BANKURA UNIVERSITY
B.Sc. 3rd Semester (Honours) Examination, March 2021
Subject: *Electronics (H)*
Course ID: 31714   **Course Code: SH/ELC/304/GE-3(TH)**
Course Title: *Electronic Circuits and PCB Designing*
Full Marks: 25   **Time: 1 Hr 15 Min**

(The figures in the right hand side margin indicate marks.
Answer all the questions)

1. Answer *any three* of the following questions   1×3=3
   a) State and explain KVL.
   b) Draw a HWR circuit.
   c) What is plated through holes technology?
   d) What is the quiscent point of a transistor?
   e) What do you mean by SMT?
   f) What is a single sided board?

2. Answer *any three* of the following questions.   2×3=6
   a) Describe the general rules of PCB Layout.
   b) What do you mean by regulated power supply? Explain.
   c) Explain CE characteristics of a transistor.
   d) What do you mean by thermal runaway. Explain.
   e) What is leakage current of a transistor. Define it.   1+1=2
   f) What is etching process of a PCB?

3. Answer *any two* of the following questions.   5×2=10
   a) What do you mean by basic artwork approach of a PCB? Explain.
   b) State and explain photo resist and wet resist in the context of PCB designing.   2.5+2.5=5

c) What is etchant system? State the principles of solder connection. What are solder alloys?   2+2+1=5

d) Find the expression of efficiency of a FWR.

4. Answer *any one* of the following questions.   6×1=6

a) State and explain different stages of PCB designing.

b) Describe voltage divider biasing of a transistor with proper circuit diagram and their working.

c) Describe the SMT clearly depicting its benefits and limitations.