

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN
THIRD YEAR B.C.A.

BCA 304 : OPERATING SYSTEM(Unix & Linux)

Teaching Scheme (per week)		Examination Scheme					
		INT		EXT		TOTAL	
Th. (hours)	Pr. (hours)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)
3	--	30	--	70	--	100	--

Unit-1

(17 Marks)

Introduction :

Meaning, function, evolution (OS), batch OS, Multiprogramming, time sharing, real time Memory Management :

Physical & virtual memory, memory allocation (contagious, non- contagious), virtual memory (using paging & segmentation)

Process :

Introduction, process state transaction diagram, process scheduling (FCFS, SJN, round robin, priority base non preemptive, priority base preemptive), Dead lock difference between (multiprocessing, multithreading, multitasking OS),

Unit-2

(18 Marks)

Starting with Unix :

Architecture, feature, types of Shell (c, bourn, Korn), logging commands, **password**, logout, who, who am I, clear

Unix File System Related Commands :

Overview (file system), types of files (ordinary, directory & device), unix files & directory permission, related commands (ls, cat, cd, pwd, mv, cp, ln, rm, rmdir, mkdir, umask, chmod, chown, chgrp, find, pg, more, less, head, tail , v, touch)

Text Editing With Vi-Editor :

Introduction, modes, switching modes, cursor movement, screen control, control commands, entering text, cut, copy, paste

Unit-3

(18 Marks)

IO Redirection & Piping :

Concept (redirection , piping), operation (> , < , >> , << , |), Examples

Advance Tools in Unix:

Finding patterns in files (grep, egrep, fgrep,), working with columns & fields (cut, paste, join), tools for sorting (sort & UNIQ), comparing files (cmp, comm..... diff), changing information in files (tr, sed) , examining file content (OD), tools for mathematical calculation (bc, factor), monitoring input & output (tee, script), tools for displaying date & time (cal, date), communication (telnet, wal, mtod, write, mail, news, finger), process related commands (ps, command to run process in background, nice, kill, at, batch, cron, crontab, wait, sleep), concept of mounting file system (mount,), concept of demounting file (umount)

Unit-4

(17 Marks)

Shell Programming :

Shell keywords, variables (system variables, (PS2, PATH, HOME)), LOGNAME (MAIL, IFS, SHELL, TERM, MAILCHECK), user variables (set, unset, and echo), positional parameter, interactive shell scripting using read echo, Decision (if then fi, if then else fi, if then elif else fi, case esac, test command), logical operator, looping statement (while, for, until, break, continue), arithmetic (expr), examples

Books

1. Operation System Principal

Abraham Silberscats , Peterbare Galvin , Greg gagne

2. The Complete Reference

Richard L. Petersen

3. Linux Programming

Wrox

Question Paper Scheme:

University Examination Duration : 3 Hours.

- Q.1 - Unit-I (17 Marks)
A. Objective/ Short Questions.
B. Descriptive/ Long questions.
- Q.2 - Unit-II (18 Marks)
A. Objective/ Short Questions.
B. Descriptive/ Long questions.
- Q.3 - Unit-III (18 Marks)
A. Objective/ Short Questions.
B. Descriptive/ Long questions.
- Q.4 - Unit-IV (17 Marks)
A. Objective/ Short Questions.
B. Descriptive/ Long questions.

Note: Options should be given in all questions.