

B.Sc. DEGREE EXAMINATION, DECEMBER 2008.

(Examination at the end of Third Year)

Part II — Information Technology

Paper I — SOFTWARE ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) Explain various core principles that focus on software engineering practice as a whole.
(b) Explain about the Spiral Model and its advantages?
2. (a) Write and explain various Design Modeling Principles?
(b) What is requirement? Explain various Requirement Engineering Tasks?
3. Describe an Analysis Patterns with two benefits for each?
4. (a) What is Domain Analysis? Explain with neat diagram.
(b) How do we assess the quality of a software design?
5. (a) Explain various Black-box testing Methods with an example?
(b) What is Object Constraint language? Explain it.
6. What is Cohesion? Explain different types of Cohesions with an example?
7. Explain a Software Testing Strategy for conventional Software Architectures?
8. (a) Write an essay on Integration testing and Unit testing?
(b) Explain about alpha and beta tests with an example?
9. Discuss about Metrics for the analysis model, Design Model and Source Code?
10. Write all in the following :
 - (a) What is Architecture?
 - (b) Tabular Design Notation.
 - (c) What are Design Issues.
 - (d) Define Verification?
 - (e) What are tests used for Validation Testing?

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Part II — Information Technology

Paper II — COMPUTER COMMUNICATIONS AND NETWORKS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) Discuss the fundamental characteristics determine the effectiveness of a data communications system.
(b) For n devices in a network, what is the number of cable links required for a mesh, ring, bus and star topology?
2. (a) What is the difference between bit rate and baud rate? Give an example where both are the same. Give an example where they are different.
(b) Explain and compare synchronous and Asynchronous transmission mode.
3. (a) Distinguish between Switched Exchanges and Stream exchanges.
(b) Explain Traffic Dimensioning.
4. (a) What are the functions of each layer of OSI Model?
(b) Explain about ARPANET.
5. Describe ISDN architecture.
6. What are the digital services available to telephone customers? What is FTTC and who use it?
7. Draw the IPv4 data gram format and explain how a data gram is prevented from going back and forth forever between routers.
8. (a) Write about Fiber Optic Networks.
(b) Explain Structure of the Telephone System.
9. Describe IEEE 802 LAN Standard protocols.
10. Write short notes on any FOUR of the following :
 - (a) Various Switching mechanisms.
 - (b) Handshake systems.
 - (c) Electronic mail.
 - (d) DNS.
 - (e) TCP protocol.

(DSBC 31)

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Paper III — BASICS OF E-COMMERCE

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. With the implementation of Electronic commerce, discuss the benefits to organizations, consumers and society.
2. How can Electronic Commerce facilitate customization of products and Services?
3. Discuss the objectives of web advertisements and their characteristics
4. Discuss the benefits of push technology.
5. Explain the benefits and limitations of electronic auctions.
6. Write about the impact of Electronic Commerce on the travel industry.
7. Write about electronic banking.
8. Write about how online publishing Services, would help the stakeholders?
9. Write about how the electronic payment systems.
10. Explain the infrastructure required for E-Commerce

(DSDW 31)

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Part II — Information Technology

Paper IV — DATA WAREHOUSING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. What is Dataware housing? What is need of Dataware house? How to build a Dataware house?
2. Explain architecture of Dataware housing?
3. Explain Starflake schema?
4. What is Data mart? What is need of Data mart? Discuss design issues of Data mart?
5. Explain design issues for Data warehousing?
6. Explain various components of Extract, Transform and Load (ETL).
7. Write about different approaches to data transformation.
8. Discuss type of OLAP.
9. (a) What is data mining? Briefly describe the components of a data mining system.

(b) What kinds of patterns can be identified in a data mining system?

10. Why you need tools to manage a Data Warehouse?

(DSVP 31)

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Part II — Information Technology

Paper V — VISUAL PROGRAMMING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. Explain VC++ components.
 2. Explain the procedure for developing a simple applications in VC++.
 3. (a) Discuss the different types of projects in VC++.
(b) Write an application in VC++ to draw a circle within a client area of the window and fill it with any one of the brush style.
 4. Explain about cursors and bitmaps in VC++.
 5. Write about Visual C++ windows development tools.
 6. Write a windows program to add and remove items in a list box.
 7. Explain the Visual C++ environment.
 8. Discuss key features of the MFC library.
 9. Explain OLE features and specifications.
 10. Differentiate between ATL versus ActiveX.
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