

UNIVERSITY EXAMINATION 2013/2014

EXAMINATION FOR THE DEGREE OF

BACHELOR OF SCIENCE AND INFORMATION TECHNOLOGY

ICS 2101: COMPUTER ORGANIZATION

INSTRUCTIONS

Answer question one (compulsory) and any other two questions

Question One

(a) Define the term operating system and describe the four main roles of an OS in micro-computer (6mks)

(b) The terms BIOS, POST and CMOS are key in the computer system booting process, Briefly discuss the role of each. (6mks)

(c) Explain the four stages a processor goes through in the pipeline cycle (4mks)

(d) Define the term device driver. (2mks)

(e) State the importance of 'power good' signal (2mks)

(f) With aid of a diagram describe the system bus hierarchical structure (10mks)

Question Two

(a) CPU scheduling deals with the problem of deciding which of the processes in the ready

Queries is to be allocated the CPU. Briefly discuss any five scheduling algorithm that the

CPU implements to solve possible process deadlocks (10mks)

(b) A system displays an error on the screen during booting process. State how to decode the Alfa-numeric error message. (5mks)

(c) Differentiate between formatting and partitioning (2mks)

(d) Define the term system bus. (3mks)

Question Three

(a) Outline the four functions of an expansion bus (4mks)

(b) Briefly describe any four data processing modes (8mks)

(c) Explain the role of the following utilities in optimizing the performance of a computer

System

(i) Scandisk

(ii) Disk clean-up

(iii) System restore

(iv) Defrag mental (4mks)

(d) Post is the first line of defense for technicians. Qualify this statement (4mks)

Question Four

(a) (I) List out three most basic logic gates. (3mks)

(ii) Show the standard expression for three gates and symbols (3mks)

(iii) Draw truth tables for the three logic gates. (3mks)

(b) Define the term documentation (2mks)

(c) Discuss the three levels of documentation (4mks)

(d) List and briefly describe the file organizations (5mks)