

**F.Y.BSc.I.T. Sem I A.T.K.T. Internal/Practical Exam March- April (2019-20)**  
**August-2020**

**Subject : Operating System (Internal)**

**Roll Number - 132 Student Name - SHARMA SACHIN**

1.	Define Operating System. Explain main components of O.S.
2.	Explain MS-DOS file System.
3.	Write short note on memory virtualization
4.	Write a short note on Android OS.
5.	Define deadlock. Write the conditions for resource deadlock

**Roll Number - 154 Student Name - VISHWAKARMA ZIGNESH**

1.	Explain different types of Operating System.
2.	Write a short note on Inter Process Communication (IPC).
3.	Explain any five design issues of paging system
4.	Explain DMA (Direct Memory Access) using suitable diagram.
5.	List and explain design goals of Android OS

**Roll Number 157 Student Name - YADAV AAYUSH PRADEEP**

1.	Define Thread. What are the advantages of Thread? explain
2.	Explain different types of memories in the computer.
3.	Define Swapping. What is the purpose of swapping?
4.	What is Interrupt? How is it handled in OS?
5.	Explain deadlock recovery in detail.

**Roll Number -162 Student Name - YADAV ASHISH**

1.	List and explain important characteristics of cloud.
2.	Distinguish between Type1 and Type2 Hypervisor.
3.	What are various functions performed by an OS? Explain.
4.	List four conditions that must hold for a resource to be in deadlock.
5.	Explain the history of Windows in detail.

**Subject : Operating System (Practical)**

**Roll Number -162 Student Name - YADAV ASHISH**

Q1) Install windows OS on virtual machine (VMWare).

Q2) Perform the following DOS commands

i) cd ii) fdisk iii) date iv) ver v) copy



**Subject : Digital Electronics (Practical)****Roll No . 161            TIWARI SHWETA SHUSHIL**

1. Implement the given Boolean expressions using minimum number of gates for De Morgan's Theorem
2. Implement Universal Gates.

**Roll No . 110            JHA ROSHAN SUBODH**

1. Implement AND, OR, NOT, XOR, XNOR, NAND and NOR gates
2. Design and implement Full adder.

**Roll No . 128            SHAIKH IBRAHIM**

1. Design and implement Half adder
2. Implement the given Boolean expressions using minimum number of gates for De Morgan's Theorem

**Roll No . 132            SHARMA SACHIN**

1. Design and implement 4:1 multiplexer
2. Implement AND, OR, NOT, XOR, XNOR using NOR gates.

**Roll No . 162            YADAV ASHISH**

1. Implement the given Boolean expressions using minimum number of gates for De Morgan's Theorem
2. Implement Universal Gates.

## **Subject: Discrete Mathematics (Internal)**

**Roll Number: 161      TIWARI SHWETA SHUSHIL**

1. Define Universal Existential Statement and Existential Universal Statement. Give examples of each.
2. Find the number of integers between 1 and 250 that are divisible by 2 or 3 or 5 or 7.
3. Define necessary and sufficient conditions and only if as applied to universal conditional statements.  
Rewrite the following statements as formal and informal quantified conditional statements. Do not use the word necessary or sufficient.
  - i. Squareness is a sufficient condition for rectangularity.
  - ii. Being at least 35 years old is a necessary condition for being President of the United States.
4. Disprove the following by giving two counter examples:
  - i. For all real numbers  $a$  and  $b$ , if  $a < b$  then  $a^2 < b^2$ .
  - ii. For all integers  $n$ , if  $n$  is odd then  $(n - 1)/2$  is odd.
  - iii. For all integers  $m$  and  $n$ , if  $2m + n$  is odd then  $m$  and  $n$  are both odd.
5. Use the quotient-remainder theorem with  $d = 3$  to prove that the product of any three consecutive integers is divisible by 3. Use the mod notation to rewrite the result

**Roll Number: 162      YADAV ASHISH**

1. There are four bus lines between A and B and three bus lines between B and C. In how many ways can a man travel.
  - i. by bus from A to C by way of B?
  - ii. round-trip by bus from A to C by way of B?
  - iii. round-trip by bus from A to C by way of B if he does not want to use a bus line more than once?
  
2. A bakery produces six different kinds of pastry, one of which is eclairs. Assume there are at least 20 pastries of each kind.
  - i. How many different selections of twenty pastries are there?
  - ii. How many different selections of twenty pastries are there if at least three must be eclairs?
  - iii. How many different selections of twenty pastries contain at most two eclairs?
  
3. Define Cartesian product. Let  $R$  denote the set of all real numbers. Describe  $R \times R$ .
  
4. Let  $R$  be the set of all real numbers and define a relation  $R$  on  $R \times R$  as follows:  
For all  $(a, b)$  and  $(c, d)$  in  $R \times R$ ,  $(a, b) R (c, d) \Leftrightarrow$  either  $a < c$  or both  $a = c$  and  $b \leq d$ .
  
5. Write the negation of each of the following statements as simply as possible
  - i. If she works, she will earn money.
  - ii. He swims if and only if the water is warm.
  - iii. If it snows, then they do not drive the car.
  - iv. John is 6 feet tall and he weighs at least 120 kg.
  - v. The train was late or Amol's watch was slow.

## **Subject: Discrete Mathematics (Practical)**

**Roll No. 128                      SHAIKH IBRAHIM**

1. Write a Scilab program for Inclusion Exclusion principle.
2. Write a Scilab program for Greatest Common Divisor.

**Roll No. 132                      SHAIKH OWAIS**

1. Write a Scilab program for Sum rule principle.
2. Write a Scilab program to calculate the factorial of a given number.

**Roll No. 153                      YADAV RAJAN**

1. Write a Scilab program for Permutations.
2. Write a Scilab program for Minimum spanning tree



**Subject : Imperative Programming (Internal)**

**Roll Number - 161 Student Name - TIWARI SHWETA SHUSHIL**

1. \_Write a program to add 10 to even indexed numbers of an array.
2. Write a program to display the factorial of a number.
3. Write a program to illustrate the use of a recursive function.
4. Write a program to display the first 10 multiples of a number divisible by 5 And 7.
5. Write a program to find the sum of digits of a number.

**Roll Number - 162 Student Name - YADAV ASHISH**

1. Write a program to display the addition of the first 20 even numbers.
2. Write a program to illustrate the use of structure.
3. Write a program to display the following pattern.
4. Write a program to create a one dimensional array and store and display data 20 In it.
5. Write a program to swap two numbers without using a third variable.

**Subject : Imperative Programming (Practical)**

**Roll Number - 121 Student Name - PATIL NIDHI HEMANT**

1. Write a program to enter a number from the user and display the month name. If number >13 then display invalid input using switch case.
2. Write a program to check whether the number is even or odd.

**Roll Number - 128 Student Name - SHAIKH IBRAHIM**

1. Write a program to check whether the number is positive, negative or zero.
2. Write a program to find the factorial of a number.

**Roll Number - 131 Student Name - SHARMA ABHISHEK**

1. Write a program to check whether the entered number is prime or not.
2. Write a program to find the largest of three numbers.

**Roll Number - 145 Student Name - YADAV DINESH**

1. Write a program to find the sum of squares of digits of a number.
2. Write a program to reverse the digits of an integer.

**Roll Number - 150 Student Name - YADAV VISHAL**

1. Write a program to find the sum of numbers from 1 to 100.
2. Write a program to print the Fibonacci series.

**Roll Number - 154 Student Name - VISHWAKARMA ZIGNESH**

1. Write a program to find the reverse of a number.

2. Write a program to find whether a given number is palindrome or not.

**Roll Number - 161 Student Name - TIWARI SHWETA SHUSHIL**

1. Write a program to check whether the entered number is Armstrong or not.
2. Write a program to count the digit in a number

**Roll Number - 162 Student Name - YADAV ASHISH**

1. Write a program to find the factorial of a number using recursive function.
2. Write a program to find the sum of natural numbers using a recursive function.

## **Subject : Communication Skills (Internal)**

### **Roll Number - 161 TIWARI SHWETA SHUSHIL**

- 1) Explain internal and external dimensions of Communication.
- 2) Explain the term Kinesics in detail.
- 3) Discuss the two approaches to writing business messages.
- 4) Discuss the process of Listening.
- 5) Explain the guidelines of team briefing.

### **Roll Number - 154 VISHWAKARMA ZIGNESH**

- 1) Describe the stages of Interpersonal Communication.
- 2) What are the different types of business messages?
- 3) Differentiate between open-ended and closed questions.
- 4) What are the benefits of team presentation?
- 5) What is reputation management?

### **Roll Number - 162 YADAV ASHISH**

- 1) What are the characteristics of Communication?
- 2) Describe netiquette in detail.
- 3) What are the different types of Listening?
- 4) Explain the difference between meetings and conferences.
- 5) Explain the strategies for Managing Conflict.

## **Subject : Communication Skills (Practical)**

**Roll Number - 128 SHAIKH IBRAHIM**

1. Draft a job application letter to Reliance for the position of a sales representative. Use a word processor to write the application.
2. Critically analyze the link provided <http://google.com> website. Give your comments on the following using feedback technique. Home page, headings, use of color, navigating to hyperlinks, highlighting techniques and reader friendliness.