

- N.B. (1) Question number 1 is compulsory.  
(2) Solve any 3 from remaining.  
(3) Assume suitable data where ever necessary.

**Q.1. Attempt the following:**

- Explain use of echo, expr and read command with example shell script.
- Explain use of export, set command with an example.
- Explain ping and netstat commands with example.
- Explain various Layouts in Android Programming.

**20**

**Q.2.**

- (a) Explain different file access permissions in Linux. Consider you have a folder named "mydir" with two files "f1", "f2" write appropriate command/s to make both files and directory to have all the permissions only for the owner of files. **10**
- (b) Write note on iptables and with example explain how it can be used to drop traffic coming from a specific ip address to a machine. Also explain how to list all firewall rules using iptables. **10**

**Q3.**

- (a) Explain use of wget and curl commands to get website contents. **10**
- (b) Write note on sed. Show how it can be used for  
(i) As replacement for head command  
(ii) As find and replace utility, for all two or more digit numbers by string 'N'

**Q4.**

- (a) Write a note on process management in Linux. Explain ps command. **10**
- (b) Explain how to work with data and Files in Android application. **10**

**Q5.**

- (a) Explain use of httpd.conf Explain any five configuration directives used in httpd.conf file. **10**
- (b) Explain following commndns with an example each.  
i. usermod ii. chgrp iii. adduser iv. chown v. userdel **10**

**Q6.**

- (a) Discuss significance of passwd, shadow, group and gshadow files in /etc directory. **10**
- (b) Write note on Disk partitioning. Explain role of Logical Volume Manager as device mapper. **10**