

University of Asia Pacific
Department of Computer Science & Engineering
Mid-Semester Examination Fall-2020
Program: B. Sc Engineering (3rd Year/ 2nd Semester)

Course Title: Peripheral & Interfacing

Course No. CSE 315

Credit: 3.00

Time: 1.00 Hours.

Full Marks: 60

There are **Three** Questions. Answer all of them. All questions are of equal value/Figures in the right margin indicate marks.

Please note that there are two question at number 3, answer only one of them.

*In Arduino environment, sketch and code are synonymous.

1. ***“Peripheral and Interfacing, refers to the same thing in Computer Science.”***
 - a. Here what do we understand by the two afore-mentioned terms? Write some examples: [05]
 - b. What do you think, Is the statement true/false? Explain your answer with detailed example. [15]
2. a. Write a sketch to implement any 5 gates (excluding Transfer gate). User will give two inputs (A and B) and monitor the output through the pins of Arduino. The gates will be selected through the Serial Communication of Arduino. Use functions to solve the above-mentioned problem. [20]

Note: Do not use predefined functions to solve the problem. Write the code from scratch.

Possible output in the serial monitor:

```
Please select a number between 1 to 5
1
AND operation is being performed. Please wait for some moments and
find the output at pin 13.
Please select a number between 1 to 5
2
OR operation is being performed. Please wait for some moments and
watch the output at the pin 13.
Please select a number between 1 to 5
7
Undefined Input. Please try again.
```

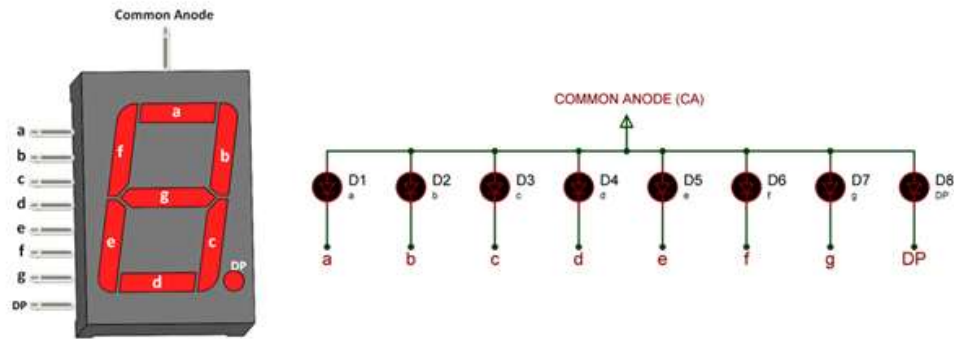


Figure A. Common Anode 7 Segment Display

3. a. Suppose, user can transfer a signal to the Arduino through a Push Button. [20]
Now, design a sketch so that whenever user transfers the signal to the Arduino the display (Figure A) will show the next number on it.
Initially it will be showing zero- '0' on it.

Or,

3. a. Suppose, user can give an input (one digit integer) through Serial [20]
Communication. Now, design a sketch so that whenever user gives an input the particular number will be transferred to the display instantly and the number will be shown on it. Initially the display will be off.