

## Third Semester B. Sc. Examination

## ELECTRONICS

## Paper - II

## (Electronic Circuit Design)

Time : Three Hours ]

[ Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.  
 (2) Draw neat and illustrations wherever necessary.

**EITHER**

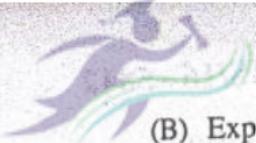
1 (A) Write a note on 'Simulation', state the advantages of software simulation.  
 Write a note on various categorization of 'input'. 4+6

**OR**

(B) Explain the terms 'Range & Response time' of a sensor.  
 Define 'Prototyping.'  
 Write a short note on 'Developing and Testing Ideas.' 4+6

**EITHER**

2. (A) Explain sub-menu, settings and use of following tools in analogue analyser set up.  
 (1) DC (2) Parameter Sweep. 5+5



## OR

(B) Explain sub-menu, settings and use of following tools in analogue analyser set up :

(1) AC

5+5

(2) Transient / Fourier.

### EITHER

3. (A) Illustrate utility of 'Probe Tool', steps involved in digital logic simulation. Illustrate digital instrument 'Pulser.' 5+5

## OR

(B) Explain three options for digital simulation.

Explain stepwise process to add 'scope' in workspace. 6+4

### EITHER

4. (A) Explain 'Virtual Instrumentation' with the help of suitable block diagram.

Write a short note on advantages of VI. 5+5

## OR

(B) Explain the role of 'Software' in VI.

Explain the role of 'Hardware' in VI. 5+5

5. Answer any Ten questions in short :—

- (a) What is meant by 'Re-design' ?
- (b) What is meant by 'Ergonomic' design ?
- (c) Define 'Hysteresis'.
- (d) Define the term 'mix signal' in simulation.
- (e) Define 'Initial Condition'.
- (f) What is meant by 'workspace' ?
- (g) Give expansion for the terms 'SPICE'.
- (h) What is meant by 'Tick' ?
- (i) State utility of 'Trace Button' in digital simulation.
- (j) What is meant by 'Tele-operations' ?
- (k) What is meant by 'DAQ.' ?
- (l) Define 'Flexibility and Scalability' in VI.

$$10 \times 1 = 10$$