G.R. No.

U218-146 (T1)

OCTOBER 2018 / IN-SEM (T1)

S.Y.B.TECH. (INFORMATION TECHNOLOGY) (SEMESTER - I)

COURSE NAME: PROBLEM SOLVING AND OBJECT ORIENTED PROGRAMING
COURSE CODE : ITUA21176
(PATTERN 2017)

Time : [1 Hour]　　　　　　　　　　　　　　　[Max. Marks : 30]

(*) Instructions to candidates:
1) Answer Q.1 OR Q.2, Q.3 OR Q.4
2) Figures to the right indicate full marks.
3) Use suitable data where ever required

Q 1)　a) Explain six steps of problem solving　　　　　　　　　[6]

　　　b) Draw a flowchart and write an algorithm to find addition of digits　[6]

　　　c) What is meant by problem? What are the ways to solve problem　[4]

OR

Q2)　a) Explain different strategies for algorithm design　　　　[6]

　　　b) Write output of following functions　　　　　　　　[6]

　　　　　　1. Sign(0)

　　　　　　2. Abs (-8)

　　　　　　3. String(-345.88)

　　　　　　4. Max (5,7,8,9)

　　　　　　5. Mid(S,3,2)

　　　　　　6. Right(s,3)

　　　where s=theater

　　　c) What is the need of function?　　　　　　　　　　[4]

Q3) a) List down major types of module and explain their function with example

[6]

b) Draw a decision table for the following set of conditions for gross income tax and rate:

1) Gross <= 5,000 tax rate 5%   2) income between 5,000 - 10,000 tax rate 8%

3) income between 10,000 - 15,000 tax rate 10%   4) Gross > 15,000 tax rate

15%   [4]

c) Explain case structure with flowchart and example   [4]

OR

Q4) a) Explain three decision logic structure with example   [6]

b) Using positive logic, solve the following set of conditions to calculate hotel bill: [4]

1) Sales of eatables up to 100 Rs., 11% discount
2) Sales of eatables up to 1000 Rs., 22% discount
3) Sales of eatables up to 10000 Rs., 33% discount

c) What are the parameter passing techniques?   [4]