about unit testing and integration testing. [7M]
 B Briefly explain about debugging process with a neat diagram. [7M]

OR

- 8 A Describe about black-box testing with an example. [7M]
 B Differentiate between reactive vs proactive risk strategies. [7M]

SECTION-V

- 9 A Discuss about the important activities involved in management of software quality assurance. [7M]
 B Briefly explain about goals attributes and metrics of software quality assurance. [7M]

OR

- 10 A Describe about the measures of reliability and safety in software quality assurance. [7M]
 B Analyze about the iso 9000 quality standards [7M]

Code No: **R18A0511****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, December 2022**Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each SECTION and each Question carries 14 marks.

SECTION - I

1. a) Briefly discuss the advantages and drawbacks of waterfall model. [7M]
b) Explain the basic principle of Prototyping with an example. [7M]
OR
2. a) Discuss the evolving role of software in light of present day software applications. [7M]
b) Express your understanding on the umbrella activities of a software process. [7M]

SECTION – II

3. a) “Non-functional requirements are also essential for customer satisfaction”-Justify this statement with suitable justification. [7M]
b) Write short note on requirements validation process. [7M]
OR
4. a) What are the essential components of SRS document? Explain by taking a simple application of your choice. [7M]
b) Distinguish between functional and non-functional requirements. [7M]

SECTION – III

5. a) What are the golden rules of user interface? Briefly explain. [7M]
b) How can we assess the design quality? Briefly explain. [7M]
OR
6. a) What is the role of software architecture? Describe different software architecture styles. [7M]
b) Write short note on key activities in Object Oriented Design, [7M]

SECTION – IV

7. a) Distinguish between black box and white box testing by taking an example software application of your choice. [7M]
b) How could you achieve 100% testing coverage? Explain. [7M]
OR
8. a) What do you understand by software testing and how can you decide that the testing can be stopped. [7M]
b) “It is always advisable to identify and fix the bug during execution phase”-Justify this statement with suitable justification. [7M]

SECTION – V

9. a) Write short note on RMMM plan. [7M]
b) What are the various categories of risks? Give an overview about Risk Management. [7M]
OR
10. What is the need of Risk Management and explain various activities connected to Risk Management? [14M]

Code No: R18A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, February 2022****Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

*********SECTION-I**

- 1 a) Explain about process frame work in software engineering. [8M]
b) Explain different applications of software. [6M]

OR

- 2 a) Explain the unified process model with a neat sketch. [10M]
b) Write a short note on extreme programming. [4M]

SECTION-II

- 3 a) Explain about requirements elicitation and analysis. [8M]
b) Explain about system requirements and user requirements. [6M]

OR

- 4 What is a system model? Explain different types of system models. [14M]

SECTION-III

- 5 a) Explain about software architecture with suitable example. [8M]
b) Discuss about data design. [6M]

OR

- 6 a) How can you design user interface? Explain. [8M]
b) Briefly explain object oriented design process. [6M]

SECTION-IV

- 7 a) What do you mean by software testing? Explain about integration testing. [8M]
b) Explain about system testing. [6M]

OR

- 8 a) Explain different software product metrics. [10M]
b) Write a note on software quality factors. [4M]

SECTION-V

- 9 Explain about risk management. [14M]

OR

- 10 a) Explain about CMMI. [7M]
b) What is the need of Software Quality Assurance. [7M]

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Regular/Supplementary Examinations, July 2021

Software Engineering

(IT)

Roll No								
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

- | | |
|----------|---|
| 1 | a) Define the term Software Engineering. Describe its various characteristics. [7M]
b) State and explain various types of software myths related to management. [7M] |
| 2 | a) Explain Waterfall model with a neat diagram. [10M]
b) Write the advantages and disadvantages of waterfall model. [4M] |
| 3 | a) Explain clearly about software requirements document. [7M]
b) Differentiate between functional and non-functional requirements. [7M] |
| 4 | Discuss about principal requirements engineering process activities with a neat diagram. [14M] |
| 5 | Write the taxonomy of architectural styles and give a brief description of each style. [14M] |
| 6 | a) Explain about user interface design. [8M]
b) Explain the golden rules of user interface design. [6M] |
| 7 | a) Explain about unit testing considerations and procedures. [7M]
b) Write the differences between black box testing and white box testing. [7M] |
| 8 | a) Explain about formal technical reviews. [7M]
b) What is RMMM? Explain about RMMM plan. [7M] |

Code No: R18A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Regular/Supplementary Examinations, Dec-21/Jan-22****Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 List and explain the following [7M]
a) Activities of generic process framework for software engineering
b) Umbrella activities [7M]

OR

- 2 What is a software myth? Explain the changing nature of the software. [14M]

SECTION-II

- 3 List and explain distinct tasks of requirements engineering [14M]

OR

- 4 Explain the Functional and Non-Functional requirements [14M]

SECTION-III

- 5 What is design process? Explain the characteristics of good design [14M]

OR

- 6 What is software architecture? Why is it so important?. [14M]

SECTION-IV

- 7 What is software testing? Explain unit testing in detail. [14M]

OR

- 8 Explain the metrics for Testing? [14M]

SECTION-V

- 9 Differentiate between Reactive and Proactive risk strategies [14M]

OR

- 10 Define RMMM? Explain RMMM plan in detail [14M]

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021**Software Engineering**

(CSE)

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a) Discuss about the role of Changing Nature of Software and Software myths in software engineering [7M]
b) Explain spiral model with its merits and demerits [7M]
- 2 a) Explain in detail about various process models. [7M]
b) What is the role of process assessment in the process framework [7M]
- 3 a) Differentiate between functional and non-functional requirements. [7M]
b) Discuss the various steps in requirement engineering. What are the work products of engineering the requirements? [7M]
- 4 a) Explain the Functional and non-functional requirements in requirement engineering [7M]
b) Explain Context Models and Behavioral models with their importance [7M]
- 5 a) Define Software architecture. Explain why it may be necessary to design the system architecture before the specifications. Compare function oriented and object oriented designs. [7M]
b) What do you mean by the terms cohesion and coupling in the context of software engineering? How are these concepts useful in arriving at a good design of a system explain with example. [7M]
- 6 a) Explain the process of mapping dataflow into software architecture. [7M]
b) List the golden rules of user interface design [7M]
- 7 a) What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk? [7M]
b) Explain about formal technical reviews. [7M]
- 8 a) Define software quality assurance. State various SQA activities [7M]
b) What are the main objectives of Software verification and validation? Briefly explain different V and V techniques. [7M]

Code No: R18A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Regular Examinations, October/November 2020****Software Engineering****(IT)**

Roll No									
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Time: 2 hours**Max. Marks: 70**Answer Any **Four** Questions

All Questions carries equal marks.

- 1 a) Define software engineering and discuss about software myths
 b) Illustrate the software process framework
- 2 a) Compare the incremental model and spiral model with neat diagram
 b) List out the merits and demerits of waterfall model
- 3 What do you mean by feasibility study? Demonstrate functional and non-functional requirements with suitable examples
- 4 Explain the data models with suitable examples
- 5 a) Explain Golden rules for user interface design
 b) Discuss about Software architecture
- 6 Explain in detail about object oriented design process with suitable examples
- 7 a) Illustrate a strategic approach to software testing
 b) Explain the concept of Debugging
- 8 What do you mean by SQA and Explain the ISO 9000 Quality Standards

Code No: R18A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Supplementary Examinations, June 2022****Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 With a neat diagram explain the spiral model [14M]
- 2 Explain the phases of unified process model with a diagram [14M]
- 3 Explain the following with respect to requirements validation
a) Different types of checks [7M]
b) Requirements validation techniques [7M]
- 4 Explain in detail about Event-driven and Data-driven modeling [14M]
- 5 Explain object oriented design process using UML [14M]
- 6 Explain the following software architectures
a) Data flow Architecture [7M]
b) Call and Return Architectures [7M]
- 7 Explain black-box and White-box testing [14M]
- 8 Explain Capability Maturity Model Integration (CMMI) in detail [14M]

Code No: **R18A0511****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, June 2022**Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

1. Discuss various phases of waterfall model in detail. **(14M)**
2. a) What is unified process? Discuss its suitability to present day software applications **(7M)**
b) Write short note on various categories of myths connected to software industry. **(7M)**
3. a) What is the use of an Activity diagram and draw an activity diagram for withdrawing money from a Bank ATM. **(7M)**
b) How do you create a process that can manage requirements unpredictability? Explain. **(7M)**
4. a) Draw the sequence diagram for booking an item in an online ecommerce website. **(7M)**
b) Explain software requirements engineering process in brief. **(7M)**
5. a) What are the merits of an Object Oriented Design process? Explain. **(7M)**
b) Write short note on Design concepts. **(7M)**
6. a) What is modularity and write its importance by keeping maximization of cohesion and minimization of coupling as the basis. **(7M)**
b) “Work breakdown structure helps in on time delivery of software products”. Justify this statement. **(7M)**
7. a) Why does software testing need extensive planning? Explain. **(7M)**
b) Write short note on the metrics for software design model. **(7M)**
8. a) Write short note on CMMI and its role in quality improvement. **(7M)**
b) What is the importance of FTR in software quality assurance and write various steps in carrying out FTR. **(7M)**

Code No: R18A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Supplementary Examinations, November 2022****Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 **A** List the general principles & Process Frame work in software engineering [7M]
 B Compare different types of myths in Software Engineering [7M]

OR

- 2 **A** Discuss in detail about the layers involved in Unified Process model [7M]
 B Sketch and explain Evolutionary model. [7M]

SECTION-II

- 3 **A** Classify different types of Requirements. [4M]
 B Discuss how an engineer responsible for drawing up a system requirements specification might keep track of the relationships between functional and non-functional requirements. [10M]

OR

- 4 **A** What is the main aim of requirement Engineering? Describe its four sub-processes and deliverable of each sub-process? [7M]
 B What is SRS Document? Explain in detail about the structure of a software requirement document [7M]

SECTION-III

- 5 **A** Explain about the various design concepts considered during design? [7M]
 B With a neat diagram, explain various architectural styles & patterns? [7M]

OR

- 6 **A** Explain the following terms with respect to software design: [7M]
 (i) Data design (ii) architectural design with neat Examples
 B Describe the golden rules of User Interface Design [7M]

SECTION-IV

- 7 What is black box testing? Explain the different types of black box testing strategies. Explain by considering suitable examples. [14M]

OR

- 8 **A** Discuss in detail about various software testing strategies. [7M]
 B What are the Various Metrics used for analysis and Design? [7M]

SECTION-V

- 9 **A** Propose RMMM plan for “staff inexperienced” risk while developing a software project [7M]
 B What is the necessity of Quality assurance in Software Engineering? [7M]

OR

- 10** **A** What is Meant by Software Quality? Give an overview of various software Quality factors? **[7M]**
- B** What is SQA? Discuss in detail SQA Activities? **[7M]**

Code No: R17A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, February 2022****Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

*********SECTION-I**

- 1 a) Discuss the evolving role of Software. [8M]
b) What is Team Software Process and list out its objectives? [6M]
OR
2 How the waterfall and the prototyping models can be accommodated in the spiral process model. Analyze. [14M]

SECTION-II

- 3 a) What is requirement engineering? State its process and illuminate the requirements of elicitation problem. [8M]
b) Why the customer interaction is a difficult process? Explain one formal procedure used for customer interaction. [6M]
OR
4 a) Differentiate between data models and object models with illustration [7M]
b) How do you fit the right prototyping approach in software system models? Explain. [7M]

SECTION-III

- 5 a) Illustrate design quality in the context of design engineering. [7M]
b) How Software architecture is useful in creating an architectural design. [7M]
OR
6 Explain about the User interface analysis and design. [14M]

SECTION-IV

- 7 a) Contrast the validation testing with system testing. [7M]
b) Interpret the art of debugging in software testing methodology. [7M]
OR
8 Discuss about the Metrics for testing and source code. [14M]

SECTION-V

- 9 a) Illustrate reactive vs. proactive risk strategies in risk management. [7M]
b) How far the risk refinement is useful in risk management. [7M]
OR
10 a) Describe the software quality assurance. [7M]
b) Exemplify software reliability. [7M]

Code No: R17A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, July 2021****Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 a) What do you mean by Software Myth? Explain Management Myths and Customer Myths. [7M]
 b) Explain a generic process framework for software engineering activities. [7M]
- 2 Explain the process areas required to achieve various maturity levels in CMMI. [14M]
- 3 a) Differentiate between functional and non-functional requirements in software engineering. [7M]
 b) Explicit effects on software requirement collection? [7M]
- 4 Interpret the Context Models and Behavioural models. [14M]
- 5 a) What is design process and clarify it with respect to design engineering? [7M]
 b) Analyse the data design and architectural styles in software engineering process. [7M]
- 6 a) Elucidate in detail about the characteristics and criteria for a good design. [7M]
 b) Describe the design procedure for data acquisition system. [7M]
- 7 Why is it so important to include boundary values in your black-box test data? [14M]
 Illustrate with examples in which a test suite developed using black box techniques might give the impression that ‘everything is OK”, while a test suite developed with whit box testing techniques (for example, branch coverage) might uncover a fault and vice versa.
- 8 a) Deliberate the procedure of formal technical reviews in testing the software. [7M]
 b) Identify the importance of the ISO 9000 quality standards in improving software quality. [7M]

Code No: R17A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Supplementary Examinations, July/August 2021****Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1** What is CMMMI? Explain in detail about CMMMI. **[14M]**
- 2** Explain spiral model with its merits and demerits. **[14M]**
- 3** Briefly explain the models used for structured analysis. **[14M]**
- 4** Define the term software requirement. Explain different types of software requirements. **[14M]**
- 5** Explain about design concepts. **[14M]**
- 6** What is the need of user interface? Explain user interface design steps. **[14M]**
- 7** Define software testing. Explain different software testing strategies. **[14M]**
- 8** What is the need of software reviews? Explain. **[14M]**

Code No: R17A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Supplementary Examinations, Dec-21/Jan-22****Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 Discuss in detail about the layers involved in Unified Process model. [14M]

OR

- 2 Explain different software myths with respect to management, customer and practitioner with neat case studies. [14M]

SECTION-II

- 3 What is SRS Document. Explain in detail about the structure of a software requirement document. [14M]

OR

- 4 Draw an ER and DFD diagram for university information system. [14M]

SECTION-III

- 5 Draw a translating diagram for analysis model into a software design. Brief about each translations. [14M]

OR

- 6 Discuss the steps involved in effective User interface design. [14M]

SECTION-IV

- 7 Explain control structure testing. What are the different testing techniques involved in it? [14M]

OR

- 8 Explain in detailed about Black-Box and White-Box testing. [14M]

SECTION-V

- 9 Explain software quality assurance? [14M]

OR

- 10 Analyze on the concept of risk projection. [14M]

Code No: R17A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****II B.Tech II Semester Supplementary Examinations, July 2021****Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70****Answer Any Five Questions****All Questions carries equal marks.*********

- 1 a) What do you mean by Software Myth? Explain Management Myths and Customer Myths. **[7M]**
 b) Explain a generic process framework for software engineering activities. **[7M]**
- 2 Explain the process areas required to achieve various maturity levels in CMMI. **[14M]**
- 3 a) Differentiate between functional and non-functional requirements in software engineering. **[7M]**
 b) Explicit effects on software requirement collection? **[7M]**
- 4 Interpret the Context Models and Behavioural models. **[14M]**
- 5 a) What is design process and clarify it with respect to design engineering? **[7M]**
 b) Analyse the data design and architectural styles in software engineering process. **[7M]**
- 6 a) Elucidate in detail about the characteristics and criteria for a good design. **[7M]**
 b) Describe the design procedure for data acquisition system. **[7M]**
- 7 Why is it so important to include boundary values in your black-box test data? **[14M]**
 Illustrate with examples in which a test suite developed using black box techniques might give the impression that ‘everything is OK”, while a test suite developed with whit box testing techniques (for example, branch coverage) might uncover a fault and vice versa.
- 8 a) Deliberate the procedure of formal technical reviews in testing the software. **[7M]**
 b) Identify the importance of the ISO 9000 quality standards in improving software quality. **[7M]**

R20

(Autonomous Institution – UGC, Govt. of India)

Artificial Intelligence

(CSE, IT, CSE-CS, CSE-DS, CSE-IOT)

Roll No

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each SECTION and each Question carries 14 marks.

SECTION-I

1. *A* List and explain various AI Languages. [7M]
B What are the basic components of AI problem solving methodology? [7M]
Illustrate with an example.

OR

- 2X A Illustrate the heuristic Hill Climbing Algorithm with an example. [7M]
 B Explain A* Algorithm with example. [7M]

3 **A** Discuss Alpha-Beta Pruning and its advantages over min-max method. **[10M]**
B Explain the Syntax and Semantics of Propositional Logic. **[4M]**

OR

- 4 *A* Explain forward chaining and backward chaining [7M]
B Compare and contrast the two variants of Logic-Predicate and Propositional. [7M]

SECTION-III

A Explain the issues in Knowledge Representation. Define Inheritance in Semantic Net. **[8M]**

B Differentiate between monotonic and non monotonic reasoning. **[6M]**

OR

- 6 *A* Explain acting under uncertainty domain [5M]
 B Explain Bayesian Networks? [9M]

7. *A* Differentiate between Supervised Learning and Unsupervised Learning. [4M]
B Discuss Winston's learning briefly with neat sketch. [10M]

OR

- 8 *A* Describe the role of information gain in Decision Tree Learning. [7M]
B Explain decision tree algorithm. [7M]

9. *A* Explain the Phases in Building Expert System. [9M]
B Explain the Applications of the Expert Systems. [5M]

OR

- | | | | |
|-----------|----------|--|-------------|
| 10 | A | List the Characteristics of Expert Systems. Classify various Expert System shells and tools. | [8M] |
| | B | Explain about MYCIN Expert system in detail. | [6M] |

Code No: R18A1205**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Regular/Supplementary Examinations, Dec-21/Jan-22****Artificial Intelligence****(EEE, CSE & IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

*********SECTION-I**

- 1 Explain the Heuristic Search Techniques. List and explain the applications of Artificial Intelligence [14M]

OR

- 2 What is a Breadth first search of the search tree? Write an algorithm to conduct Breadth first search explain with example and also mention advantages and disadvantages. [14M]

SECTION-II

- 3 Give a brief note on Alpha-Beta Pruning. How Mini max Search is useful and implemented. [14M]

OR

- 4 How Probabilistic Reasoning is useful in Basic Knowledge Representation. Compare Propositional Logic & First-Order Logic with their features [14M]

SECTION-III

- 5 Explain in detail about Other Knowledge Representation Schemes along with its advantages and disadvantages. [14M]

OR

- 6 Discuss about Acting Under Uncertainty? Analyze the Bayesian Belief networks with clear examples. [14M]

SECTION-IV

- 7 Illustrate Learning by Taking Advice & Learning in Problem Solving by considering two real time examples [14M]

OR

- 8 Describe the role of information gain in decision tree learning [14M]

SECTION-V

- 9 With the help of a neat diagram, explain the Expert System Architecture. List its Applications [14M]

OR

- 10 Explain Various Phases in building Expert Systems. Write the procedure for Knowledge Acquisition by using Expert Systems. [14M]

R18

(Autonomous Institution – UGC, Govt. of India)

Artificial Intelligence

Roll No

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I
Define Artificial Intelligence. Explain the techniques of A.I. Also describe the characteristics of Artificial Intelligence

[14M]

OR

- 2 *A* Explain real-world AI problems with examples
 B Explain any two Heuristic Search algorithms?

[4M]

[10M]

SECTION-II
Explain min-max search and Alpha-Beta Pruning with examples

[14M]

OR

[14M]

SECTION-III

Write down logical representations for the following sentences suitable to use with Generalized Modus Ponens:

[14M]

- (a) Horses, cows and pigs are mammals
- (b) An offspring of a horse is a horse
- (c) Bluebeard is a horse
- (d) Offspring and parent are inverse relations
- (e) Every mammal has a parent. Draw the proof tree generated by an exhaustive back-ward chaining algorithm for the query $\exists h \text{ Horse}(h)$.

OR

- 6 Explain how to resolve Uncertainty and Bayesian Belief Network with an example [14M]

SECTION-IV
Discuss the issues to be addressed in order to extend decision tree induction to a wide variety of platforms. [14M]

OR

- 8/ Explain Rote Learning, Learning by Taking Advice, Learning in Problem Solving with a Real world Example [14M]

SECTION-V

With the help of a neat diagram, explain the Expert System Architecture. List its Applications [14M]

OR

OR

- Application _____ OR _____ [14M]
 10 What is Shell in Expert System? Discuss in detail about Shell and Knowledge Acquisition Techniques?

Code No: R18A1205

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

R18

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021

Artificial Intelligence

(EEE, CSE & IT)

Roll No

Time: 3 hours

Max. Marks: 70

Answer Any Five Questions

All Questions carries equal marks.

- 1 Discuss about the advantage of heuristic search techniques and explain generic best first search strategy [14M]
- 2 a. Define Artificial Intelligence. Explain the techniques of A.I. Also describe the characteristics of Artificial Intelligence. [7M]
b. Discuss about how backtracking search strategy performs. [7M]
- 3 Describe the mini max algorithm with an example. [14M]
- 4 a. Discuss about backward chaining algorithm [7M]
b. Describe probabilistic reasoning with example. [7M]
- 5 Explain how to represent Knowledge in an Uncertain Domain. [14M]
- 6 a. Discuss about Knowledge Representation Issues in detail. [7M]
b. Explain rule based methods for uncertain reasoning. [7M]
- 7 a. Explain how to do learning from examples. [7M]
b. Describe the role of information gain in decision tree learning. [7M]
- 8 Explain the Expert System Architecture with the help of a neat diagram [14M]

(Autonomous Institution – UGC, Govt. of India)
IV B.Tech I Semester Supplementary Examinations, Dec-21/Jan-22
Artificial Intelligence
(CSE & IT)

Roll No									
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Time: 3 hours

Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a. With Neat Schematic Diagram, Explain the Working Methodology of Components of an Agent Program. [7M]
 b. Explain the following Uninformed Search Strategies with Suitable Examples: [7M]
 i. Breadth First Search
 ii. Iterative Deeping Depth First Search

OR

- 2 a. Define Agent Program. Explain the Following Agent Programs with Respect to Intelligent Systems [7M]
 i. Simple Reflex Agents
 ii. Model-Based Reflex Agent
 b. Explain the following Heuristic Search Strategies with Suitable Examples: [7M]
 i. Hill Climbing
 ii. Generic Best-First Algorithm

SECTION-II

- 3 a. Explain Stochastic Search Algorithm [7M]
 b. Discuss the Models for First Order Logic [7M]
 OR
4 a. Explain Alpha-Beta Algorithm and Its Move Ordering. [7M]
 b. Explain the Following Syntax and Semantics of First Order Logic [7M]
 i. Atomic Sentences
 ii. Complex Sentences

SECTION-III

- 5 a. Explain Mental Events and Mental Objects [7M]
 b. Explain Non-Monotonic Reasoning with an Example. [7M]
 OR
6 Define Bayesian Network. Explain the Semantics of Bayesian Network. [14M]

SECTION-IV

- 7 Explain the Learning from Decision Trees and How Attributes are Selected for Nodes in the Decision Trees [14M]

OR

- 8 a. Explain the Following Forms of Learning [7M]
 i. Supervised Learning
 ii. Unsupervised Learning
 b. Explain Learning through Problem Solving with an Example [7M]

SECTION-V

- 9 Explain the Following with respect to Representing and Using Knowledge Domain: [7M]
 i. If-Then Rules [7M]
 ii. Semantic Networks [7M]

OR

- 10 a. Explain the Knowledge Acquisition and Inference Engine in Expert System. [7M]

Code No: R18A1205

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

R18

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, February 2021

Artificial Intelligence

(EEE, CSE & IT)

Roll No

Time: 2 hours 30 min

Max. Marks: 70

Answer Any Five Questions

All Questions carries equal marks.

- 1 Explain about uninformed search strategies with examples [14M]
- 2
 - a) Define Heuristic search? What are the advantages of Heuristic search? [7M]
 - b) Write about any one Heuristic technique [7M]
- 3 Discuss A* algorithm in detail. [14M]
- 4 Give a brief note on Alpha-Beta Pruning [14M]
- 5 Explain how to handle uncertain knowledge in detail. [14M]
- 6 Write about the Belief Bayesian Networks [14M]
- 7
 - a. . Discuss about Winston's Learning Program. [7M]
 - b. Briefly describe learning in Problem Solving [7M]
- 8 Discuss various ways of knowledge acquisition. [14M]

R17

JGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, July/August 2021

Artificial Intelligence

(CSE & IT)

Roll No

Time: 3 hours

Max. Marks: 70

Answer Any Five Questions

All Questions carries equal marks.

◆ ◆ ◆ ◆ ◆

- | | | |
|---|---|-------|
| 1 | a) Write completeness, optimality, time complexity and space complexity for all uninformed search strategies. | [7M] |
| | b) Compare and contrast DFS and BFS. | [7M] |
| 2 | Explain simple reflex agents and goal-based agents with an example. | [14M] |
| 3 | Discuss in detail about the A* algorithm using a suitable example | [14M] |
| 4 | a) Explain backward chaining algorithm with an example. | [7M] |
| | b) Discuss probabilistic reasoning. | [7M] |
| 5 | How to represent knowledge in uncertain domains? Discuss in detail. | [14M] |
| 6 | Discuss probability concepts used for uncertainty reasoning. | [14M] |
| 7 | a) Discuss learning by taking advice. | [7M] |
| | b) Explain in detail about decision trees. | [7M] |
| 8 | a) Discuss in detail about components of an expert systems. | [7M] |
| | b) Differentiate Human system and Expert system. | [7M] |

本館備有各種新書

Code No: R20A0452

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, May/June 2023

Internet of Things & Its Applications

(ME, CSE, IT, CSE-CS, CSE-AIML & CSE-DS)

Roll No								
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- | | | | |
|----------|----------|---|-------------|
| 1 | A | Summarize the Megatrends, Capabilities and implications of IoT. | [7M] |
| | B | Write a short notes on Functional blocks of an IoT ecosystem | [7M] |

OR

- 2 **A** Explain the differences between M2M and IOT. **[7M]**
 B How does M2M communication work? Explain **[7M]**

SECTION-II

- | | | | |
|----------|----------|--|-------------|
| 3 | A | Explain LoRaWAN standard and alliance MAC layer and security | [7M] |
| | B | Describe MQTT framework and message format in detail | [7M] |

OR

- 4** **A** Explain COAP protocol and its message format. **[7M]**
 B List and explain the key advantages of internet protocol **[7M]**

SECTION-III

- 5 Explain about the concepts involved in Raspberry Pi [14M]
OR

rs. S

- Write short notes on Microcontrollers, System on Chips, IOT system architecture blocks. [10M]

SECTION-IV

- 7** **A** Explain in detail the core functions of edge analytics with necessary diagrams. **[7M]**
- B** Explain the different types of cloud computing services. **[7M]**

OR

- 8** Explain about the computing using a cloud platform for IoT/M2M applications [14M]

SECTION-V

- 9** Formulate the significant use of Raspberry Pi in Smart cities and Industrial appliances. **[14M]**

OR

- 10** Discuss IoT applications in home, infrastructures, **[14M]**

Code No: **R20A0452****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022**Internet of Things & Its Applications**

(ME, CSE, IT, CSE-CS, CSE-AIML & CSE-DS)

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 **A** Explain the generic M2M System Solution with a neat diagram. [7M]
 B Explain the functional layers and capabilities of an IoT solution with a neat diagram. [7M]

OR

- 2 Discuss IoT World Forum (IoTWF) standardized architecture and IoT data management stack of Simplified IoT Architecture. [14M]

SECTION-II

- 3 Explain SCADA over IP networks and SCADA protocol translation with a neat diagram. [14M]

OR

- 4 What is Zigbee? Explain 802.15.4 physical layer, MAC layer, and security. [14M]

SECTION-III

- 5 Describe the relative strength and limitation of Building IOT with Raspberry Pi and Arduino Board details [14M]

OR

- 6 Explain about Design Methodology and Embedded computing logic [14M]

SECTION-IV

- 7 **A** Explain the types of data analytics. [7M]
 B Explain structured versus unstructured data and data in rest versus data in motion. [7M]

OR

- 8 **A** Explain the challenges of IoT security [7M]
 B Explain the different cloud computing service models. [7M]

SECTION-V

- 9 Discuss about IoT applications in buildings, security, Industries. [14M]

OR

- 10 Discuss about Industry 4.0 concepts. [14M]

Code No: R18A0453**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Supplementary Examinations, April 2023****Internet of Things & Its Applications****(EEE, ECE, CSE, IT & AE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

*********SECTION-I**

- 1 What is Internet of Things (IoT). What are components required to design IoT Device and explain IoT eco system. [14M]

OR

- 2 What are sensors and actuators? Explain in detail. What is Machine to Machine communication (M2M)? [14M]

SECTION-II

- 3 Explain with example MQTT Protocol. What is the role of MQTT protocol in IoT? what are the features of MQTT protocol? [14M]

OR

- 4 What is role of Cloud Computing and Big Data in Internet of Things? Explain the IoT analysis. [14M]

SECTION-III

- 5 Explain the design methodology in the implementation of IoT applications. [14M]

OR

- 6 Explain about Raspberry Pi. [14M]

SECTION-IV

- 7 Give complete details of IoT Data Analytics Challenges [14M]

OR

- 8 What is cloud computing in IoT? And explain cloud services in IoT. [14M]

SECTION-V

- 9 Design a smart home automation system in IoT . [14M]

OR

- 10 Implement the air pollution monitoring system in IoT [14M]

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech II Semester Supplementary Examinations, December 2022**Internet of Things & Its Applications**

(EEE, ECE, CSE, IT & AE)

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a) What is IoT? Explain in detail about genesis of IoT [5M]
b) What does IoT and digitization mean? Elaborate on this concept. [5M]
c) Write a short note on “IoT impact in Real World”. [4M]

OR

- 2 a) With a neat diagram explain how actuators and sensors interact with physical world. Classify actuators based on energy type [7M]
b) What are the different types of Sensors used in IoT Network? [7M]

SECTION-II

- 3 What are the different Physical layer protocols in IoT? Explain any two. [14M]
- OR
- 4 a) Write about CoAP protocol with message format. [7M]
b) Describe MQTT protocol. [7M]

SECTION-III

- 5 a) Explain about Raspberry Pi Learning Board [7M]
b) Explain in detail about various pins/parts of Arduino Board with a neat sketch [7M]

OR

- 6 a) Explain about IoT System building blocks with neat diagram [6M]
b) Write a short note on
i. Microcontrollers [4M]
ii. System –on- chip [4M]

SECTION-IV

- 7 a) Explain different cloud computing deployment models. [7M]
b) Compare and contrast structured and unstructured data [7M]

OR

- 8 a) Explain in detail about IoT data Analytics. [7M]
b) Explain IOT cloud-based services . [7M]

SECTION-V

- 9 What is smart application? Explain about smart home automation. [14M]
- OR
- 10 a) Explain about Industrial IoT [7M]
b) Explain different Industrial IoT applications. [7M]

Code No: R18A0453**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Supplementary Examinations, February 2022****Internet of Things & Its Applications****(EEE, ECE, CSE, IT & AE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a) Identify the IOT Networking considerations and Challenges in IOT [8M]
b) How M2M Works and explain its necessity? [6M]
OR
- 2 a) How the Core IoT Functional Stack is built explain in detail? What are the functions performed? [8M]
b) Draw the Simplified IoT Architecture. [6M]

SECTION-II

- 3 a) Explain briefly about the LORA architecture and various components in a LORA network [8M]
b) Differentiate between Constrained Nodes and Constrained Networks [6M]
OR
- 4 a) Describe the topology and Security of IEEE 802.15.4 [8M]
b) Explain the features of Wi-Fi, ZigBee and LORA Technologies. [6M]

SECTION-III

- 5 Describe the features of IoT Architecture Layers in detail [14M]
OR
- 6 a) Draw the simplified block diagram of the IOT with basic building blocks and explain [8M]
b) Outline the purpose of Embedded system hardware in IOT? [6M]

SECTION-IV

- 7 Explain and compare edge computing, fog computing and cloud computing [14M]
OR
- 8 Discuss the following concepts [14M]
i) Data Acquiring ii) Data acquisition and iii) Data validation iv) Data Categorization for Storage

SECTION-V

- 9 Describe the Smart home platform/home automation using IOT. [14M]
OR
- 10 Discuss the concept of Industry 4.0 [14M]
