# 2017

## BCA

## 4th Semester Examination

## OS LAB AND COMPUTER NETWORK LAB

### PAPER—2297 (SET-1)

### (PRACTICAL)

*Full Marks : 100*

*Time : 3 Hours*

*The figures in the right-hand margin indicate full marks.*

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

*Questions should be distributed on lottery basis.*

Answer any *two* questions taking *one* from each group.

*(on lottery basis)*

### Group — A

### (OS Lab)

Answer any *one* on lottery basis :          1×25

1. Write a shell program to create a child process. Send SIGCHLD signal after 5 seconds.

*(Turn Over)*

2. Write a shell program to check whether a number is Armstrong or not.

3. Draw the following pattern using shell program.

```
         *
       * * *
     * * * * *
   * * * * * * *
```

4. Write a shell program to convert a binary number to octal number.

5. Write a shell program to display the multiplication table of any given number.

6. Write a shell program to find out perfect numbers from range 1 to 100.

7. Write a shell program to sort the elements from *n* number of given elements.

8. Write a shell program to implement binary search.

9. Write a shell program to draw the following pattern.

```
       1
     1 0 1
   1 0 1 0 1
 1 0 1 0 1 0 1
```

*(Continued)*

**10.** Write a shell program to find out prime numbers from range 50 to 200.

**11.** Write a shell program to calculate factorial of given input, the output will be displayed as : 4×3×2×1 = 24

**12.** Write a shell program which will copy a file to other file name. The source and destination should be given as command line argument.

### Group — B

### (*Network Lab*)

Answer any *one* on lottery basis :     1×25

**1.** Write a program to implement stream server.

**2.** Write a TCP echo client program using socket.

**3.** Write a socket program to print all client IP address and their relative port.

**4.** Write a program to implement connections sender to send UDP message to peer.

**5.** Write a server procedure that sleeps for 30 seconds.

**6.** Write a UDP echo server program using sockets.

7. Write a program that behaves like a simple TELNET.

8. Write a program to implement character send and receive from server.

## INSTRUCTIONS

*Distribution of Marks —*

| | | |
|---|---|---|
| **Practical Note Book** | : | **05** |
| **Viva-Voce** | : | **15** |

*Experiments —*

| | | |
|---|---|---|
| **Group – A** | : | **25** |
| **Group – B** | : | **25** |
| **Internal Assessment** | : | **30** |
| *TOTAL* | : | **100** |