

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Microprocessor

Branch: Computer Engg / IT

M. Marks: 100



Roll No. 90087

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] 15
- Q2. Draw the pin diagram of microprocessor (8085)? What is the difference between a microprocessor and microcomputer? [20] 10
- 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] 15
- 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] 15
- 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] 10
- 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: Data Structures Using C

Branch: Computer Engg / IT

M. Marks: 100

Roll No. 90087

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? [2x10] 15
B. What do you understand by structured programming?
- Q2. Explain:
A. Single dimensional array B. Two dimensional array [4x5] 10
C. Multi dimensional array D. Pointer variable
- 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? [2x10] 10
B. Explain Queue, Circular queue, De-queue?
- 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? [2x10]
B. Explain In-Order traversal with the help of an example?
- Q8. What do you understand searching in data structure? Explain linear search in detail? [20] 15
- Q9. Explain the difference between bubble sort and Quick sort? [20]
- Q10. A. What are the various applications of linked list? [2x10]
B. Explain Merge Sort?

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Generic Skills & Entrepreneurship Development

Branch: Computer

Scheme: New

M. Marks: 100

Roll No. 65 90009

Semester: 4th

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] (5)
- Q2. Define health? How can health be managed? Explain? [20] (5)
- 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] (0)
- Q7. Explain the steps to start a small scale industry? [20] (0)
- 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] (5)
- 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: Computer Networks

Branch: Computer Engg /IT

M. Marks: 100

Roll No. 90087

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] 20
15

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

[20] 20
15

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] 20
15

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

[2x10] 20
15

Q6. A. Differentiate between IPV4 and IPV5?
B. Explain:

[15] 20
15

Network IPX/SPX

[05]

Q7. Explain:

A. NICs

B. Hubs

C. Repeaters

D. Modems

[4x5] 20
15

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

[15]

Q9. A. Explain Mobile Adhoc Network in detail?

[05]

B. Explain DSL (Digital Subscriber Line Technology)

[20]

Q10. Explain Hauffman codes and cryptography?

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Object Oriented Prog. Using C++

Branch: Computer Engg / IT

M. Marks: 100

Roll No. 90087

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] 15
- Q2. A. What is the difference between Procedure oriented programming & Object oriented programming?
B. Explain:
I. Class
II. Dynamic Binding [2x10] 15
- 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] 15
- Q5. What do you understand by a constructor and a destructor? Explain with the help of a program? [20] 15
- 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] 10
- Q10. Explain with examples:
A. Pre-Processor directives
B. Switch-Case [2x10]

JAMMU & KASHMIR BOARD OF TECHNICAL EDUCATION

MJ-22

Subject: Software Engineering

Branch: Computer Engg / IT

M. Marks: 100

Roll No. 90097

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]