Water level detection device PoC

SPECIFICATION

|  |  |
| --- | --- |
| Transmission Range (3 marks) | \_\_\_\_\_\_\_\_\_\_\_ (mm) |

**Transmitter:**

|  |  |
| --- | --- |
| Supply Voltage Range  (2 marks) | Vmin = \_\_\_\_\_\_\_\_\_\_\_ (V)  Vmax = \_\_\_\_\_\_\_\_\_\_\_ (V) |
| Supply Current (at Vcc = 12V) (1 mark) | I = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (A) |
| Power (1 mark) | P = \_\_\_\_\_\_\_\_\_\_\_\_\_ (W) |
| Operational Frequency (1 mark) | f = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Hz) |
| Wavelength (1 mark) | λ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (nm) |

**Receiver:**

|  |  |
| --- | --- |
| Supply Voltage Range (2 marks) | Vmin = \_\_\_\_\_\_\_\_\_\_\_ (V)  Vmax = \_\_\_\_\_\_\_\_\_\_\_ (V) |
| Output Voltage – Empty Tank (2 marks) | V1 = \_\_\_\_\_\_\_\_\_\_\_\_\_ (V) |
| Output Voltage – Full Tank (2 marks) | V2 = \_\_\_\_\_\_\_\_\_\_\_\_\_ (V) |
| Accuracy – 20% Water (4 marks) | ∆C = \_\_\_\_\_\_\_\_\_\_ (pF)  Change of output signal ∆V = \_\_\_\_\_\_\_\_\_\_\_ (V)  Change of output signal ∆V = \_\_\_\_\_\_\_\_\_\_\_ (%) |
| Output Voltage – Transmitter Failure (1 mark) | V0 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (V) |

Note: To earn marks, you will need to demonstrate that these parameters are determined correctly.