

Series Test – I, January 22nd of 2008

EC 804 (B) ASIC Design (2002 Admissions onwards)

Time: **2 hours**

Maximum Marks: **25**

- I) Draw the typical ASIC design flow and explain all the different steps involved at each stage. (8)
- II) A) List and explain all the types of ASICs. (NB: Do not compare one with another here.) (7)
- B) Differentiate between and mention the advantages and disadvantages between one another with examples, if applicable, for the following ASIC approaches :
- 1.) ASICs and FPGAs
 - 2.) Cell Based ICs and Masked Gate Arrays
 - 3.) Sea-of-gates and Masterslices
 - 4.) PROM, PLA and PAL
- (10)

Invaluable Questions

NB: These questions do not carry any marks and they are optional for students. Attempt them only after you are finished with the questions that carries marks. DO NOT answer just ONLY these questions as they carry “ZERO” marks. Performance in this section has “ZERO EFFECT” on the marks scored on the subject.

- 1.) Who invented the Metal Oxide Semiconductor (MOS) transistor? (0)
- 2.) What the invention of Jack St. Clair Kilby in 1958 for which he won Nobel Prize in Physics for the year 2000? (0)
- 3.) Dr. Marcian Edward "Ted" Hoff Jr. was the inventor of the first _____ . (0)