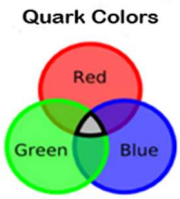
Color of quarks:



There are three colors of quarks: red, blue, and green.
The color property of quark has been assigned to satisfy the Pauli exclusion principle. (quarks, being fermions, should obey Pauli exclusion principle).

The antiquark colors are: anti red, anti-blue, and anti-green respectively.

Flavor of quarks:

The flavor of quark indicates the varieties (types) of quarks. So, there are six flavors of quarks**:** *up, down, charm, strange, top, bottom***.**

Short questions:

Q.1) What quarks combination will give a proton?
Ans: Proton has a quark combination of uud.

Verification:

For proton:

Charge, $Q = 1e = 1$
Baryon number, $B = 1$
Lepton number, $L = 0$

For uud combination:

Charge, $Q = +\frac{2}{3}e + \frac{2}{3}e - \frac{1}{3}e = 1e = 1$

Baryon number, $B = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 1$
Lepton number, $L = 0 + 0 + 0 = 0$

Thus, the quark combination of neutron is uud.

Q.2) What quarks combination will give a neutron?
Ans: The quark combination of neutron is: udd.

Verification:

For neutron:

Charge, $Q = 0$
Baryon number, $B = 1$
Lepton number, $L = 0$

For udd combination:

Charge, $Q = +\frac{2}{3}e - \frac{1}{3}e - \frac{1}{3}e = 0$
Baryon number, $B = \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 1$
Lepton number, $L = 0 + 0 + 0 = 0$

Thus, the quark combination of neutron is udd.
