Total No. of Questions : 8]

SEAT No. :

P4435

[Total No. of Pages : 2

[5255]-1055
M.E. (E & TC) (VLSI & Embedded Systems)
RECONFIGURABLE COMPUTING
(2017 Pattern) (Semester - I)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Answer any five questions.***
2) ***Neat diagram must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of Calculator is allowed,***
5) ***Assume suitable data if necessary.***

Q1) a) Give Von Neumann computer architecture and explain its flow for program execution. **[4]**

b) Explain Fine grained, Coarse-Grained fabrics in FPGA. **[4]**

c) Write short note on Application specific processor. **[2]**

Q2) a) Explain with diagram single context and multi-context configuration. **[4]**

b) Explain DSP processor as domain specific processor, give example of DSP processor. **[3]**

c) Elaborate application of Reconfigurable Computing **[3]**

Q3) a) With labelled diagram, Explain PAM as Reconfigurable computing platform. **[4]**

b) Explain Pipeline and block Reconfigurable architectures. **[3]**

c) Explain FPGA design flow with necessary diagram **[3]**

Q4) a) Explain Relocation and Defragmentation w.r.t.RC point of view. **[5]**

b) Explain integration of RPF into Traditional Computing Systems. Also explain RaPiD architecture. **[5]**

Q5) a) What is SoPC and explain in detail the main components of system on programmable Chip. **[5]**

b) Explain Non-frequently reconfigurable systems and its application **[5]**

P.T.O.

Q6) a) What are the Computational Characteristics and Performance parameters of FPGAs. **[4]**

b) Elaborate with help of diagram the transfer of System from PCB to System on Programmable chip. **[4]**

c) Give various FPGA design tools. **[2]**

Q7) a) Explain pattern matching as application of Reconfigurable Computing. **[5]**

b) Write short note on: Architecture of an adaptive cryptographic system. **[5]**

Q8) a) Elaborate Reconfigurable Computing for Software Defined Radio. **[4]**

b) Explain about Compile-time reconfiguration & Run -time reconfiguration. **[3]**

c) What are the communication protocol involved in a network. **[3]**