



# APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

## Scheme for Valuation/Answer Key

*Scheme of evaluation (marks in brackets) and answers of problems/key*

### APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY FIRST SEMESTER B.TECH DEGREE EXAMINATION(S), MAY 2019

Course Code: BE101-05

Course Name: INTRODUCTION TO COMPUTING AND PROBLEM SOLVING

Max. Marks: 100

Duration: 3 Hours

Marks may be awarded for outputs based on any version of Python

#### PART A

*Answer all questions, each carries 2 or 3 marks.*

Marks

- |   |  |     |
|---|--|-----|
| 1 | system software and application software. (1.5 + 1.5 marks)  | (3) |
| 2 | Roles of each one. (1 mark each)   | (3) |
| 3 | properties (any 3 -1 mark each)  | (3) |
| 4 | Flowchart (3marks)   | (3) |
| 5 | syntax. (2 marks)<br>example. (1 mark)   | (3) |
| 6 | Give the output for the following program segment:<br><br>P<br>Y<br>T<br>H<br>O<br>N<br><br>Done (2 marks)<br><br>output if print (c) is followed by a break statement<br><br>P (1 mark) | (3) |
| 7 | program (1mark)<br><br>using function (1marks)<br><br>type casting(1mark)  | (3) |
| 8 | import math (1marks)<br><br>math.sqrt() (1marks)   | (3) |



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- math.log() (1marks)
- 9 Write a program (2marks) (2)
- 10 identify the key-value pairs. (1)  
to print keys and values of the dictionary (2) (3)
- 11 1 mark each (3)
- 12 Division by zero exception (1) (2)  
Justification (1)
- 13 inbuilt exceptions. (1 mark each) (3)
- 14 Differentiate. (1.5 compound Boolean expression each mark) (3)

**PART B**

*Answer any four full questions, each carries 8 marks.*

- 15 Bus explanation (1mark) (8)  
types. (4marks)  
Diagram. (3marks)
- 16 algorithm (4 marks) (8)  
flowchart (4 marks)
- 17 Program using compound Boolean expression. (8marks) (8)  
NB: if compound Boolean expression not used give partial marks accordingly
- 18 recursion (2marks) (8)  
python program to calculate  $nC_r$ . (3marks)  
Use *fact* (3marks)
- 19 Correct program (8 marks) (8)  
NB: partial marks may be awarded for partial output

**PART C**

*Answer any two full questions, each carries 14 marks.*

- 20 a) menu driven (2 marks) (7)  
(i) (2 marks)  
(ii) Replace all the spaces (1.5 marks)  
put \$ at the start and end of the string. (1.5 marks)



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- b) (i) functions with example (1 mark each) (4)  
(ii) exception handling (3 marks). (3)
- 21 a) operations in python. Give examples. ( 1 mark each)  
creation .(2marks) (7)  
sort + Display (1 mark + 1 mark)
- b) to read a number (1mark) (7)  
check for prime. (3marks)  
raise an arithmetic error (3marks)
- 22 a) **Reading** proper list(3marks)  
Separating (4marks) (7)
- b) to read a text file (2marks) (7)  
identifying palindromes (3marks)  
display (2marks)

