FYBSCIT sem II Regular & A.T.K.T Exam April-2018
OOPS. 13/4/18

**Q. P. Code : 33404**

**(2½ Hours)** **[Total Marks: 75]**

N. B.: (1) **All** questions are **compulsory**.
(2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(3) Answers to the **same question** must be **written together**.
(4) Numbers to the **right** indicate **marks**.
(5) Draw **neat labeled diagrams** wherever **necessary**.
(6) Use of **Non-programmable** calculators is **allowed**.

**1. Attempt *any three* of the following:** **15**

a. What is object oriented programming? State its applications.
b. Illustrate the relationship between object and class.
c. Explain the concept of abstraction with suitable example.
d. Explain in brief about reusability with suitable example.
e. What is polymorphism? Give suitable example for the same.
f. Write a note on dynamic binding.

**2. Attempt *any three* of the following:** **15**

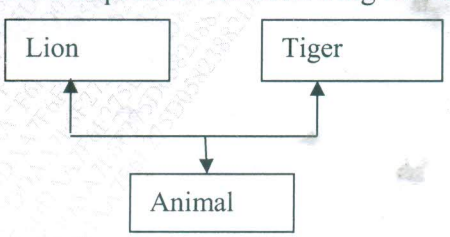
a. Explain the structure of C++ class.
b. Write a C++ program to create a class Bank with { acno, custname, bal} as its attributes. And implement the methods withdraw() , deposit() and showBalance().
c. Explain in brief the concept of friend function and class with suitable example.
d. What is constructor? State its characteristics.
e. Write a C++ program to implement the concept of constructor and destructor.
f. Explain the concept of pointer to object with suitable example.

**3. Attempt *any three* of the following:** **15**

a. Explain the concept of function overloading with suitable example.
b. Write a C++ program to overload binary (++) operator.
c. List the operators that cannot be overloaded. Explain the rules for overloading the operators.
d. What is static function? Explain how it is implemented.
e. What is pure virtual function? Explain how it is implemented.
f. Explain in brief the concept of abstract class.

**4. Attempt *any three* of the following:** **15**

a. Explain the concept of multilevel inheritances with suitable example.
b. Write a C++ program to implement the following hierarchy of inheritance.




c. Explain the concept of method overriding with suitable example.
d. Write a note on containership.
e. Explain the mechanism of handling the exception with suitable example.
f. Explain in brief about hybrid inheritance with suitable example.

**[TURN OVER]**

**5. Attempt *any three* of the following:** **15**

a. Explain the concept of function template with suitable example.

b. Write a C++ program to implement the concept of class template.

c. State and explain different file modes.

d. Write a C++ program to read the input from the user and write into the file. [Select a suitable file mode]

e. Write a C++ program to display the contents from the file in a console mode. [Select a suitable file mode]

f. Write a C++ program to copy the contents from one file to other file. [Select a suitable file mode]

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