**CSE 309-CT 2**

**Time – 25 mins Full marks – 20**

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| 1. | Today we will work with shapes. A general shape will have a particular color and area. We can divide a shape into circles, triangles and quadrilaterals. Circles have center points and radius. Triangles have three edges. Quadrilaterals have four edges. Further, we can divide quadrilaterals into parallelograms, non-parallelograms and trapeziums. A square, rhombus and rectangle are also parallelograms.  Now create an inheritance tree from the above example. | 10 |
| 2. | Suppose we have an abstract class of ***Pet***and two other classes ***Dog***and***Cat*** inherits it.  Now give a suitable example of abstract class and abstract methods using these three classes.   Demonstrate why using abstract classes and abstract methods are important here. | 10 |
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