|  |  |  |  |
| --- | --- | --- | --- |
| Light | Humidity | Temp | Pressure |
| BH1750  http://www.dfrobot.com/index.php?route=product/product&product\_id=531#.V1LF0pF97IU for  $13.05 | Dht22 approx Rs. 350  https://www.adafruit.com/category/35 for  $9.95 | |  |
| Temt6000 module  http://www.freetronics.com.au/products/light-sensor-module#.V1LCkJF97IU  $5 | BME280  $19.95  http://master-e.net/?gclid=CPbzoqamjs0CFRcfaAodNAUNOQ for  $9.95 | | |

**dht22**

* Low cost
* 3 to 5V power and I/O
* 2.5mA max current use during conversion (while requesting data)
* Good for 0-100% humidity readings with 2-5% accuracy
* Good for -40 to 80°C temperature readings ±0.5°C accuracy
* **No more than 0.5 Hz sampling rate (once every 2 seconds)**
* Body size 27mm x 59mm x 13.5mm (1.05" x 2.32" x 0.53")
* 4 pins, 0.1" spacing
* Weight (just the DHT22): 2.4g
* has more accuracy than dht11

**for details of bme280**: https://learn.adafruit.com/adafruit-bme280-humidity-barometric-pressure-temperature-sensor-breakout/overview

BH1750:

http://www.dfrobot.com/index.php?route=product/product&product\_id=531#.V1LF0pF97IU

**Pressure Sensors**

Separate Pressure sensors, if required are as follows-

1.**Absolute Pressure measurements**

1. https://www.pasco.com/prodCompare/absolute-pressure-sensors/index.cfm
2. http://www.te.com/usa-en/product-CAT-PTT0059.html
3. http://www.ebay.in/itm/111842778256?aff\_source=Sok-Goog

difficulties -> impossible to attain absolute condition . Hence require strict specifications for precise output.

where we can use it : altitude pressure related measurements . In our case if our journey starts from plain and ends in hills then we should use such type of pressure sensors .

2.Gauge Pressure measurements

1. http://www.amazon.in/BMP180-pressure-sensor-Arduino-KitsGuru/dp/B00XTZYEB4?tag=googinhydr18418-21&tag=googinkenshoo-21&ascsubtag=822b0cc0-34eb-45d4-bd16-bfd50b028546

Measures pressure relative to atmospheric pressure .

difficulties -> atmospheric pressure varies with height

where we can use it : if altitude of journey almost remains same then we can use instead of absolute pressure sensor because of low cost .

**Suggested Sensors for us**

BME280 - Temperature Pressure and Humidity sensor

Temt6000 module - light sensor

Estimated budget - approx $24