

V-076

Roll No. 11501040002

Total Printed Pages: **2**

**05BCS101**

**B.TECH. (COMPUTER SCIENCE & ENGG.)**

**V-SEM Examination, Dec.-2017**

**SUB : SOFTWARE ENGINEERING**

Time : 3 Hours]

[Total Marks 60

Use of following supporting material is permitted during examination.

1. \_\_\_\_\_ Nil \_\_\_\_\_ 2. \_\_\_\_\_ Nil \_\_\_\_\_

Note: 1. Attempt any five question.

2. Each question carry equal marks.

1. a. What is system? Differentiate between system engineering and software engineering.  
b. Discuss major problem on system development.
2. a. What is SDLC? Explain SDLC model in brief.  
b. Explain system level project planning in detail.
3. Explain incremental process model. Justify that it is appropriate for business software system but less

05BCS101

1

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appropriate for real time system.

4. With the help of neat diagram. Explain boehm's spiral model give merit and demerit of spiral model.
5. Explain finite state machine (FSM) model.
6. Explain data flow and control flow diagram with suitable example.
7. What is software design? Explain architectural and procedural design? Explain.
8. What is software coding? Describe programming style and program quantity in context of software coding.
9. Discuss object oriented analyses (OOA) and modeling in detail.
10. What is UML? Explain the following in context of UML.
  - a. Use case diagram
  - b. Sequence diagram
  - c. Classes and objects
  - d. Interfaces
  - e. State diagram

Roll No. 11501040002Total Printed Pages: **2****05BCS102****B.TECH. (COMPUTER SCIENCE & ENGG.)****V-SEM Examination, Dec.-2017****SUB : COMPUTER ARCHITECTURE**

Time : 3 Hours]

[Total Marks 60

Use of following supporting material is permitted during examination.

1. \_\_\_\_\_ Nil \_\_\_\_\_ 2. \_\_\_\_\_ Nil \_\_\_\_\_

*Note:- 1. Attempt any five question.*

*2. Each question carry equal marks.*

1. Explain different types of arithmetic and logic micro operations?
2. Explain concept of bus and timing in register transfer?
3. Different types of addressing models? Detail study?
4. What is the concept of pipelining? With diagram.

5. Explain and write booth's algorithm.
6. What is an array multiplier? And explain multiplexer and de multiplexer.
7. Study of basic organization of micro-programmed controller?
8. Concept of cache memory and virtual memory organization.
9. What is strobe based and handshake based communication?
10. What is DMA? Explain DMA based data transfer.

*Direct memory Access*

V-078

Roll No. 1150040002

Total Printed Pages : **2**

**05BCS103**

**B.TECH. (COMPUTER SCIENCE & ENGG.)**

**V-SEM Examination, Dec.-2017**

**SUB : DATABASE MANAGEMENT SYSTEM**

Time : 3 Hours]

[Total Marks 60

Use of following supporting material is permitted during examination.

1. \_\_\_\_\_ Nil \_\_\_\_\_ 2. \_\_\_\_\_ Nil \_\_\_\_\_

Note: 1. Attempt any five question.

2. Each question carry equal marks.

1. ✓ Differentiate file system DBMS.
2. ✓ What is DBMS? Explain the advantages & structure of DBMS.
3. ✓ Define E-R model with appropriate example.
4. Write short note on-
  - a. Aggregation

05BCS103

1

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- b. Weak entity\_
- c. Attributes
5. Explain selection and protection with suitable example.
  6. Explain the use of join & direction in relation Algebra of DBMS.
  7. Explain triggers and active databases.
  8. ✓ Write the SQL queries for the given schema. Student ( name, student number , credit howls, department)
    - a. Change the class of student 'uday' to 2
    - b. Delete the record for the student whose mane is 'Geeta' and whose student no. is 17.
  9. ✓ Discuss 1NF, 2NF, 3NF and BCNF with an example and state the normal form.
  10. Write short notes on-
    - a. ODBC
    - b. JDBC

Roll No. 1150104002Total Printed Pages : 2**05BCS104****B.TECH. (COMPUTER SCIENCE & ENGG.)****V-SEM Examination, Dec.-2017****SUB : COMPUTER GRAPHICS**

Time : 3 Hours]

[Total Marks 60

Use of following supporting material is permitted during examination.

1. \_\_\_\_\_ Nil \_\_\_\_\_ 2. \_\_\_\_\_ Nil \_\_\_\_\_

Note: 1. Attempt any five question.

2. Each question carry equal marks.

1. Give an brief introduction to raster scan display?
2. Working principle of dot matrix and inkjet laser ? with diagram.
3. Working principles of keyboard and mouse scanner? With diagram.
4. Explain the techniques used in scan conversion and image representation?

05BCS104

1

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5. Explain and write Bresenham's algorithm?
6. With diagram explain 2D and 3D co-ordinate system?
7. Write point and line clipping algorithm?
8. Explain various colour models like RGB, YIQ and CMY also explain where and how these colour models are used?
9. What are different multimedia components used in computer graphics ?
10. Explain multimedia and presentation tools used in computer graphic?

Roll No. 115010 4000 2

Total Printed Pages : 2

**05BCS105****B.TECH. (COMPUTER SCIENCE & ENGG.)****V-SEM Examination, Dec.-2017****SUB : TELECOMMUNICATION  
FUNDAMENTALS**

Time : 3 Hours]

[Total Marks 60

Use of following supporting material is permitted during examination.

1. \_\_\_\_\_ Nil \_\_\_\_\_ 2. \_\_\_\_\_ Nil \_\_\_\_\_

Note: 1. Attempt any five question.

2. Each question carry equal marks.

1/ Draw the following reference models used in computer communication-

a. OSL/LSO model

b. TCP/LP model.

2. Explain the stop and wart ARQ protocol and also discuss the piggy backing method.

3. What do you understand by synchronization problem how to solve it? Explain with suitable example.
4. Show that slotted aloha has a maximum throughput of twice the pure ALOHA maximum throughput.
5. Explain the frame structure of point to point protocol. What is difference between HDLC and PPP?
6. What is looping problem in switching. Explain spanning. Explain spanning tree protocol in details.
7. Explain TDMA super frame structure and collision possible in TDMA and FDMA? Justify.
8. Describe ADSL. Also discuss the two systems used in ADSL.
9. Explain CDMA. What are forward and reverse CDMA channels?
10. What are the various spread spectrum techniques? Explain frequency hopped spread spectrum techniques.