The advantages, disadvantages, and application of each model :

1)Waterfall Model:

Advantages: i)We can define requirements early in the cycle.

ii)Requirements are easily understandable and defined.

Disadvantages: i)We can not change requirements quite often.

Application :Product definition is stable.

2)V Model:

Advantages:

i)Directly associated testing phase.

Disadvantage :

i)Highly disciplned model

ii)next phase starts only after completion of the previous phase.

Application :Mandatory for most tenders for public-sector software projects

3)Incremental Model:

Advantage :It combines element of waterfall model applied in an iterative fashion.

Disadvantage :This incremental model applies only linear sequence.

Application :

• A project has a lengthy development schedule.

4)Spiral Model:

Advantage :We can change requirements quite often.

Disadvantage :Requirements are not easily understandable and define.

Application :Learning with maturity which involves minimum risk for the customer as well as the development firms.

5)Concurrent Model:

Advantage :It provides an accurate state of the current state of a project.

Disadvantage :It needs better communication between the team members. This may not be achieved all the time.

Application : A client/server system is composed of a set of functional components.

6)Unified Process Model:

Advantage :It is easier to control the risks as high-risk tasks are completed first.

Disadvantage :The process is difficult to manage.

Application :The system is developed incrementally over time, iteration by iteration, and thus this approach is also known as iterative and incremental software development.

7)Prototype Model:

Advantage :Unlimited user participation.

Disadvantage :Less experience on similar project.

Application :When the desired system needs to have a lot of interaction with the end users.

8)RAD Model:

Advantage :User are experts of problem domain.

Disadvantage :We can not change requirements early in the cycle.

Application :

RAD should be used only when a system can be modularized to be delivered in an incremental manner