**SPCC (old)**

What is the difference between dynamic Linking & Loading??

What is DLL? Explain the 4 types of cards produced by Assembler?

What is Compiler? Give the difference between Compiler & Interpreter?

Explain phases of Compiler with Example.?

What are Tokens & Lexeme? Give the examples?

Explain the block diagram of Lexical Analyzer?

Write a note on Input Buffering and explain the role of lexical analyser?

Explain LEX variables and LEX functions?

Explain role of parser in compiler construction?

What are the tasks performed by the parser?

What is Recursion? How to remove Left Recursion?

Explain the different phases of compiler? Illustrate the output after each phase for the following statement: a=b+c-d\*5.

Differentiate Top-Down and Bottom-up Parsing? Explain Recursive descent parser with an example?

Explain different types of Intermediate code representation with examples?

Explain different error recovery techniques?

What are the different types of Intermediate code? Explain implementation of Three Address code?

**IOT**

Zigbee

IEEE802.xx.x

IEEE802.15.4

Bluetooth- types, comparison

Core IOT functional stack 10M

IOT protocols 10M

SCADA

Short note on home automation (4 points)

**SPCC**

1. What is the difference between dynamic Linking &amp; Loading?

2. Write short note on Peephole Optimization.

3. What are the functions of Loader?

4. Explain the design of direct linking loader.

5. Compare Pattern, Lexeme &amp; Token with suitable example?

6. What is Relocation and Linking concept in Loaders?

7. Explain role of parser in compiler construction?

8. What is Recursion? How to remove Left Recursion?

9. Differentiate Top-Down and Bottom-up Parsing? Explain Recursive descent parser

with an example?

10. Explain various Code Optimization techniques in detail?

11. What are the different ways of representing Intermediate code? Explain with

example?

12. What is Left Factoring? Find First &amp; Follow for the following grammar:

S -> aA; A -> BD; B -> b | ε; D ->d | ε.

13. Design predictive parser for the given grammar: E -> TQ ; T ->FR ; Q -> +TQ|-

TQ|E; R-> \*FR| /FR| E; F -> (E) | id

14. Construct LL(1) parser for following grammar: E -> TE’; E’ -> +TE’ | ε; T -> FT’ ;

T’ -> \*FT’ | ε ; F -> (E) | id

15. Construct SLR parser for the following grammar: 1) E -> E +T 2) E -> T

3) T -> T \* F 4) T-> F 5) F -> id

16. Construct SLR parser for the following grammar: S -> (S)S | ε

**MC**

1. What are the limitations of mobile IP?

2. Discuss the problems of using traditional TCP in wireless networks. Explain I-TCP.

3. State the advantages and disadvantages of Snooping TCP.

4. Explain working of Mobile TCP with its advantages and disadvantages.

5. What is reverse tunnelling?

6. What are the advantages and disadvantages of wireless LAN?

7. State the differences between Ad-hoc and infrastructure based wireless networks.

8. Explain system architecture of 802.11

9. Explain protocol architecture of 802.11.

10. Explain MAC management in 802.11

11. With reference to Bluetooth protocol, explain piconet and scatternet.

12. Explain Optimization in Mobile IP.

13. What is the need of micro mobility? Explain HAWAII in detail.

14. Explain MIPv6 and FMIPv6 for micro mobility.

15. Explain cellular IP architecture. State the advantages of Cellular IP

**AI**

1. Write short notes on:

(i) Genetic algorithms.

(ii) IDA\* search algorithm.

(iii) Resolution

(iv) Decision tree learning.

2. What is supervised and unsupervised learning? Give example of each.

3. Explore the WUMPUS World problem and describe its PEAS

representation.

4. What are the steps involved in natural language programming (NLP) of

an English sentence? Explain with an example sentence.

5. Differentiate between forward and backward chaining with suitable

example.

6. What are the problems associated with Hill climbing technique? How

can they be overcome?

7. Define Heuristic function. Calculate heuristic function for the 8puzzle

problem.

8. Explain the steps involved in converting the propositional logic

statement into CNF with suitable example.

9. Sketch and explain types of reasoning.

10. Differentiate between STRIPS language and ADL.