

Part I : Answer the following questions by marking the best answer among the choices given (1.5 Mark each)

1. C8051F020 micro-controller word width is
 - a) 4-bit.
 - b) 8-bit. *
 - c) 16-bit
2. Special function register could be addressed using addressing mode
 - a) Direct *
 - b) Indirect
 - c) Both (a) and (b)
3. Absolute addressing mode is useful in
 - a) Data transfer instructions.
 - b) Arithmetic instructions.
 - c) jump or branching instructions. *
4. C8051F020 micro-controller memory location 0F0H when accessed using direct addressing mode refers to
 - a) a Special function register *
 - b) a General purpose RAM location
 - c) an out of Range Addressing
5. Micro-Controller watchdog timer can be used to
 - a) Schedule periodic check on the status of a process.
 - b) Reset the micro-controller when runs out. *
 - c) Measure the number of particular events of interest.
6. During writing an assembly code for C8051F020 micro-controller, a delay loop was needed to make a delay of some time it was writing as following:

```
loop1:
    mov  R0, #020H
    djnz R0, loop1
```

so this code make a delay of about

- a) 20 clk cycle.
- b) 60 clk cycle.
- a) Infinite loop. *

7. C8051F020 micro-controller memory location 05FH can be accessed using addressing mode
- Direct
 - Indirect
 - Both (a) and (b). *
8. In C8051F020 micro-controller assembly language the following instruction is an example for addressing mode.
- ```
mov A, @R0
```
- Absolute
  - Relative
  - Indirect \*
9. In C8051F020 micro-controller assembly language the following instruction belongs to .....
- ```
xrl A, @R1
```
- Arithmetic operation
 - Logical operation *
 - Program branching operation
10. Program counter (PC) is incremented during the
- Fetch operation
 - execute operation *
 - PC increment operation

Part II: Mark the following statements as either True (T) or False (F). (1 Mark each)

- In C8051F020 micro-controller all memory locations as Bit Addressable. (F)
- C8051F020 is a mixed-signal micro-controller because it can deal with different Digital input output almost at the same time. (F)
- The difference between micro-controller and micro-processor, that the micro-controller is more specific than micro-processor. (T)
- The same assembly code written for C8051F020 can run as it is on any other micro-controller. (F)
- Micro-controller has a limited general purpose memory (RAM) space. (T)
- The following code is a valid C8051F020 assembly code `mov R1, #01AFH` (F)
- The following code is a valid C8051F020 assembly code `clr P3.2` (T)
- The following code is a valid C8051F020 assembly code `add R0, A` (F)
- The following code is a valid C8051F020 assembly code `mov @R1, A` (T)
- The following code is a valid C8051F020 assembly code `mov #40H, 0FFH` (F)