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**VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD**  
**B.E. (CBCS) III-Semester Supplementary Examinations, May/June-2018**

**Introduction to Scripting Languages**

Time: 3 hours

Max. Marks: 70

*Note: Answer ALL questions in Part-A and any FIVE from Part-B*

**Part-A (10 × 2 = 20 Marks)**

- Write a python3 print statement which prints the below sentence where the string *Dhoni* is represented by a variable name, the number 98 is represented by a variable `score` and the number 77 is represented by a variable `balls`. Dhoni scored 98 runs in 77 balls.
- Change the below two python statements into a single statement and mention the version of python required to run the above two statements.  

```
marks = raw_input("Enter the marks")
marks = int(marks)
```
- Name any two iterative statements supported in python along with their syntax.
- Compare a list and a dictionary with respect to their indices. Also write a python statement which creates a dictionary containing at least two key-value pairs.
- Define a function and provide the syntax for a function definition in python.
- Modify the below python code to incorporate exception handling mechanism  

```
quantity = input("Enter the quantity:")
quantity = int(quantity)
```
- Assume that you have a function named `getProductPrice()` defined in module `inventory.py`. This `getProductPrice()` function is being called from another module named `printbill.py`. Provide any two ways in which you can write a python statement in `printbill.py` module to have access to `getProductPrice()` function.
- Demonstrate the concept of composition with an example.
- State any two advantages of using automated testing.
- List any four tasks which can be done using pip tool.

**Part-B (5 × 10 = 50 Marks)**

*(All sub-questions carry equal marks)*

- Given values of variables `a`, `b`, `c` and `d` as  
`a = 10`, `b = 3`, `c = 1` and `d = 5`  
and the expression  
`z = a * b ** c + d`
    - How many steps are required to determine the value of `z`?
    - Illustrate the steps representing the order of evaluation by enclosing the operands in parentheses at each step.
    - Determine the value of `z` for python2 and python3.
  - Write a python program which takes the course name and roll number of a student as two command line arguments and prints 3 lines as output where
    - first line must print the first three characters of the course name
    - second line must print the last three character of the roll number
    - third line must print the length of string representing the course name.
Assume that the program is written in a file named `coursereg.py` and write the python command to run the program which takes sample input `python` as course name and `1602-20-737-121` as roll number.

15. a) Determine the Z-Transform of the sequence  $x[n] = \cos[\omega n] u[n]$ . [4]

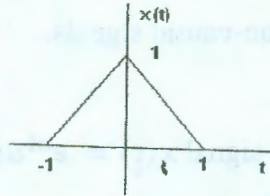
b) Find the Inverse Z-Transform of  $X(Z) = \frac{3Z^{-1}}{(1-Z^{-1})(1-2Z^{-1})}$  if ROC is [6]

i)  $|Z| > 2$

ii)  $|Z| < 1$

iii)  $1 < |Z| < 2$

16. a) For the signal given below generate  $x(-3t+2)$ . [5]



b) If  $X(\omega)$  is the spectrum (Fourier Transform) of signal  $x(t)$ , Prove that “no change in Magnitude Spectrum but the phase spectrum is linearly shifted” when the signal  $x(t)$  shifts by  $t_0$ . [5]

17. Answer any **two** of the following:

a) A discrete time signal is given by  $x[n] = n$  for  $-2 \leq n \leq 3$ , give the graphical representation of  $x[n]$ ,  $x[n-2]$  and  $x[2n]$ . [5]

b) Write the Properties of Convolution. [5]

c) State and Prove the Time shifting property of Z-Transform. [5]

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