

Semester 3rd

BCA-214: Object Oriented Programming using C++

- Q 1)** What is C++? What is class? What are the different features of c++?
- Q 2)** What is inheritance in C++? Explain the different types of inheritance with examples.
- Q 3)** Explain various Data types in detail.
- Q4)** Explain various types of operators in detail.
- Q5)** What is the difference between C and C++? What are the various OOPs concepts in C++?
- Q6)** What is Polymorphism? What are the different types of polymorphism in C++?
- Q 7)** What is function? Explain how a function is declared in C++? Write about Function Prototype. (OR) Describe four categories of function prototype. What are the differences between call by value and call by reference?
- Q 8)** Explain Decision making statements in C++. (OR) Branching statements in (OR) Conditional statements.
- Q 9)** Explain various looping / Iterative statements in C++ with example. What is the difference between while and do while loop? Explain with examples.
- Q 10)** Explain Function Overloading and Operator Overloading with examples. What are the benefits of Operator Overloading?
- Q11)** What do you mean by Pure Virtual Functions and friend function with examples?

BCA-215: Fundamentals of Database Management System

- 1) What is DBMS and what is its utility? Explain RDBMS with examples.
- 2) What is a Database? Explain a few advantages of a DBMS. Mention the issues with traditional file-based systems that make DBMS a better choice?
- 3) What do you mean by normalization? Explain different types of Normalization forms in a DBMS.
- 4) What is a transaction? What are ACID properties?
- 5) What is meant by an entity-relationship (E-R) model? Explain the terms Entity, Entity Type, and Entity Set in DBMS.
- 6) Explain 3-tier architecture of DBMS.
- 7) Who is DBA? Explain the role of DBA in DBMS.
- 8) Explain different levels of data abstraction in a DBMS.
- 9) Explain different types of relationships amongst tables in a DBMS.
- 10) Explain the difference between a 2-tier and 3-tier architecture in a DBMS.
- 11) What is Data Independence? What **are two types of Data Independence**? What are the three levels of data abstraction?

BCA-213: Computer System Organization and Architectures

- 1) Explain basic architecture of computer in detail
- 2) **What is instruction format? Discuss different types of instruction formats.**

- 3) **Define addressing modes. Classify and explain with examples.**
- 4) **Differentiate between Hardwired control and Micro programmed Control.**
- 5) Briefly explain Primary storage and secondary storage.
- 6) Give the difference between RISC and CISC.
- 7) Explain multiple bus organization in detail.
- 8) Discuss the different mapping techniques used in cache memories and their relative merits and demerits.
- 9) What are interrupts? How are they handled?
- 10) Give comparison between memory mapped I/O and I/O mapped I/O.
- 11) Describe the data transfer method using DMA.

Semester4th

BCA-222: Computer Networks

- 1) What are the similarities and differences between OSI and TCP/IP reference model?
- 2) What is OSI reference model? Explain its various layers in detail with help of diagrams.
- 3) Explain network classification on the basis of geographical span.(LAN MAN WAN PAN)
- 4) Explain routing algorithms- Static/ non-adaptive and dynamic/adaptive algorithms.
- 5) What is cryptography? Explain its types.

- 6) Explain error control in data link layer. And what are the various types of error correcting techniques?
- 7) Explain Transport layer protocols – TCP,UDP.
- 8) Define terms :
 - a) DNS b) WWW
 - b) E-Mail d) subnetting
- 9) Explain various congestion control algorithms.
- 10) Explain design issues of transport layer.

BCA-224: Management Information Systems

- 1) What is the scope of information system and management information system? Give reasons for using computers for MIS in the organisation.
- 2) Explain parameters of Quality OR dimensions of information quality.
- 3) Give introduction to management. Explain various managerial function in detail.
- 4) Explain levels of management. Also explain management as a control system.
- 5) Explain the structure of MIS.
- 6) Explain the classification of MIS.
- 7) What do you mean by Decision making? What are the types of Decisions? What is the role of MIS in decision making.
- 8) Explain Simon's model of decision making. Also explain the levels of decision making.
- 9) Explain various stages in the development of MIS.
- 10) Explain various models of system development.
- 11) Briefly explain the functions and activities of Marketing Information System.

- 12) How does the use of Internet technologies to support the marketing function at any company improve business and customer value ?
- 13) What is Decision Support System (DSS)? What are the characteristics of DSS? Explain types of DSS.
- 14) What is the definition and characteristics of Knowledge? Explain basic knowledge concepts. What is Process of knowledge management?

BCA-226: Relational Database Management System with Oracle

- 1) What is a transaction? What are ACID properties?
- 2) What is RDBMS ? What are its features? How it is different from DBMS?
- 3) What do you mean by concurrency control? Explain various concurrency control protocols.
- 4) Explain the concept of recovery .What is Shadow Paging recovery technique?
- 5) Discuss the different types of transaction failure. Also discuss two log based recovery techniques and differentiate them.
- 6) Explain the following architecture of RDBMS :
 - a) Client / Server Architecture
 - b) Multi-tier Architecture

- 7) What is Oracle? Write the various features of oracle. Write the procedure to install oracle.
- 8) Explain the various commands of SQL with example.
- 9) What is the need of joining tables? Explain various types of joins in detail.
- 10) Define Trigger. What are the various uses of triggers? Compare triggers and integrity constraints
- 11) Draw a diagram of DDL, DML and DCL with reference to triggers.