

Study Guide 2

There will be 15 multiple-choice questions worth 30 points out of the 100 possible. Transfer your best choice for the question to the table at the top of the first page of the examination. This portion will be closed book, closed notes, and closed data sheet. You will first receive the multiple-choice portion of the examination. After you have completed these questions you will turn in that portion of the examination and receive the design and analysis portion of the examination. This portion of the examination will also be closed note, closed book. You may use the table on the back of this page. A summary of datasheet information will be provided when necessary in that a printed copy of the PIC24FJ128GA Data Sheet from Microchip Technology Incorporated.

The main topics to be covered in the design and analysis portion of the examination are listed below and come from the textbook and the PIC24F Family Reference manual:

- Chapter 7 – Communications
 - Synchronous vs. Asynchronous
 - SPI registers (summary provided with examination) and protocol
 - Star and daisy-chain interconnection
 - SEEPROM
- Section 24¹ – Inter-Integrated Circuit (I²C)
 - I²C registers (summary provided with examination)
 - Start, stop, R/W, ACK and NAK
 - Device addressing and memory array addressing
 - Physical layer to include pull-up and series resistors
- Chapter 8 – Asynchronous Communications (UART)
 - EIA-232 specification and EIA nomenclature
 - UART registers (summary provided with examination)
 - ASCII code (table provided with examination)
 - C escape sequence and ANSI terminal escape sequence
- Chapter 9 – Glass Bliss (LCD)
 - Liquid crystals and light polarization
 - HD44780 compatibility registers (summary provided with examination)
 - LCD access functions to include write helper function
 - User specified characters

There will be no question from material only covered in the laboratory exercises.

¹ PIC24F Family Reference Manual