Assignment No 3.

Q1 What are the 12 Agile principles?

1. Satisfy Customers Through Early & continuous Delivery:-
Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.

2) Welcome Changing Requirements Even Late in the Project:-
welcome changing requirements; even late in development. Agile processes harness change for the customer's competitive advantage?

3. Welcome & Deliver Value frequently:-
deliver working software freqently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

4. Break the silos of your project:-
Agile relies on cross-functional teams to make communication easier between the different stakeholder in the project. As the original text States, "business pepople and developers must work together daily throughout the project.

5. Build project Arouand motivated Individuals:-
Build projects around motivated Individuals. Give them the environment and support they need, and trust them to get the job done.

6. The most effective way of communication is face-to face:-

The efficient and effective method of conveying information to and within a development team is face-to-face.

7. Working software is the primary ~~plus~~ measure of progress :-

The ~~5~~7th of agile core principles is pretty straight forward. It doesn't matter how may working hours you've invested in your project, how many bugs you manage to fix, or how many line of code your team has written.

8. Maintain a Sustainable working pace :-

Agile processes promote Sustainable development. The sponsors, developers, and user should be able to maintain a constant pace indefinitely.

9. Continuous Excellence Enhances Agile :-

Continuous attention to technical excellence and good ~~des~~ design enhances agility.

10. Simplicity is Essential :-

Simplicity - the art of maximizing the amount of work not done is essential.

11. Self-organizing Teams Generate most value :-

The best architectures, requirements, and designs emerge from self-organizing teams.

12. Regularly Reflect and Adjust your way of work to Boost effectiveness :-

At regular intervals, the team reflects on how to become effective, then tunes and adjusts its behaviour accordingly.

Q2. What are the benefits of the Agile development methodology?

→ Benefits for Agile development methodology :-

- The simple and consistent format saves times when capturing and prioritizing requirements while remaining versatile enough to be used on large and small features alike.

- Keep yourself expressing business value by delivering a product that the client really needs.

- Avoid introducing detail too early that would prevent design options and inappropriately lock developers into one solution.

- Avoid the appearance of false completeness and clarity.

- Get to small enough chunks that invite negotiation and movement in the backlog.

- Leave the technical functions to the architect, developers, testers, and so on.

Q3 What is a life cycle in Agile?

→ Agile project life Cycle :-

The overall goal of each agile method is to adapt to change and deliver working software as quickly as possible. However, each methodology has slight variations in the way it defines the phase of software development.
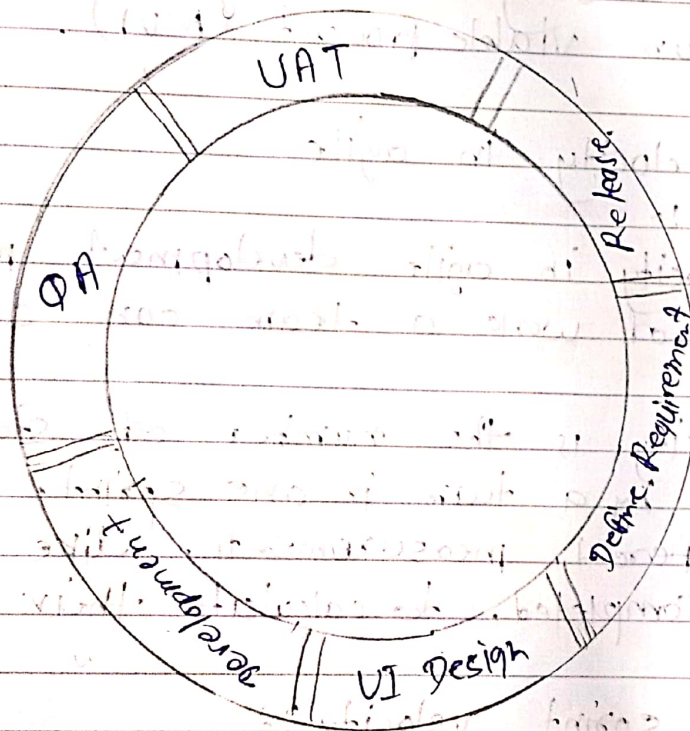
Agile software development lifecycle includes the concept, Inception, Construction, Release, Prodction, and Retirement phases.

1. Concept: Projects are envisioned and prioritized.

2. Inception: Team members are identified funding is put in place, and initial enviorments and requirements are discussed.

3. Iteration/ Construction: The development team works to deliver working software based on iteration requirements and feedback.

4. Release: QA (Quality Assurance) testing, internal and external training, documentation development, and final ~~reatea~~ release of the iteration into production.

5. Production: Ongoing support of the software.

6. Retirement: End-of-life activities, including customer notification and migration.

* Iteration process Flow is

• Requirements: Define the requirements for the iteration based on the product backlog, sprint backlog, customer and stakeholder feedback.

- Development :- Design and development software based on defined requirements.
- Testing : QA testing internal and external training documentation development.
- Delivery : Integrate and deliver the working iteration into production.
- Feedback : Accept customer and stakeholder feedback and work it into the requirements of the next iteration.



* Advantages and Disadvantages of Agile :-

Advantages :

1) Adapt change more effecitively
2) End - goal can be unknown
3) faster, high - quality
4) Strong team interaction
5) Customer satisfaction.

Disadvantages of Agile:
1) Planning can be less concrete
2) Team must be knowledgeable
3) Time commitment from developers.
4) Documentation can be neglected
5) Final product can be very different.

Q4. Write short notes on
1) Sprint Velocity
2) Minimum Viable Product (MVP).

1) Sprint Velocity in agile
- Velocity :-
    Velocity in agile development measures the quantity of work a team can accomplish in a sprint.
    Velocity is the number of story points completed by a team in one sprint. Some teams use different measurements, like hours or stories completed, to calculate their velocity.

* Calculate sprint velocity :-
    You can calculate sprint velocity with a simple math equation: divide the number of backlog tea items by the total length of your sprint in day.
    Example!
    If your team has 60 backlog items, and you average sprint duration lasts 2 weeks, the equation would look like this.

. 60 backlog items / 10 days. :- Sprint velocity of 6.

* Why measure sprint velocity :.
Makes sprint planning easy :-
    for a product owners and Scrum masters,
knowing your team's sprint velocity can help
make sprint planning easier.

Manage stakeholder expectations :-
    If your stakeholders are asking for a timeline
on a specific user story, or if they're trying
to add anything before the end of the sprint,
you as a product owner understand how that
change may affect your team's output based
on sprint velocity.

2) Minimum viable product (MVP).
→ Minimum viable product (MVP) :-
    The term minimum viable product or MVP comes
from Lean startup, a methodology that focuses on
establishing business and products within a short
development lifecycle,
        MVP, is product with enough features to
attract early-adopter customers and validate a product
idea early in the product development cycle

* Purpose of a minimum viable product :-
. Eric Ries, who introduced the concept of the
minimum viable product
. Release a product to the market as quickly a possible.

- Test an idea with real user before comming a large budget to the product's full development
- Learn what resonate with the company's target market and what doesn't.