Register No.:

483

April 2018

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What do you mean by test engineering?
2. Which testing method is widely used to test memories?
3. Define digital guarding.
4. What are active components?
5. Explain BSDL instruction register descriptions.
6. What is the advantage of a functional opens and shorts test rather than DC opens and shorts test?
7. Mention the advantage of STDF.
8. List out the faults modules used in ATPG.

PART – B

9. What is the difference between fixed reference and moving reference VI?
10. What are the different categories of test fixture?
11. State the difference between static memory and dynamic memory.
12. What is the need for boundary scan test technique?
13. Write the concept of back-driving.
14. What are the limitations of manual troubleshooting?
15. State the principle of VI signature testing.
16. Describe the block diagram of boundary scan test implement at board level.

[Turn over.....

PART – C

17. (a) Explain in brief about importance of test engineering and the possible defects occurred in manufacturing process.

(Or)

(b) Explain in brief about the principle of fundamental testing methods.

18. (a) Explain in detail about the functional and simplified model memory chip in detail.

(Or)

(b) Explain in detail the characteristics of digital logic family and built in NAND gate using any one logic family and explain its operation.

19. (a) With an example how the ageing effect are analyzed using VI curve trace.

(Or)

(b) Explain how passive components are tested using VI signature testing.

20. (a) Illustrate with a diagram about the functionality of JTAG port.

(Or)

(b) Explain boundary scan test application with block diagram.

21. (a) What is the difference between power on and power off test of a PCB? When it is applied?

(Or)

(b) Explain in brief about load boards.
