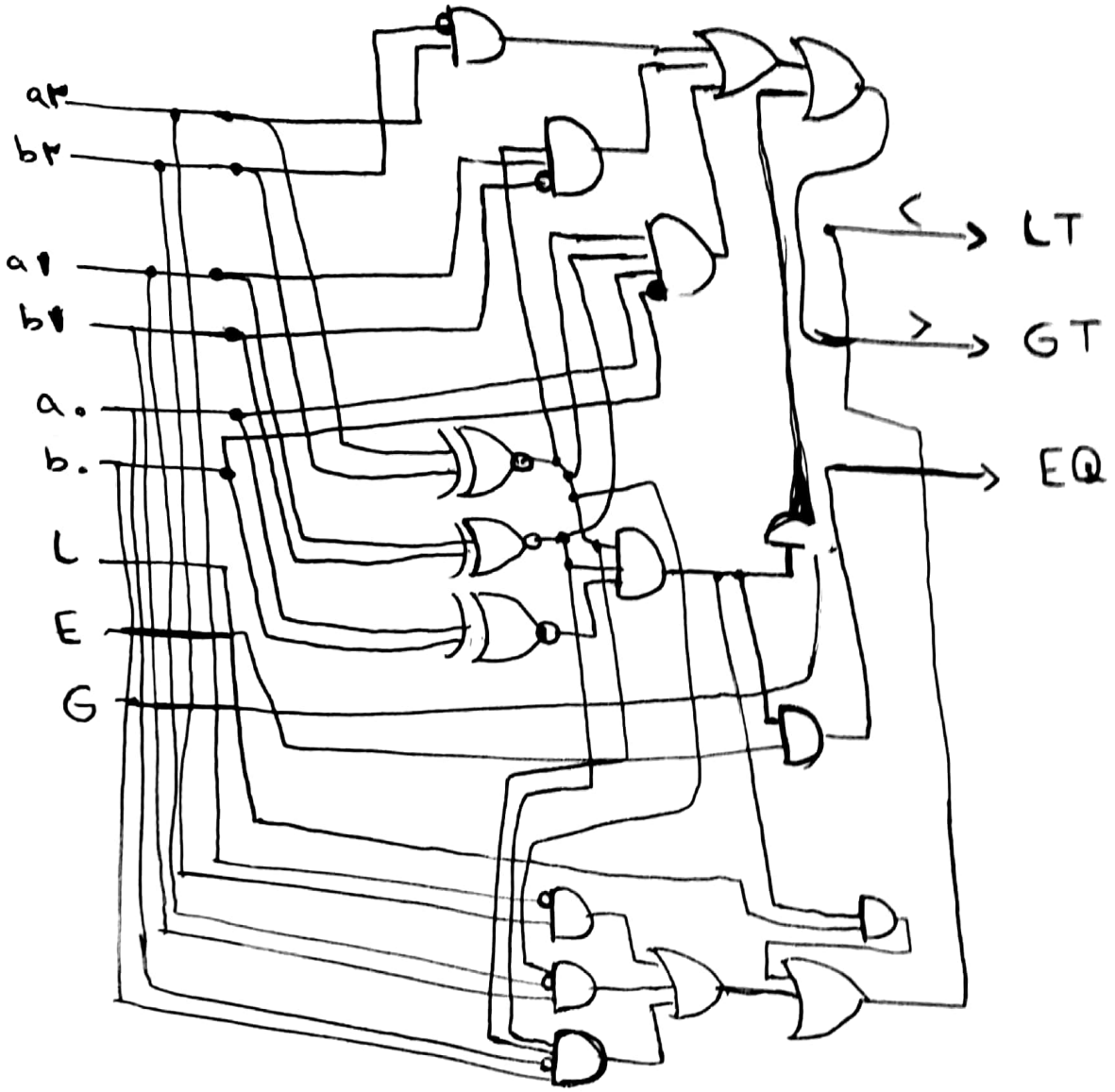

$$A\_EQ\_B = (A2 \text{ xnor } B2) \bullet (A1 \text{ xnor } B1) \cdot (A0 \text{ xnor } B0)$$

$$A\_GT\_B = A2.\overline{B2} + C2.A1.\overline{B1} + C2.C1.A0.\overline{B0}$$

$$A\_LT\_B = \overline{A2}.B2 + C2.\overline{A1}.B1 + C2.C1.\overline{A0}.B0$$

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```
module comparator3 (
  input [2:0] A,
  input [2:0] B,
  input l,
  input e,
  input g
  output lt,
  output et,
  output gt );
 wire  a2not, a1not, a0not, b2not, b1not, b0not, c2, c1, c0, ct, lc, gc,
       gt1, gt2, gt3, gt4, lt1, lt2, lt3, lb4;
 not g1(a2not, A[2]);
 not g2(a1not, A[1]);
 not g3(a0not, A[0]);
 not g4(b2not, B[2]);
 not g5 (b1not, B[1]);
 not g6 (b0not, B[0]);
 xnor g7 (c2, A[2], B[2]);
 xnor g8 (c1, A[1], B[1]);
 xnor g9 (c0, A[0], B[0]);
 and g10 (ct, c2, c1, c0);
 and g11 (lc, ct, l);
 and g12 (et, ct, e);
 and g13 (gc, ct, g);
 and g14 (gt1, A[2], b2not);
 and g15 (gt2, A[1], b1not, c2);
 and g16 (gt3, A[0], b0not, c2, c1);
```

```
or g17(gt4, gt1, gt2, gt3);
or g18(gt, g4, gc);
and g19(lt1, a2not, B[2]);
and g20(lt2, a1not, B[1], c2);
and g21(lt3, a0not, B[0], c2, c1);
or g22(lt4, lt1, lt2, lt3);
or g23(lt, lt4, lc);
endmodule
```