

**NTK/KW/15 –5842**

**Third Semester Bachelor of Science (B. Sc.)  
Examination**

**ELECTRONICS**

**Paper – II**

**Electronics Circuit Design**

Time : Three Hours ]

[ Max. Marks : 50

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

**EITHER**

1. (A) Define following terms with suitable example
- |                 |                  |
|-----------------|------------------|
| (i) Range       | (ii) Resolution  |
| (iii) Linearity | (iv) Sensitivity |
| (v) Bandwidth   | 10               |

**OR**

- (B) What are the different processes involved in design and development of analog system . Explain any fine of them. 10

**EITHER**

2. (A) What is the function of following tool in tool bar of circuit maker :—
- |                |                 |
|----------------|-----------------|
| (i) Arrow tool | (ii) Probe tool |
|----------------|-----------------|

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Contd.



- |                   |                  |    |
|-------------------|------------------|----|
| (iii) Rotate tool | (iv) Delete tool |    |
| (v) Mirror        |                  | 10 |

**OR**

- (B) State various file extensions used in circuit maker.
- (C) Explain 6 basic procedure involved in drawing schematic.
- 3 + 7

**EITHER**

3. (A) State differences between analog and digital simulation. Explain the steps to set logic simulation. How is probe tool useful to detect the state of logic in digital circuit. 2 + 5 + 3

**OR**

- (B) State the function of Run/pause button and step button. Explain digital instruments pulses and Data sequences. 3 + 7

**EITHER**

4. (A) What is virtual instrumentation system ?  
State the advantages of virtual instrumentation.  
Explain the role of software in virtual instrumentation. 4 + 4 + 2

**OR**

(B) What is graphical user interface ? How does it differ from control panel.

State application of virtual instrumentation.

5 + 5

5. Attempt any **ten** :—

(A) Define the term Hysteresis.

(B) What is prototyping ?

(C) What does CAD and EDA stand for ?

(D) What is meant by workspace ?

(E) What is grid and snap to grid in workspace ?

(F) How is value of component changed in circuit makes ?

(G) What is break point ?

(H) What is meant by Tick ?

(I) What is meant by wire bads ?

(J) What is the function of Transducer ?

(K) State the sole of hardware in VI ?

(L) State the sole of computes in VI ?

10×1=10