

# **20MCA136 –NETWORKING AND SYSTEM ADMINISTRATION LAB**

*Lab Report Submitted By*

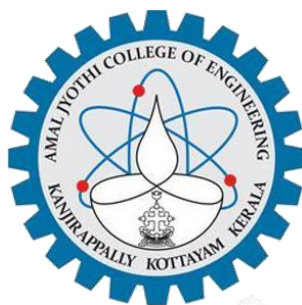
**SHAMJAD MAZOOD NAZER**

**Reg. No.: AJC21MCA-2095**

*In Partial fulfillment for the Award of the Degree Of*

**MASTER OF COMPUTER APPLICATIONS (2 Year)  
(MCA)**

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

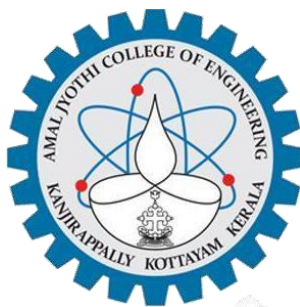


**AMAL JYOTHI COLLEGE OF ENGINEERING  
KANJIRAPPALLY**

[Affiliated to APJ Abdul Kalam Technological University, Kerala. Approved by AICTE, Accredited by NAAC with 'A' grade. Koovappally, Kanjirappally, Kottayam, Kerala – 686518]

**2021-2022**

**DEPARTMENT OF COMPUTER APPLICATIONS**  
**AMAL JYOTHI COLLEGE OF ENGINEERING**  
**KANJIRAPPALLY**



**CERTIFICATE**

This is to certify that the Lab report, **“20MCA136 NETWORKING AND SYSTEM ADMINISTRATION LAB”** is the bonafide work of **SHAMJAD MAZOOD NAZER (Reg. No: AJC21MCA-2095)** in partial fulfillment of the requirements for the award of the Degree of Master of Computer Applications under APJ Abdul Kalam Technological University during the year 2021-22.

**Ms. Grace Joseph**

**Lab In-Charge**

**Rev. Fr. Dr. Rubin Thottupurath Jose**

**Head of the Department**

**Internal Examiner**

**External Examiner**

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1	Introduction to Computer hardware: Physical identification of major components of a computer system such as mother board, RAM modules, daughter cards, bus slots, SMPS, internal storage devices, interfacing ports	4-04-2022	1
2	Install latest version of Ubuntu on a virtual box.	21-03-2022	7
3	Study of a terminal based text editor such as Vim or Gedit, Basic Linux commands: - familiarity with following commands/operations expected	24-03-2022	22
4	Shell scripting: study bash syntax, environment variables, variables, control constructs such as if, for and while, aliases and functions, accessing command line arguments passed to shell scripts. Study of startup scripts, login and logout scripts, familiarity with systemd and system 5 init scripts is expected	5-05-2022	46
5	Installation and configuration of LAMP stack. Deploy an open source application such as phpmyadmin and Wordpress.	2-06-2022	64
6	Build and install software from source code, familiarity with cmake utility expected	23-05-2022	72
7	Introduction to command line tools for networking IPv4 networking, network commands: ping route traceroute, nslookup, ip. Setting up static and dynamic IP addresses. Concept of Subnets, CIDR address schemes, Subnet masks, iptables, setting up a firewall for LAN, Application layer (L7) proxies	2-06-2022	75
8	analyzing network packet stream using tcpdump and wireshark. Perform basic network service tests using nc	2/06/2022	79
9	Introduction to Hypervisors and VMs: KVM installation and commands.	16/06/2022	87
10	Introduction to Containers: Docker installation and deployment	23/05/2022	92