SV - 202

Total No. of Pages : 2

Seat No.	

T.E. (Computer Science and Engg.) (Semester - V)

Examination, April - 2019

SYSTEM PROGRAMMING

Sub. Code : 66294

Day and Date : Saturday, 27 - 04 - 2019 **Total Marks : 100**

Time : 02.30 p.m. to 05.30 p.m.

Instructions :
1) **Question No. 4 and 8 are compulsory.**
2) **Answer any two questions from Question No. 1, 2 and 3.**
3) **Answer any two questions from Question No. 5, 6 and 7.**
4) **Figures to right indicate full marks.**

Q1) a) What is Language Processor? Explain in detail Language Processing Activities. **[8]**

b) Discuss in detail fundamentals of Language specifications. **[8]**

Q2) a) Explain Intermediate Representation with an illustrative example. **[8]**

b) How the problem of Forward Reference is resolved in Assembler? **[8]**

Q3) a) Write about MACRO Definition and Call with syntax and Example. **[8]**

b) Discuss in detail, along with sketch/block diagram, the design of a macro Preprocessor. **[8]**

Q4) Write short note on : **[18]**

a) Toy Compiler.

b) Advanced macro facilities.

c) LEX and YACC LPDT's.

Q5) a) What is the Role of Operand Descriptor in the choice of instruction in target Code of Toy code generator. **[8]**

b) Discuss in detail with example; Triples and Quadruples. **[8]**

P.T.O.

Q6) a) Explain Memory Allocation in Block Structured Language. **[8]**

b) Write in detail; Execution of Overlay structured programs. **[8]**

Q7) a) What is Relocation? Discuss Role of Relocation factor to perform Relocation. **[8]**

b) Give the Structure of UI with neat Diagram. **[8]**

Q8) Write short note on: (Solve any three) **[18]**

a) Steps in Program Development.

b) Debug Monitor.

c) Compilation of Control Structures.

d) Text Editor

SV - 205

Seat No.	

Total No. of Pages : 2

T.E. (Computer Science and Engg.) (Semester - V) (Revised) Examination, May - 2019
NETWORK TECHNOLOGIES
Sub. Code : 66297

Day and Date : Wednesday, 15 - 05 - 2019 **Total Marks : 50**

Time : 02.30 p.m. to 04.30 p.m.

Instructions:
1) **Q. 1 is compulsory.**
2) **Attempt any three questions from Q.2to Q.5.**
3) **Figures to the right indicate full marks.**
4) **Assume suitable data if necessary.**

Q1) a) Explain broadcast and common control channels of GSM. **[6]**

b) Explain IEEE 802.11 MAC frame format. **[4]**

c) Explain design goals of MAC protocol for AD hoc wireless network. **[4]**

Q2) a) Explain the following GSM Identities.

i) MSISDN

ii) IMSI

iii) IMEI **[6]**

b) What is TDD? Explain Bluetooth multislot packet transmission. **[6]**

Q3) a) Explain MAC layer operation of IEEE 802.11.

i) Distributed control function.

ii) Point coordination function. **[6]**

b) Explain the following physical links used in Bluetooth.

i) Asynchronous connectionless link.

ii) Synchronous connection oriented link. **[6]**

P.T.O.

Q4) a) Explain weaknesses in WEP scheme. [6]

b) What are the applications of wireless sensor networks? [6]

Q5) a) Write a note on VPN. [6]

b) Explain the architecture of sensor node. [6]

SV-204

Total No. of Pages : 2

Seat No.	

T.E. (CSE) (Part - III) (Semester - VI) (New) Examination, May - 2018

STORAGE NETWORKS

Sub. Code :66861

Day and Date : Saturday, 12 - 5 - 2018 **Total Marks : 100**

Time : 2.30 p.m. to 5.30 p.m.

Instructions :
1) **Figures to the right indicate full marks.**
2) **Question No.4 & Question No.8 are compulsory.**
3) **Attempt any two questions from Q.1 to Q.3 and from Q.5 to Q.7.**

Q1) a) Explain Disk Drive Components in detail? **[8]**

b) Describe benefits of NAS in detail? **[8]**

Q2) a) Explain cache mirroring and cache vaulting in Intelligent Storage System? **[8]**

b) Explain the different components of SAN? **[8]**

Q3) a) Explain the different Fibre Channel Topologies? **[8]**

b) Discuss iSCSI components & connectivity? **[8]**

Q4) Attempt Any Three. **[18]**

a) DAS (Direct Attached Storage)

b) RAID Level 5

c) Read & Write in cache,

d) Factors affecting NAS

P.T.O.

Q5) a) Explain any four implementation consideration of Virtualization entity? **[8]**

b) With suitable diagram explain Symmetric Storage Virtualization? **[8]**

Q6) a) Discuss following business continuity terminologies? **[8]**

i) Disaster Recovery

ii) Disaster Restart

iii) Recovery point objective

iv) Recovery Time Objective

b) Explain any two backup technologies? **[8]**

Q7) a) Which are the limitations of non - virtualized Storage Networks? **[8]**

b) With suitable example explain Backup Granularity? **[8]**

Q8) Attempt any three. **[18]**

a) Measurement of Information Availability.

b) Business Impact Analysis

c) Full Volume mirroring

d) Storage Security Domains

SV - 208

Seat No.	

Total No. of Pages : 2

T.E. (Computer Science and Engineering) (Semester - VI) (Revised) Examination, May - 2019

Database Engineering

Sub. Code : 66860

Day and Date : Friday, 17 - 05 - 2019 **Total Marks : 50**

Time : 09.30 a.m. to 11.30 a.m.

Instructions : 1) **Attempt any two questions from question no. 1, 2 and 3.**
2) **Attempt any two questions from question no. 4, 5 and 6.**
3) **Figures to the right indicate full marks.**

Q1) a) What are the different levels of data abstraction? **[6]**

b) Explain the following : **[7]**

i) Super key ii) Primary Key

iii) Candidate Key iv) Foreign Key

Q2) a) Write SQL queries to perform given tasks on following schema. **[6]**

Sailors(sid: integer, sname: string, rating: integer, age: real)

Boats(bid: integer, bname: string, color: string)

Reserves(sid: integer, bid: integer)

i) Find the names of sailors who have reserved at least one boat

ii) Find the names of sailors who have not reserved a red boat

iii) Find the name and age of the oldest sailor

iv) Find the age of youngest sailor who is at least 18 years old

b) Explain different data models. **[6]**

Q3) a) Find closure and canonical cover for given set of functional dependencies. **[6]**

$\{A \rightarrow B, A \rightarrow C, CG \rightarrow H, CG \rightarrow I, B \rightarrow H\}$

b) Compare 3NF with BCNF. **[6]**

P.T.O.

Q4) a) Compare ordered indexing with hashing. Give index definition in SQL. [6]

b) What are the different physical storage media used for data storage? Compare all with respect to performance and cost. [6]

Q5) a) Explain two phase locking protocol with its variants. [6]

b) Explain conflict serializability and view serializability. [6]

Q6) a) Explain timestamp ordering protocol for concurrency control. [6]

b) Explain log based recovery mechanism. [7]

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SV-206

Seat No.	

Total No. of Pages : 2

T.E. (CSE) (Part - II) (Semester - VI) Examination, May - 2019
COMPILER CONSTRUCTION (Revised)
Sub. Code : 66858

Day and Date : Monday, 13-05-2019 **Total Marks : 50**

Time : 09.30 a.m. to 11.30 a.m.

Instructions : 1) All questions are compulsory.

2) Figures to the right indicate full marks.

SECTION - I

Q1) a) Describe the use of DFA for a construction of a lexical analyzer. Illustrate with example. **[4]**

OR

a) Construct finite automata accepting the set of all strings ending with 101 where the Language is defined on {0, 1}. **[4]**

b) Enumerate and describe the different compiler construction tools. **[6]**

Q2) a) Compute the FIRST and FOLLOW sets for the grammar given below **[6]**

$E \rightarrow TE'$

$E' \rightarrow +TE' | \varepsilon$

$T \rightarrow FT'$

$T' \rightarrow *FT' | \varepsilon$

$F \rightarrow (E) | id$

OR

a) Explain different error-recovery techniques used in syntax analysis. **[6]**

b) Explain Specification of Tokens in Lexical Analysis. **[4]**

Q3) What are features of LR parser? Write the LR parsing algorithm. **[5]**

P.T.O.

SECTION - II

Q4) a) What are S attributed definitions? Explain with the help of an example. [6]

OR

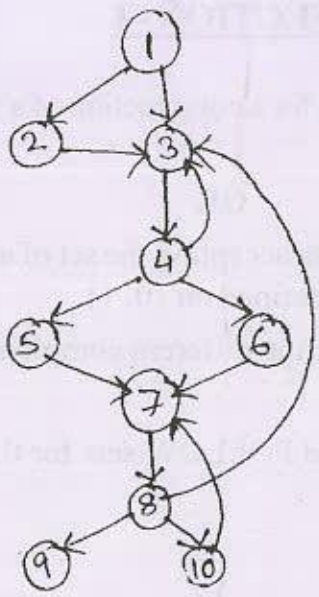
a) What is backpatching? Explain it with a suitable SDD. [6]

b) Generate three address code for the following block : [4]

a = b * (c + d)

e = ((a + b) * (a + c))

Q5) a) What is a dominator tree? Draw the dominator tree for the given flow graph. [6]



OR

a) What is peephole optimization? Describe different characteristics of peep-hole Optimization. [6]

b) Discuss different issues in design of code generator. [4]

Q6) What is a basic block? Draw DAG for the given basic block [5]

a=b+c

b=b–d

c=c+d

e=b+c

SV - 202

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T.E. (Computer Science and Engg.) (Semester - V)

Examination, April - 2019

SYSTEM PROGRAMMING

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