Name & Roll No.   Total marks: 10   Total Time: 10 Mins.

Q1. Consider the following classes write the output of the program and explain what you should do to make the outputs 10, 30, 40.

```cpp
class Polygon {
  protected:
    int width, height;
  public:
    void set_values (int a, int b)
      { width=a; height=b; }
    void print()
      {
      cout<<width<<" "<<height<<endl;
      }
};
class Rectangle: public Polygon {
  private:
    int length;
  public:
    int set_values(int a, int b, int c)
      { Polygon::set_values(a,b);
        length=c;
      }
    void print()
      {
       cout<<width<<" "<<height<<"
"<<length<<endl;
      }
};
void temp(Polygon & obj)
{
    obj.print();
}
int main () {
  Rectangle rect;
  Polygon poly;
  rect.set_values(4,5);
  poly.set_values(10, 20, 30);
  temp(rect);
  temp(poly);
  return 0;
}
```

Solution:
Outputs in both cases will be 4, 5 and 10, 20.
To make the output 10,30, 40 we must make the print function virtual.