

Name :
Roll No. :
Invigilator's Signature :

**CS/MCA/SEM-5/MCA-E-502A/2010-11
2010-11**

SYSTEM ADMINISTRATION AND LINUX

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

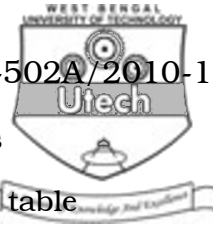
- i) Run level 3 stands for
 - a) Reboot
 - b) Multiuser CUI mode
 - c) Unused
 - d) None of these.

- ii) In Linux system kernel resides at
 - a) /boot/kernel
 - b) /boot/vmlinuz
 - c) /home/boot
 - d) /boot/linuxz.

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- iii) Expiry date of a user can be set using
- a) -d option
 - b) -I option
 - c) -e option
 - d) -m option.
- iv) Encrypted password for users is stored in
- a) /etc/passwd
 - b) /etc/skel
 - c) /etc/shado
 - d) /etc/sysconfig.
- v) fsck is used for
- a) Checking file system
 - b) Formatting file system
 - c) Mounting file system
 - d) None of these.
- vi) -z option is used with tar command for
- a) Gunzip
 - b) bz2
 - c) Winzip
 - d) none of these.
- vii) The system call required by TCP socket to read and write is
- a) read () and writr ()
 - b) fget () and fput ()
 - c) sendto () and recvfrom ()
 - d) puts () and gets ().



- viii) The default table of iptables command is
- a) nat table
 - b) mangle table
 - c) filter table
 - d) none of these.
- ix) A POSIX thread can be created using function.
- a) pthread_create ()
 - b) fork ()
 - c) fputc ()
 - d) none of these.
- x) shmget () function is used for
- a) allocate a shared memory segment
 - b) return share memory id
 - c) delete shared memory entry
 - d) none of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. What is Packet Filtering ? Discuss the reasons for filtering a packet. 2 + 3
3. How can you create HTTP server in Linux environment machine ?
4. Define bootstrap loader. Differentiate between LILO & GRUB. 2 + 3
5. Explain the Message-Queue Data Structure with brief example.
6. What do you mean by Swap Partition and Proxy Server ? 3 + 2



GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) What is Critical Section ? How can we create a semaphore ?
b) What are binary semaphore and counting semaphore ? Explain with example how SEM_UNDO flag works.
c) Write a C-Program that counts the maximum number of pipes in the system. $3 + 3 + 3 + 6$
8. a) Write down the steps to configure a DNS server having name "wbut.mca.in".
b) What is the difference between FTP and NFS ? State differences between get and post methods. $10 + 3 + 2$
9. a) What is CGI ? Define basic two types of CGI mechanism.
b) Write a program in PERL that will convert rupees in pound into dollar.
c) Write PERL command to print from 8th to 10th line of a file "ff".
d) What is the function of chop () in PERL ? $4 + 6 + 3 + 2$
10. a) Explain in brief bzero (), bind (), listen () and accept () functions for establishing a socket in a TCP/IP based Network.
b) Write a command to add a user named "ASIM" under group name "ROY" with comment line "MCA 3rd YEAR" having shell "bash" with password "HELLO". $12 + 3$
11. Write short notes on any *three* of the following : 3×5
 - a) DHCP
 - b) Xinted
 - c) iptables
 - d) runlevel
 - e) Firewall.

