B.S. Abdur Rahman Crescent Institute of Science & Technology
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CSD 3202

RRN 2 1 0 1 7 1 6 0 1 0 5 2

CONTINUOUS ASSESSMENT TEST- 1 MARCH 2024

Programme & Branch	:	B.Tech CSE, CSE(CS) & CSE(IoT)		
Semester	:	VI	Date & Session	: 05/03/2024 AN
Course Code & Name	:	CSD 3202 & Compiler Design		
Duration	:	90 minutes	Maximum Marks	: 50

ANSWER ALL QUESTIONS

PART A (5 X 2 = 10 MARKS)

1. Define interpreter and compiler.
2. List any four compiler construction tools.
3. What is meant by lexeme? Give an example.
4. Draw the transition diagram for the regular expression "$(p/q)^+ppq$".
5. Distinguish between top down and bottom up parsing.

PART B (2 X 16 = 32 MARKS)

6.a (i) Explain the various phases of compiler and describe its functions with suitable example. **(12)**

(ii) Discuss about various cousins of compiler. **(4)**

(OR)

b (i) Construct NFA for the regular expression $(0/1)^*0(0/1)$ using Thompson's construction rule and construct an optimized DFA. **(16)**

7.a (i) Construct predictive parsing table for the grammar.

$P \rightarrow PpQ \mid Q$
$Q \rightarrow QqR \mid R$
$R \rightarrow rPs \mid t$

Parse the input string "rts" using the above constructed parsing table. **(16)**

(OR)

b (i) Construct SLR parsing table for the following grammar

$K \rightarrow K+L \mid L$
$L \rightarrow L^*M \mid M$
$M \rightarrow (K)/id$

Parse the input string "(id+id)" using the constructed table. **(16)**

PART C (1 X 8 = 8 MARKS)

8.a Derive the string "*aaabbabbba*" for the following grammar using left most derivation and right most derivation.

S → aB | bA
A→ a |aS | bAA
B → b | bS | aBB (8)

(OR)

b. Consider the grammar:

E-> E+E
E-> E*E
E->id

Perform shift reduce parsing of the input string "id+id*id". (8)

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CSDX 233

RRN 2 1 0 1 9 1 6 0 1 0 0 2

CONTINUOUS ASSESSMENT TEST- 1 MARCH 2024

Programme & Branch	:	B.Tech CSE,CSE(CS),CSE(IoT)		
Semester	:	VI	Date & Session	: 09/03/2024 & AN
Course Code & Name	:	CSDX 233 & Gaming Technology		
Duration	:	90 minutes	Maximum Marks	: 50

ANSWER ALL QUESTIONS

PART A (5 X 2 = 10 MARKS)

1. Define Game design.
2. List any four skills required for a game designer.
3. Mention the four elements of game.
4. How to balance the economy of game?
5. Write any three main rules of game.

PART B (2 X 16 = 32 MARKS)

6.a (i) Examine the eight criteria utilized for achieving optimal game design. **(8)**

(ii) Elaborate the Agile methodology in game development with examples. **(8)**

(OR)

b. (i) Describe the primary factors that influence player decision-making in games. **(16)**

7.a (i) Explain the Parlett's rule of analysis with a visual representation. **(10)**

(ii) Elucidate the key components necessary to design an activity that puts a player in a state of flow. **(6)**

(OR)

b. (i) Illustrate the ten fundamental concepts of probability that are essential for a game designer. **(16)**

PART C (1 X 8 = 8 MARKS)

8.a (i) Create a state diagram to represent the stages involved when a player solves a puzzle in an adventure or puzzle game. **(8)**

(OR)

b. (i) Design a new level for Helix jump that incorporates augmented reality features and describe how these elements would elevate the gaming experience. **(8)**

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