

B.C.A. – 2nd Sem
English (Compulsory)-B

B.C.A. – 2nd Sem
Computer Organization

- Q1) Differentiate between Combinational and Sequential Circuits
- Q2) Explain Full Adder, Half Adder
- Q3) Explain 3x8 MUX
- Q4) Explain Instruction Cycle.
- Q5) Explain Interrupt Cycle.
- Q6) Explain SR Flip Flop and JK Flip-Flop. Also draw differences between them
- Q7) Explain General Register Organization.
- Q8) Construct Common Bus System using MUX.
- Q9) Explain various Arithmetic and Logical Micro-operations
- Q10) Explain Addition algorithm for Signed-Magnitude Numbers.
- Q 11) Draw Flowchart and explain Booth's Multiplication Algorithm. Multiply 22×-11 using Booth Algorithm
- Q12) Explain Virtual Memory.
- Q 13) Explain Cache Memory.
- Q14) Explain Set-Associative Cache
- Q15) Explain Priority interrupt
- Q16) Differentiate between Vectored and Non-Vectored Interrupt
- Q17) Write a note on Virus, Its Symptoms, and its cure
- Q 18) Explain various internal components of computer?
- Q19) Explain PC Doctor
- Q20) Explain various memory Reference and Register Reference Instructions.
- Q21) Explain Von Neumann architecture for computer organization? What are the drawbacks of Von Neumann architecture?
- Q22) What is the logic gate? Explain OR, AND, NOT gates with truth table?
- Q23) Which gates are known as universal blocks and why?
- Q24) What is multiplexer? Explain working 8×1 multiplexer?

Q25) Explain JK master slave flip flop. Draw transition tables, characteristics equation, state, and timing diagram?

Q26) What are the different expansion cards available for a PC? Explain in detail?

Q27) Write the steps to install software in a PC?

Q28) What is the difference between worm, virus and Trojan horse?

Q29) What are the essential activities to be done for computer system maintenance?

Q30) What is Register Transfer Language and micro operations?

Q31) How addition is performed with 2's complement? Give an example.

Q32) How floating point numbers are represented in memory?

Q33) How are subroutines handled in assembly language? Explain with suitable example.

Q34) What are the various mapping procedures used in cache memory organization?

Q35) Why are addressing modes used? Discuss the various addressing modes?

Q36) What is associativity memory?

Q37)

Q38)

Q39)

Q40)

Q41)

B.C.A. – 2nd Sem
Fundamentals of Web Programming

B.C.A. – 2nd Sem

Object Oriented Programming using C++

1. Difference between C and C++.
2. Difference between procedural and non-procedural language?
3. Define ADT?
4. Difference Between static binding and run time binding?
5. Cast operator?
6. Manipulators?
7. Library functions?
8. Features of OOPs?
9. What is an access specifier?
10. How is encapsulation implementation in C++?
11. What is class instantiation?
12. What do you mean by constructor? Why do we need it?
13. List the characteristics of a constructor?
14. If a class contains no constructor, can its objects be created?
15. What do you mean by default constructor?
16. What is operator overloading?
17. How will you overload a binary operator?
18. What are the pitfalls of operator overloading?
19. Difference between public and private inheritance?
20. What is the order of execution of constructors and destructors in inheritance?
21. Write note on AWK pattern scanning?
22. Give full form of AWK?
23. Why do we use class instead of structures?
24. Explain access specifier ? How it is used?
25. What is scope resolution operators? How it is useful for defining the members of a class?
26. How will you define a member function inside and outside the class?
27. What are the various types of functions used in a class? Explain with suitable example?
28. What is an array of class objects? How are they defined in C++?
29. Create the following classes:
 - a) Class- Employee
Data members-Employee identification number, employee name, basic pay, dearness allowance, house rent allowance.
Member Functions: Input the data, calculate the total salary and display it along with the employee detail.
 - b) Class-Student
Data members-Roll numbers, marks of three subjects
Member functions-input the data, compute average marks in three subjects, compute and display grade of the student.
28. Explain the concept of inline member functions?
29. How will you define a constructor inside and outside a class?
30. What do you mean by dynamic initialization of objects? Why do we need it?
31. What is copy constructor? Explain its need?
32. How will data conversion be performed?

- (a.) If the source object's class contains the conversion function.
- (b.) If the destination object's class contains the conversion function.

- 33 What do you mean by public inheritance? Explain with example?
- 34 Explain private inheritance with suitable example?
- 35 Can we access the private members of the base class by objects of derived class? If yes. How?