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**BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)**

**B.Tech.Sem - VIII E & TC : WINTER- 2022**

**SUBJECT : SYSTEM ON CHIP**

Day : Tuesday

Time : 02:30 PM-05:30 PM

Date : 29-11-2022

**W-13380-2022**

Max. Marks : 60

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**N. B. :**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Draw neat and labelled diagrams **WHEREVER** necessary.
  - 4) Assume suitable data, if necessary.
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**Q. 1** What are the major challenges in SOC design? How design process can be improved? **(10)**

**OR**

**Q. 1** What are the fundamental trends in SOC design? Discuss in brief. **(10)**

**Q. 2** What are the Hardware trends? Discuss w.r.t. SOC design. **(10)**

**OR**

**Q. 2** Describe software structure w.r.t. SOC design. **(10)**

**Q. 3** Using suitable flow charts, explain basic processor generation flow. **(10)**

**OR**

**Q. 3** With block diagram, discuss configurable processor. **(10)**

**Q. 4** How will you describe performance driven communication design? **(10)**

**OR**

**Q. 4** Describe advanced SOC design flow. **(10)**

**Q. 5** With reference to SOC design, discuss pipelining for processor performance. **(10)**

**OR**

**Q. 5** Explain common sources of processor stalls and their impact on performance. **(10)**

**Q. 6** Give overview of future of SOC. **(10)**

**OR**

**Q. 6** Describe processor scaling model. **(10)**

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