Task 1:

Rt value = 115 ohm

For LED:

- LED voltage at forward current 25mA = 1.9120 V (supposing to be 2.2/1V)

Task 2:

For laser:

- threshold current = 17-18mA (supposing to be 18mA)

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Task 3:

- setting up:

when we giving current 25mA, we need larger voltage, (input 5V, across laserdiode 2.1V, which are larger than we did with dc input)

- sine wave:

we got good sine wave with 600 mV amplitude and offset of 5.7 Vpp

Task 4:

without long fibre: V = 232.26-50.47

with long fibre: V = 70-17.15

db drop = - 10.73

db per meter = -1.07

task5:

200pF looks goodDiagram

Description automatically generated