CHAPTER – 1

Exercise 1: What is the function of the secondary memory in a computer?
a) Execute all of the computation and logic of the program
b) Retrieve web pages over the Internet
c) Store information for the long term, even beyond a power cycle
d) Take input from the user
Answer: (c)

Exercise 2: What is a program?
Answer: The definition of a *program* at its most basic is a sequence of Python statements that have been crafted to do something.

Exercise 3: What is the difference between a compiler and an interpreter?
Answer:

Interpreter	Compiler
An *Interpreter* reads the source code of the program as written by the programmer, parses the source code, and interprets the instructions on the fly.	*Compiler* needs to be handed the entire program in a file, and then it runs a process to translate the high-level source code into machine language and then the compiler puts the resulting machine language into a file for later execution.

Exercise 4: Which of the following contains "machine code"?
a) The Python interpreter
b) The keyboard
c) Python source file
d) A word processing document
Answer: (a)

Exercise 5: What is wrong with the following code:
```
>>> primt 'Hello world!'
File "<stdin>", line 1
primt 'Hello world!'
^
SyntaxError: invalid syntax
>>>
```
Answer: It should be **print** and not primt.
        print 'Hello world!'

Exercise 6: Where in the computer is a variable such as "x" stored after the following Python line finishes?

x = 123

a) Central processing unit
b) Main Memory
c) Secondary Memory
d) Input Devices
e) Output Devices
Answer: (b)

Exercise 7: What will the following program print out:

x = 43
x = x + 1
print(x)

a) 43
b) 44
c) x + 1
d) Error because x = x + 1 is not possible mathematically
Answer: (b)

Exercise 8: Explain each of the following using an example of a human capability: (1) Central processing unit, (2) Main Memory, (3) Secondary Memory, (4) Input Device, and (5) Output Device. For example, "What is the human equivalent to a Central Processing Unit"?
Answer: These are my thoughts and opinions may vary.
1. Central Processing Unit – Heart
2. Main Memory – Brain (Subconscious)
3. Secondary Memory – Brain (Conscious Thought)
4. Input Device – Ears, Hands
5. Output Device – Mouth

Exercise 9: How do you fix a "Syntax Error"?
Answer: The line and character that Python indicates in a syntax error may just be a starting point for your investigation.