Q1: Which cloud deployment model would you choose for each of the following? Why? Please justify your answer briefly (within 5 sentences).

(a) The UAB Hospital, which has to store millions of patient medical records containing sensitive data and also a lot of research publications that are public.

**Answer:** For this hospital I would suggest a hybrid cloud deployment model. It is because the hybrid cloud deployment model can manage private and public data of any organization.

Hybrid cloud deployment model has benefit that can save data in multiple places which has less chance of losing the sensitive data of patients.

Hybrid model also very good at sharing the public data with researchers or any external source.

It is also very good at keeping the private data safe and secure.

(b) Skywalker Saber Industries -- A galactic defense contractor which works on 100% confidential, sensitive, and secret data on lightsaber design.

**Answer:** I think for skywalker saber industries private cloud deployment model would be best and more preferable. It is because it provides the security, privacy and control to the private data of organization.

Private cloud model also provides with performance and reliability to the resources.

Private cloud model also doesn’t have any external threats or any unauthorized access just because of its strong security.

One more thing that skywalker can also use on premises cloud model but it all depends on the company which one they want to use, depending upon there recourses, requirements, budget and many more.

(c) The Kaleidoscope -- UAB's student newspaper that wants to digitize its archives of newspaper page photos.

**Answer:** For this type we can use public cloud deployment model because it will be available to everyone.

Public cloud model provides scalable environment which will be very helpful for the storage and processing needs. It would be very easy if one need to grow his needs.

It can be also very cost efficient because UAB student would be only paying how much he is using or consuming, not more than that. It is also good for students because there are not any upfront investments or anything else like that. There won’t be any problem for increasing or decreasing the storage as per need. It is also very easy and basic to implement and use for any student.

But one thing to get know that it is public so there won’t be any very tight security and privacy holds.

(d) All the K-12 public schools in the Birmingham area that want to consolidate their IT infrastructure.

**Answer:** I would recommend using community cloud deployment model for this situation. It is because the community cloud model is used for mutual interest and requirements of multiple organizations.

All the public schools will be using the shared resources which can lead to optimize source utilization. They all can cope up with each other together and efficiently. It can also help by using centralize system in all the schools. Which can also help in security, troubleshooting and many more problems. This model also has good privacy concerns which can also help to protect students’ private data.

Q2: Assume that you are a founder of a startup, whose product has a chance to go viral and get millions of users within a few days or weeks after launch. However, you have limited capital resources, and you can only attract more venture capital for IT resources after your product starts to get many users.

Would the cloud computing model be helpful to you to launch your startup with limited capital/resources? Explain your answer.

**Answer:** Yes, I think cloud computing model will be helpful to launch your startup with limited capital and resources. There can be many reasons behind choosing cloud computing model for any startup which has potential.

We can start from cost efficiency, any startup doesn’t have that much big investment that they can invest in expensive software and hardware’s, big data storages and data centers, and only pay as much as you are consuming the cloud storage i.e., pay as you go basis.

Startup can also scale their business according to their demand, as in start they can just have small portion of cloud and with the time you can just increase it as you got a large number of users. This is known as scalability, by this we won’t be needing any upfront investment in the model. As the users increases, we the increase the cloud too with the demand.

By using cloud infrastructure, you can quickly deploy anything you want, without worrying about the resources and hardware and many more.

So by this it means that we should have cloud computing model for any startup which has potential to gain popularity as it is released.

**4-MS. [5 points] Refer to the definition of cloud computing. (Lecture 1.1., Slides 8 and 9). Based on this, can the following services (a and/or b) be called clouds? (Please write yes or no for each case, and then explain your answer based on the definition from Lecture 1.1).**

(a) Klingon Empire Tech (KET), a Holodeck Virtual Reality service that provides training in virtual reality environments over the Internet. Users log into the service by logging into KET's single powerful server. Users pay a flat monthly fee for the service. When signing up, they have to specify the memory size allocated to their VR application and this cannot be changed once the user signs up.

**Answer:** No, this is not any cloud infrastructure because in cloud you can increase and decrease the size of memory you want to use, i.e., “pay-as-you-go”. And also, there is no upfront subscription on the cloud. The subscription can’t be fixed in any cloud infrastructure.

(b) Romulan Translation Service (RTS), which provides interplanetary language translation services. Through an API. Users do not have to pre-pay for the service or pay a monthly fee. They can use any number of API calls based on their needs. The users are charged based on the number of translation API calls made.

**Answer:** Yes, by the given information we can say that this service is cloud because in this there is no upfront subscription charges, and you can “pay-as-you-go” in this service. In cloud you can increase the memory or API as per your need and same is happening in this service you can just increase the API when you need and decrease when you don’t need it.