4158

Time: 3 Hrs.   Max. Marks: 75

Note: Answer five questions in all. All questions carry equal marks.

Q 1   What is software maintenance? Describe various categories of maintenance. Which   15
         category consumes maximum effort and why? Explain the steps of software maintenance
         with help of a diagram.

Q.2   Digital Signature is Software that shows advertisements and information on a digital TV in   15
         Railway Stations, Bus stations, and other Public places. The user specifies the date, time,
         the video file, the image file and text to the software. The software shows the
         advertisements at the scheduled time.

         FRUEMP

         Functionalities

         • Different types of templates
         • Specify the time and date with template ID
         • View the play list
         • View the LOG
         • Minimize to tray
         • Edit details and templates

         Make a detailed flowchart of the digital signature software.

Q.3   Information Portal is a private domain web portal, which is being developed for a   15
         university. The portal acts as an information kiosk for students. The portal acts as a bridge
         of communication between the students and the administration. The application helps in
         improving the communication standards between the different domains existing in the
         organization. The overall advantage of the system is empowered by decreasing the latency
         that arises while operating through the manual process. The portal helps in adjusting and
         arranging the operational standards in the maintenance of information related to their
         students and examinations. The administrators on handle all the operational based
         information with respect to the transactional state that may arise in complementing the
         application procedures that take place while the system is functioning.

         The actual purpose in designing the system is to make the organizational process to get
         speed up. The management can have the expected information at its at any instance.
         Generating the required reports as per the operational requirements becomes much easier
         and information availability at the hand. The system not only becomes false proof and
         higher levels of satisfaction prevail at the side of the student, faculty and administrators.
         The application is also security oriented and gets associated with in the system as the
         general structure of accessibility is fairly demandable.

The students can just get on to the portal to know any such information that is of importance to their academics. The students can also have referential information related to the normal structure of their courses, semesters. The portal also provides the accessibility towards the provision of old question and their answers along with the material

Write the detailed software requirement specifications and propose a model of the system.

Q 4   What is the difference between SRS document and design document? What are the   15
contents we should contain in the SRS document and design document?

Q 5 a   Give two examples of software engineering tasks where it is likely to be useful, and two   8
where it is less likely to be.

b   If you were developing a security-critical system, how would you integrate the security   7
requirements engineering and assurance processes into the model?

                                                                                                                                           15

Q 6   **Answer the following:**

    i.   When you know programming, what is the need to learn software engineering
        concepts?
    ii.   What are SDLC models available? Which SDLC model is the best?
    iii.   What are functional requirements?
    iv.   What is modularization?
    x.   What is software re-engineering?