

## **Feedback for EEE\*\*\* Session:2007-2008**

**Feedback:** Please write simple statements about how well students addressed the exam paper in general and each individual question in particular including common problems/mistakes and areas of concern in the boxes provided below. Increase row height if necessary.

### **General Comments:**

### **Question 1:**

This was a very popular question of the four available, and was well answered. Most candidates either could answer part (a) completely or made no attempt at all. When schematic graphs were produced, particularly for part (c), often axes were not labeled resulting in lost marks. Part (d) was generally well answered.

### **Question 2:**

Part (a) was well answered although sometimes marks were lost due to very incomplete descriptions being given. Section (b) was poorly answered with some candidates mistakenly providing answers on Poisson statistics and BER for the quantum limit to detection part (b). Section (c) was well answered, but some candidates highlighted the various types of crosstalk without identifying their origin, losing marks.

### **Question 3:**

Part (a) was well answered, although for the follow on part (b) the possible materials were not commented upon or mistakenly given. Band structure diagrams were in general clearly presented and correct, although again in some cases axes were not labeled, losing marks. For part (c) most candidates made a small error in mistaking material with modal gain. Some candidates failed to give any units for gain. Part (d) was generally poorly answered, and again units were not given. Part (e) was well answered, with careful consideration being made of the effects of changing various device parameters.

### **Question 4:**

This was the least popular question on the paper, although for those who attempted it the average mark was 2<sup>nd</sup> highest on the paper. Parts (a) and (b) were well answered (see previous comments on labels). Part (c) was very well answered. Part (d) referred to RIN, yet many candidates gave descriptions of the turn-on delay for a laser diode.

### **Question 5:**

**Question 6:**

**Question 7:**

**Question 8:**