Bachelor of Science (B.Sc.) Semester—III (C.B.S.) Examination

ELECTRONICS

(Electronic Circuit Design)

Paper—II

Time : Three Hours]　　　　　　　　　　　　　　　　　　　　[Maximum Marks : 50

N.B. :— (1) **All** questions are compulsory and carry equal marks.

　　　　(2) Draw neat illustrations wherever necessary.

EITHER

1. (A) Explain the process involved from concept design to product output of an instrument.　　10

OR

(B) Explain the parameters of the input stage of an instruments that affects the performance of the instrument.　　10
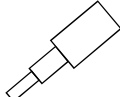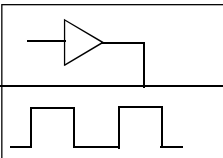
EITHER

2. (A) Explain the types of analyses that can be performed during analog analysis in circuit maker.　　10

OR

(B) What is circuit maker ? Explain the different sections of the workspace of the circuit maker. Explain the functions of the following tools in the toolbar of circuit maker :

(i) ——|—— tool　　　　　　　　　　(ii) 　Tool

(iii) 　　　　　　　　　　　　　　　(iv) 　　　　　　　　　2+4+4

EITHER

3. (A) What is Break Point in circuit maker ? Explain the different combinations of the break point. What is Data Sequences ? Explain the Edit Data Sequences dialog box.　　1+4+5

OR

(B) What is the function of pattern button in the Data Sequences Dialog Box ? What are the different kinds of pre defined patterns available ? Explain with the help of example in each case. Explain the following tools in the digital simulation mode :

    (i)   Trace

    (ii)   Reset

    (iii) Run/Pause

    (iv) Probe.   6+4

EITHER

4. (A) Draw the block diagram of a Digital Data Acquisition System and explain the function of each block. Enumerate and explain five different application of VI.   5+5

OR

(B) What is graphical user interface ? How does it differ from the control panel of instrument. Explain the role of software in VI. Compare virtual and conventional instrument.   4+3+3

5. (A) What is meant by sensor ?

   (B) Explain Response time.

   (C) Define Transfer function.

   (D) Explain the utility of IC tag.

   (E) What is meant by Mix Signal simulation ?

   (F) How will you change the designation and value of a resistor in circuit maker ?

   (G) What is a Logical switch ?

   (H) Explain Propagation delay.

   (I) What is H, L, P with respect to logic probe tool ?

   (J) What is AD Converter ?

   (K) Why is PC the most important part of VI ?

   (L) What do you understand by filtering of signal ? $1\times10=10$