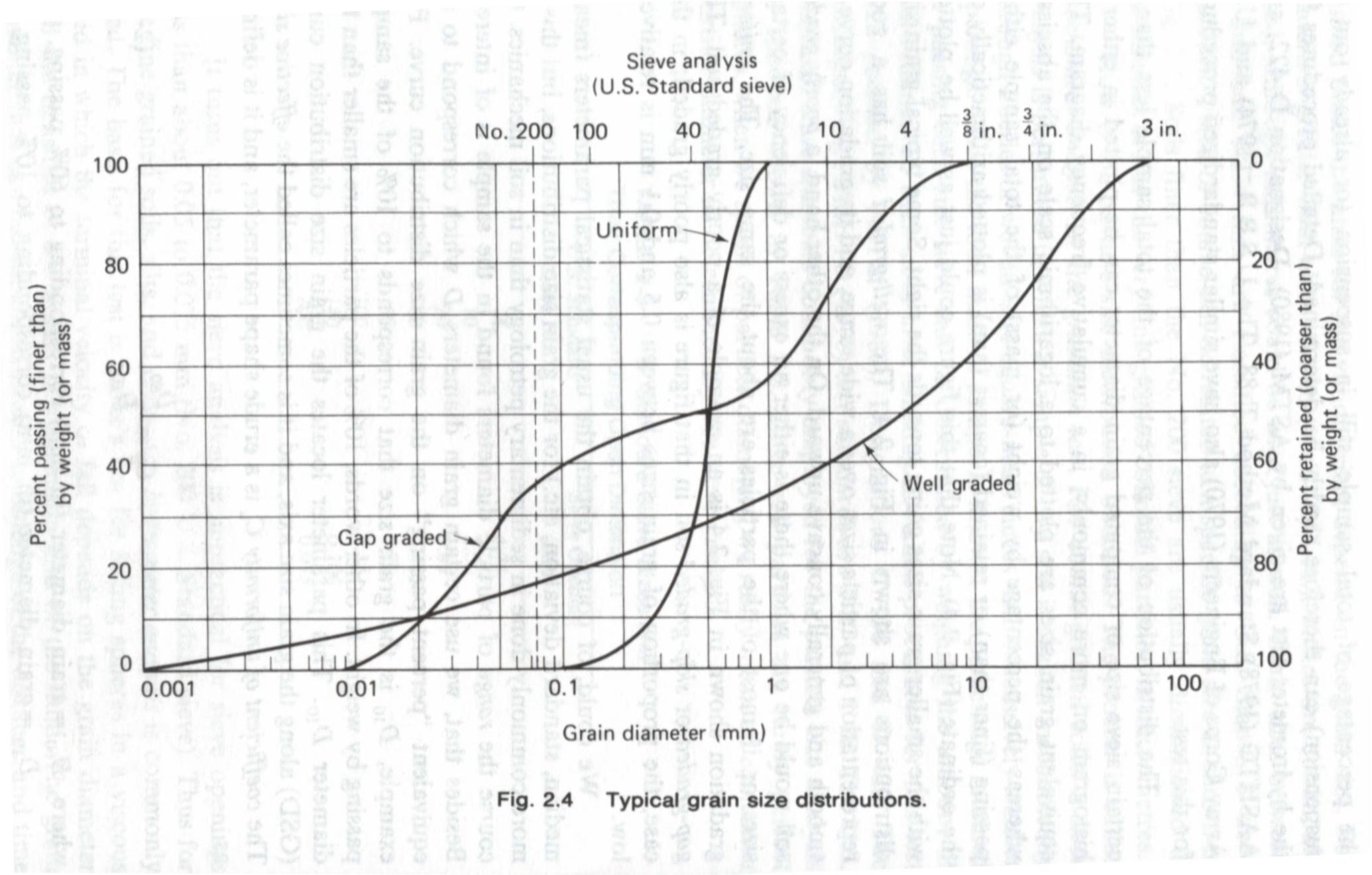
**Q1** Match the particle distribution names (well graded, gap graded, and uniformly graded) to their relevant arrow on the graph [6 marks] – [Note: submit the graph with the writing on it]

***Answer:***

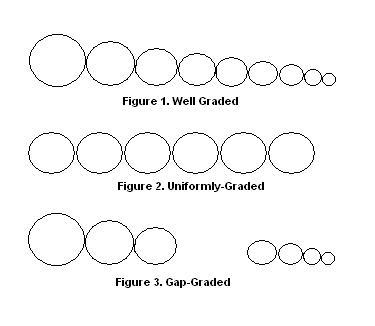


**Q2** Briefly explain the *physical* meaning of a gap graded and uniform graded aggregate

[4 marks]

***Answer:***

**Gap gradation refers to a sample with very little aggregate in the medium size range. This results in only coarse and fine aggregates. The gradation curve is *horizontal* in the medium size range.**

**Uniform gradation (also known as narrow gradation) refers to a sample that has aggregates of approximately the same size. The gradation curve is very *steep.*** [](http://upload.wikimedia.org/wikipedia/commons/6/62/Soil_Gradations.JPG)

**More Gradations to know**

### A well graded (also known as dense graded) Refers to a soil that contains particles of a wide range of sizes and has a good representation of all particle sizes (Approximately equal amounts of various aggregate sizes). The gradation curve looks even.

An open gradation Refers to an aggregate sample with very little fine aggregate particles. This results in many air voids, because there are no fine particles to fill them. The gradation curve is horizontal in the small size range.

**C:\Program Files\Microsoft Office\MEDIA\CAGCAT10\j0252349.wmfUseful Links on aggregates**

Check the following useful WebPages.

<http://training.ce.washington.edu/wsdot/Modules/03_materials/03-2_body.htm>

http://www.dot.ca.gov/hq/esc/Translab/pubs/Ontario\_Gradation.pdf