



Biomedical Engineering



Biopharmaceutical practice
Course Code : MPE 492

Allowed Time : 10 min
second Semester 2016 /2017



Faculty Of Engineering

Student Name:

Student ID

Question: Give the name of each of the following sentences:

Sentence	Name
1- The class of sterile cabinet that provides the highest attainable level of protection to personnel and the environment.	class III
2- The type of incubator that provides best control of culture conditions	CO ₂ incubator
3- The best cryoprotective agent used for cells cryopreservation.	dimethyl sulfoxide
4- The type of air flow of laminar cabinet required for pharmacy drug preparations.	horizontal laminar flow
5- The type of cells that are cultured while attached to a solid or semi-solid substrate on cell containers.	adherent (mono layer)

Question (2): Complete the following sentences:

- Vertical air flow of laminar cabinet has advantages such as ^{safety: air not blowing directly on operator} hood not as deep, less floor space and filter on top, easy to access
- Disadvantages of horizontal air flow of laminar cabinet includes ^{filter change or service requires} and ^{Do not provide protection to user} large samples obstruct air flow