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R-15

Code: 5G151
III B.Tech. I Semester Supplementary Examinations February 2021
Compiler Design
(Computer Science and Engineering)

Max. Marks: 70
Time: 3 Hours
Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

	Marks	CO	Blooms Level
UNIT-I			
1. a) What is the use of Lex? Explain about the structure of Lex programs.	7	CO1	L1
b) Define context-free grammar. Discuss about Ambiguity with an example.	7	CO1	L1
OR			
2. Construct the predictive parsing table for the following grammar. E → E + T T T → T * F F F → (E) id Also write the moves made by predictive parser on input id+id*id.	14	CO2	L5
UNIT-II			
3. a) Explain about Error recovery in parsing by considering the below Expression grammar. E → E + E E * E (E) id	7	CO2	L2
b) Explain about Dangling Else ambiguity by considering the following grammar. S' → S S → iSeS iS a	7	CO3	L2
OR			
4. Using Shift reduce parsing, find whether the string id ₁ * id ₂ is accepted or not with respect to the following grammar. E → E + T T T → T * F F F → (E) id	14	CO3	L4
UNIT-III			
5. a) Discuss in detail about the Syntax Directed Definitions.	7	CO3	L1
b) Construct an annotate parse tree for 2*3+5n	7	CO3	L5
OR			
6. a) Explain about widening and narrowing type conversions between primitive conversions in java.	7	CO4	L2
b) Discuss about overloading of functions and operators.	7	CO4	L4
UNIT-IV			
7. a) Define symbol table. What are the contents of symbol table explain about their use.	7	CO4	L2
b) Discuss about the data structures used for the symbol table.	7	CO4	L2
OR			
8. Explain about Static, Stack and heap allocation strategies.	14	CO4	L1
UNIT-V			
9. a) Explain about Live variable Analysis.	7	CO5	L2
b) Explain code generation algorithm with an example	7	CO5	L2
OR			
10. a) What is basic block? How can you transform a basic block into a DAG?	7	CO5	L3
b) Discuss about various program transformations of peephole optimization.	7	CO5	L4

Hall Ticket Number :

R-15**Code: 5G356**

III B.Tech. I Semester Supplementary Examinations February 2021

Microprocessors & Interfacing
(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

Marks	CO	Blooms Level
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UNIT-I

1. a) With the help of timing diagrams ANALYZE the minimum mode of 8086 microprocessor.

8M

K4

- b) Find out Physical address for the following :

i) CS = 4000H, IP= ABC4H

ii) DS = 5000H, SI = 2000H

iii) SS = 90000H, SP=9000H

6M

K3

OR

2. a) Draw the internal block diagram of 8086 microprocessor and ANALYZE the both units

6M

K4

- b) i) Explain the ASSEMBLY directives ORG, DB with examples

ii) Explain the INSTRUCTIONS DAA, ADD with examples

8M

K3

UNIT-II

3. a) Differentiate I/O interfacing methods of 8086 microprocessor.

6M

K2

- b) Explain stepper Motor function and Write a program for stepper motor forward and backward rotation.

8M

K2

OR

4. Explain the Operational Modes of 8255 along with Block Diagram.

14M

K2

UNIT-III

5. a) Distinguish between programmed I/O and Interrupt driven I/O.

6M

K2

- b) With neat sketch explain the architecture of 8259 PIC

8M

K2

OR

6. Explain in detail about the Architecture of 8257 with neat diagram.

14M

K2

UNIT-IV

7. Analyze 8251 USART architecture and interfacing with 8086.

14M

K3

OR

8. Analyze 8253 mode of operations and it's interfacing with 8086.

14M

K3

UNIT-V

9. List the salient features of Pentium and Pentium pro processors.

14M

K2

OR

10. Explain Paging operation in 80386.

14M

K2

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R-15

Code: 5G155

III B.Tech. I Semester Supplementary Examinations February 2021

Web Technologies

(Computer Science and Engineering)

Max. Marks: 70

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

UNIT-I

- 1 List out Java Script Objects? Explain any three Objects 14M

OR

2. What are different types of CSS available? Explain with examples. 14M

UNIT-II

3. What is DOM? Explain DOM and SAX using XML processors. 14M

OR

4. a) Define XML. What are the advantages of XML? Explain. 7M
b) Design a layout using XML containing an application form 7M

UNIT-III

5. Discuss the following:
i) Driver manager 5M
ii) Database metadata 4M
iii) Querying database 5M

OR

6. Develop a JDBC program to retrieve data from the Data Base using the steps involve in the JDBC Program 14M

UNIT-IV

7. a) Describe the lifecycle of servlet. 7M
b) Explain about handling HTTP request & response. 7M

OR

8. a) Discuss database access using servlets. 7M
b) How to use Scripting Elements in JSP? Explain 7M

UNIT-V

9. List out the important elements used in Constructing JSP Page use at least one element with suitable program 14M

OR

10. a) Write the working procedure for working with XML Data in JSP 7M
b) Discuss error handling and debugging in JSP applications. 7M
