

1. Question

Baraa Vaytan

a) Burst mode
In this mode the DMA takes control and keeps control until it has finished the data transfer. CPU is inactive during this time.

2. Cycle stealing mode
In this mode the DMA Controller requests control. The CPU grants control when it is not using the system buses. The DMA Controller transfers 1 byte then releases the bus. It then requests access again.

transparent mode
In this mode the DMA Controller effectively monitors the buses to see where they are free and transfers data independently.

b) Synchronous sequential circuits are digital circuits governed by clock signals.
/ Email / WhatsApp

- Asynchronous sequential circuits are digital circuits that are not driven by clock.

They can be called as self-timed circuits.

Communication occurs over a period of time and is not as synchronous.

Baraa Keytawh

d) because programming language in which there is a very strong correspondence between the instructions in the language and the ~~architecture~~ architecture.

- Second Question:

a) used to store and retrieve return addresses during function calls

b) make programs shorter as well as easier to read and understand because they break program code into smaller sections
fast procedures of function separately
this makes programs easier to debug.

c) Interrupt requesting the processor to stop to perform the current program and make time to execute a special code

- transfer the information generated by internal

Baraa Keytanh

Fourth Question

a)

1024	512	256	128	64	32	16	8	4	2	1
1	0	0	0	0	0	0	0	0	0	0

b) Show how memory location 4699 would be

Baraa Kaytarh

3/2/2021

First Question

a) In the context of a PIC processor explain the purpose and meaning of

ALU - a memory unit

• Program Counter: is a register in a computer processor that contains the address (location) of the instruction being executed at the current time.

TRISA: is a special function register which is used to control the direction.

- b) Explain why some ASM commands take longer to execute than others?

An ASM directory is a container for files and an ASM directory can be part of a tree structure of other directories.

- c) A PIC processor is known as a RISC device?

PIC is an abbreviation used for Peripheral Interface Controller.

advantages: reliable and malfunctioning of PIC percentage is very less.

PIC is very fast because of using RISC architecture.

Baran Kaytown

c) The high bit is in the front and the low bit is in the back

The SPI interface is Synchronous Serial Data transmission between CPU and the Peripheral low speed device. Full duplex communication and the Data transmission speed is overall faster than the I²C bus and can reach speeds of a few Mbps.

d) With the Slave device, Data is transferred in sequences of 8 bit. The bits are placed on the SDA line starting with MSB. The SCL line is then pulsed high then low.

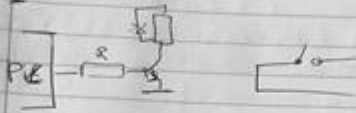
Third Question

Barua Kaytown

a) 1K Bytes flash

68 Bytes RAm, 13 Kte ~~68~~ 66 Prom Data memory
in circuit Serial Programming

b)



c) Solid state relay input
Solid State Relay Dc input Circuit

Describe The normal methods of ensuring safe

SSRs Provide Complete electrical isolation between
their input and output contacts ~~when~~

d)