use-case behavior to classes?

    a)   Sequence and communication diagram
    b)   Use cause and activity diagrams
    c)   Sequence and activity diagrams
    d)   Class and composite structure diagrams

x   The prototyping model essentially involves incorporating the   1
construction of a prototype into the iterative waterfall process mode. The
prototype is constructed in which one of the following phases of the
waterfall model of software development?

    a)   Feasibility study
    b)   Requirements analysis and specification
    c)   Design
    d)   Coding and unit testing

Attempt Any two

Q.2

i.   What is the principal aim of software engineering discipline?   5

ii.   Distinguish between program and professionally developed software?   5

iii.   Do u agree with the following statement" the emphasize of exploratory   5
programming is on error correction while software engineering
practices emphasize on error prevention"

Attempt Any two

Q.3

i.   What do u understand by the term software life cycle? Why is it   5
necessary to model software life cycle and to document it?

ii.   What are the phases of waterfall model of software development?   5
Which phases consumes maximum effort for developing a typical
software?

iii.   List major difference between the exploratory and Morden software   5
development practise.

Attempt Any two

Q.4

i.   Suppose you have been appointed as the analyst for a large software   5
development project. Discuss the aspects of the software product you
would document in the SRS document? What would be the
organisation of your SRS document? How would you validate your
SRS document.

ii.   Differentiate between functional and non-functional requirements?   5

iii   Pen down 4 basic Elements of data-flow diagrams   5

*****

d)   Increased documentation overhead

iv.   Model building can be considered to be an application of which one of   1
the following techniques?

       (a)   Abstraction
       (b)   Decomposition
       (c)   Aggregation
       (d)   Composition

V   A software process model represents which one of the following?   1

       (a)   The way in which software is developed
       (b)   The way in which software processes data
       (c)   The way in which software is used
       (d)   The way in which software may fail

vi.   Which one of the following can be considered to be a suitable SDLC   1
model for developing a moderate-sized software for which the customer
is not clear about his exact requirements?

       a)   RAD model
       b)   V model
       c)   Iterative waterfall model
       d)   Classical waterfall model

vii.   Which one of the following statements is not true of a data flow diagram   1
(DFD) model?

       a)   It is a hierarchical diagram.
       b)   It represents code structure
       c)   It does not represent decisions and control flows.
       d)   It represents decomposition of functions and data into
           finer forms.

viii.   A data flow diagram represents which one of the following?   1

       a)   The conditions based on which data items may be
           processed
       b)   The order in which different activities are carried out
       c)   The transformation of data through processing stations
       d)   The order in which various functions of a program are
           invoked

ix   Which of the following UML diagrams should you use when allocation   1

Faculty of Engineering

Mid Sem I Examination September - 2022

CS3CO26 Software Engineering

Programme: B.Tech.

Branch/Specialisation: All

Duration: 2 Hrs.

Maximum Marks: 40

Q.1 i. Which one of the following factors is primarily responsible for the perceived complexity of a software development problem to be different from its actual complexity? **1**

    (a)   Short term memory limitations
    (b)   Long term memory limitations
    (c)   Inadequate neurocomputing capability
    (d)   Inadequate visual resolution

ii. Which one of the following is a possible reason for the effort, time and cost required to develop a program to increase exponentially with the size of the program while using the build and fix style of development? **1**

    a)   Programming languages lack suitable constructs required for the build and fix style of development
    b)   Programmers lack competence in effectively using the build and fix style
    c)   Programmers are able to use abstraction and decomposition techniques in a very limited way using the build and fix model
    d)   Programmers are able to make limited use of GO TO statements while using the build and fix model

iii. A software development company is likely to face which one of the following difficulties, if it adopts the waterfall model in preference to the exploratory (build and fix) program development style in its development projects? **1**

    a)   Increased development cost
    b)   Increased development time
    c)   Decreased program maintainability