

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Object Oriented Prog. Using C++

Branch: Computer Engg / IT

M. Marks: 100

Roll No.....

Semester: 4th

Scheme: New

Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

Q1. Explain:

~~A.~~ Encapsulation

~~B.~~ Inheritance

~~C.~~ Polymorphism

~~D.~~ Data Hiding

[4x5]

Q2. A. What is the difference between Procedure oriented programming & Object oriented programming?

~~B.~~ Explain:

~~I.~~ Class

~~II.~~ Dynamic Binding

[2x10]

Q3. What are the various data types in C++? Explain increment and decrement operators in detail?

[20]

Q4. What do you understand by loops? Differentiate between while loop and do-while loop using a program?

[20]

Q5. What do you understand by a constructor and a destructor? Explain with the help of a program?

[20]

Q6. Explain:

A. Inline function

B. Friend function

C. Static functions

D. Constant member function

[4x5]

Q7. What do you understand by operator overloading? Also explain constructor overloading?

[20]

Q8. Explain:

~~A.~~ Protected data

~~B.~~ Private Data

~~C.~~ Public Data

~~D.~~ Virtual Function

[4x5]

Q9. What is inheritance? Explain multiple and multi level inheritance in detail?

[20]

Q10. Explain with examples:

A. Pre-Processor directives

B. Switch-Case

[2x10]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Data Structures Using C

Branch: Computer Engg / IT

M. Marks: 100

Roll No.....

Semester: 4th

Scheme: New

Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

Q1. A. Explain the difference between top down and bottom up design with the help of a suitable example?

B. What do you understand by structured programming? [2x10]

Q2. Explain:

A. Single dimensional array

B. Two dimensional array

C. Multi dimensional array

D. Pointer variable

[4x5]

Q3. What are the operations that can be performed on array? Explain with the help of examples? [20]

Q4. What is a linked list? What are the types of linked list? Explain doubly linked list with the help of a suitable example? [20]

Q5. A. What is a stack? What are the various applications of the stack?
B. Explain Queue, Circular queue, De-queue? [2x10]

Q6. What do you understand by recursion? Explain recursion with the help of a program in C? [20]

Q7. A. Explain the differences between a binary tree and a binary search tree?
B. Explain In-Order traversal with the help of an example? [2x10]

Q8. What do you understand searching in data structure? Explain linear search in detail? [20]

Q9. Explain the difference between bubble sort and Quick sort? [20]

Q10. A. What are the various applications of linked list?

B. Explain Merge Sort?

[2x10]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Roll No.....

Subject: Generic Skills & Entrepreneurship Development

Branch: Computer

Semester: 4th

Scheme: New

M. Marks: 100

Time: 03 Hours

Instructions:

- 1. Attempt any Five Questions.**
- 2. Figures to the right indicate marks.**

- ~~Q1.~~ Define generic skills? Explain the importance of generic skills development in lifelong learning? [20]
- ~~Q2.~~ Define health? How can health be managed? Explain? [20]
- Q3. Define anxiety? Explain its causes and symptoms? [20]
- ~~Q4.~~ What do you mean by team? What are the various stages of team development? [20]
- Q5. Name various approaches of problem solving and explain them? [20]
- Q6. Explain the main functions of DIC's (District Industry Centre) perform for business organizations? [20]
- Q7. Explain the steps to start a small scale industry? [20]
- ~~Q8.~~ What do you understand by a project report? What is the necessity of a project report? [20]
- ~~Q9.~~ Define entrepreneurship? Explain the role of entrepreneur in economic development? [20]
- ~~Q10.~~ Explain the meaning of self concept and what does "knowing self for self development" mean? [20]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Software Engineering

Branch: Computer Engg / IT

M. Marks: 100

Roll No.....

Semester: 4th

Scheme: New

Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

~~Q1.~~ Explain Software development life cycle in detail? [20]

Q2. What do you understand by agile technologies? What are the various management issues in software engineering? [20]

Q3. Explain:

A. Mc Cabe's complexity

B. Halstead software science

[2x10]

Q4. Explain briefly COCOMO model? [20]

~~Q5.~~ Define SRS? Write down the characteristics of a good SRS? [20]

~~Q6.~~ Differentiate between Blackbox and Whitebox testing techniques? [20]

Q7. What do you understand by verification and validation techniques? Explain briefly? [20]

~~Q8.~~ What are the objectives of design activity? What do you understand by structured coding? [20]

~~Q9.~~ A. Explain Six Sigma

~~B.~~ Configuration Management

[2x10]

~~Q10.~~ Explain:

~~A.~~ ISO 9000 Series

~~B.~~ Waterfall model

[2x10]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22
Subject: Microprocessor
Branch: Computer Engg / IT
M. Marks: 100

Roll No.....
Semester: 4th
Scheme: New
Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

- ~~Q1.~~ What do you understand by a microprocessor? Mention its impact on modern society along with its functions? [20]
- ~~Q2.~~ Draw the pin diagram of microprocessor (8085)? What is the difference between a microprocessor and microcomputer? [20]
- Q3. Briefly explain the function of various blocks of 8085 microprocessor? [20]
- Q4. What do you understand by data bus? Explain the bus organization of 8085 microprocessor? [20]
- ~~Q5.~~ A. Explain functions of:
I. Assembler II. Compiler III. Interpreter [3x5]
B. What is a difference between assembly language and machine language? [05]
- ~~Q6.~~ Explain the addressing modes of 8085 microprocessor? [20]
- Q7. Explain the instruction set of 8085 microprocessor? What do you understand by data transfer group? [20]
- ~~Q8.~~ Explain the concept of stack along with its functions? [20]
- Q9. Explain:
A. ROM B. PROM
C. EPROM D. EEPROM [4x5]
- Q10. With the help of a suitable diagram, explain briefly instruction cycle? [20]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Computer Networks

Branch: Computer Engg /IT

M. Marks: 100

Roll No.....

Semester: 4th

Scheme: New

Time: 03 Hours

Instructions:

1. Attempt any Five Questions.
2. Figures to the right indicate marks.

~~Q1.~~ Explain:

A. LAN

B. MAN

C. WAN

D. Concept of Network

[4x5]

~~Q2.~~ What do you understand by network topologies? What are the different network topologies explain in detail? [20]

~~Q3.~~ Explain the concept of switching? Give a detailed account of switching techniques in networking? [20]

~~Q4.~~ Draw a diagram of OSI model? Explain the function of all the layers of OSI model? [20]

Q5. A. What do you understand by physical and logical addressing? Explain?
B. What is sub netting and super netting? [2x10]

Q6. A. Differentiate between IPV4 and IPV5? [15]

B. Explain:

Network IPX/SPX

[05]

Q7. Explain:

A. NICs

B. Hubs

C. Repeaters

D. Modems

[4x5]

Q8. Explain the process of trouble shooting? Explain PING and TRACEROUT? [20]

Q9. A. Explain Mobile Adhoc Network in detail? [15]

B. Explain DSL (Digital Subscriber Line Technology) [05]

~~Q10.~~ Explain Hauffman codes and cryptography? [20]