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Q1a

1	Define Software Engineering? Explain Software Engineering code of Ethics.	7	CO1	PO1, PO2, PO3, PO9, PO10, PSO1	Understand

Software Engineering is an engineering discipline which consists of all aspects of software production from the early stages of development of software ~~development~~ specification to the maintainance of the software after the use.

Code of Ethics :-

(1) Confedentiality :- The employers and clients data should be protected. If it is breached then the data would be leaked and would be misused.

(2) Competence :- You should not accept the work which is outside of your competence. Competence is the ability of an individual to do work in the specific domain.

(3) Intellectual property rights :- one should know the local patents and copywrites to avoid the conflict of intrest.

(4) Computer misuse :- You should not misuse the technical skills over the trivial problems such as playing games in company's laptop or major problems like spreading trojan virus in the system

Q4a

4	With a neat block diagram present the Spiral Process Model.	8	CO1	PO1, PO2, PO3, PO9, PO10, PSO1	Apply

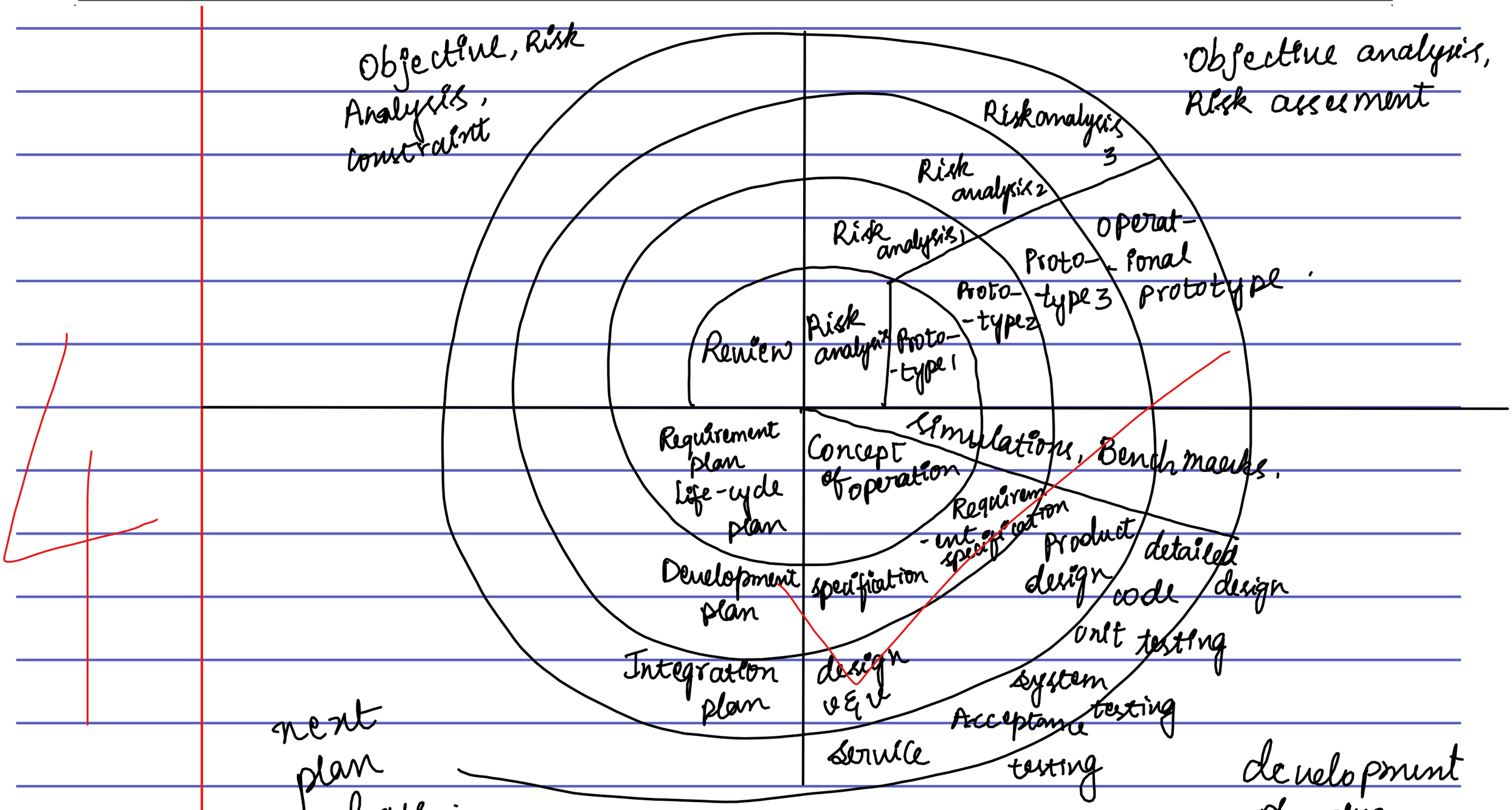

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fig: Boehman's spiral proccess model.

(1) objective analysis :-

- In the early stages the objective of the problem should be analysed so as to know the possible problems in the given process
- The constraints are also analysed so as to know limitation for some extent.

(2) Risk Assessment and analysis :-

- The possible risk are assessed so as to to avoid later discrepancy in the prototype
- It can used to analysed for constraints of the ~~syste~~ process / system.

(3) Design and development :-

- The ~~prototype of the~~ process model should be choosen for the designing the process.
- Eg :- Throwaway prototyping is used when the user ~~of~~ interface risk is ~~in~~ there in the process, waterflow model is used when the ~~main~~ main system ~~in the~~ and sub-system risk is present.

(4) Prototyping :-

- After selecting the process model, the design of system / process is started which frother gives in prototyping.

Q5a

5	Sketch the requirement engineering process and explain them in detail. What are the fundamental software process activities?	7	CO1	PO1, PO2, PO3, PO9, PO10, PSO1	Apply

Requirement engineering process

1. Requirement discovery
2. Requirement categorisation & segregation
3. Requirement prioritization and negotiation
4. Requirement specification.

Fundamental software process activities

a. software specification.
b. software design and development
c. software validation
d. software evolution.

Requirement engineering process.

1. Requirement discovery :-
   - When the objective and constraints are analysed certain requirement for that particular process or model are listed out to make sure to have it during prototyping.
   - All the requirement are only listed out including certain basics specification.
2. Requirement categorization & segregation :-
   - All the listed out requirements are segregated based upon their triviality / can be segregated in terms of specific units in the system.
   - This would help in knowing the requirements in better way and also look out for any missed out requirements.
3. Requirement prioritization and negotiation :-
   - When the requirements are segregated the priority of the list should be analysed
   - Since all the listed out needed not to be

be first priority and focuses on the basic needs.

(4) Requirement specification :-
- After prioritizing the needs, it is listed into main requirement specification to make the prototyping.

Fundament software process.

(1) software specification :-
- The basic requirements of the system / process required is listed out.

(2) software design & development :-
- The designing of the prototype is done to the software. Programming, interface designing is also involved

(3) software validation :-
- Since many units are integrated to make the whole system, the software is tested and validated.
- It is designed according to the end user's basic need.

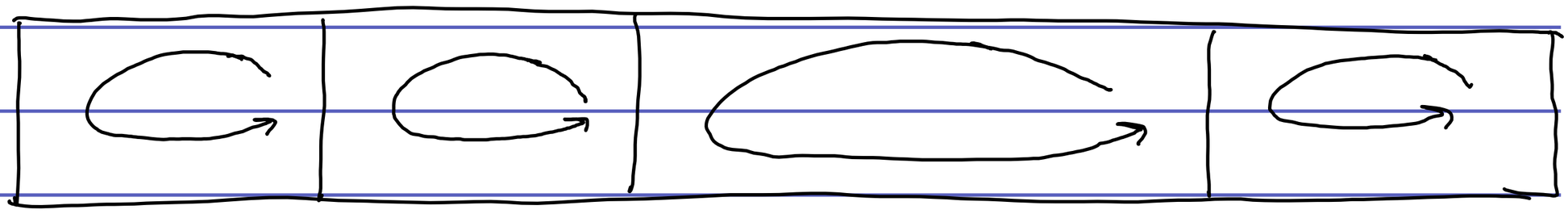
(4) software evolution :-
- In future, if the end user wants any modification or adding ~~ede~~ extra modules, then it should be designed in such a way that ~~it can be~~ there would be room for further improvements.

Q8a

8	Summarize the phases of Rational Unified Process Model.	8	CO2	PO1, PO2, PO3, PO9, PO10, PSO1	Understand

The phases for Rational unified process model are :

1. Inception
2. Ellaboration.
3. Construction
4. Transistion.



(1) Inception :-

- The process is analysed to know its brief objective, risk and constraints involved
- The basic requirements are list out required in the model.

(2) Ellaboration :-

- The risk are assesed, and brief solution is given to the model.
- The constraints are further analysed while briefing solution which would give some insights of the model praticality.

5

(3) Construction :-

- This is the longest period in the RUP model
- The prototype is programmed, design and done unit & system testing.
- The integration of the various odules are done in this phase.
- Certain test are done such as acceptance testing in this period.

(4) Transition :-

- The prototype which is developed in the virtual environment is tested in real environment
- The error detected, malfunctioning are recorded in this phase.
- Stress test, performance checking is done during this period to guide its efficiency.