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[3565]-648

M.E. (Computer) (Sem. - II)
SOFTWARE PROJECT MANAGEMENT
(2008 Course) (Theory) (Elective - IV(A))

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) *Answer 3 questions from Section I and 3 questions from Section II.*
- 2) *Answers to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data, if necessary.*

SECTION - I

Q1) Dr. Date is starting a dental practice in Baramati. He wants a system to manage the appointments. He will have a dental assistant and a receptionist. When a patient calls for an appointment the receptionist will check the calendar and will try to schedule the patient as early as possible to fill in vacancies. If the patient is happy with the proposed appointment the receptionist will enter the appointment with the patient's name and purpose of appointment. The system will verify the patient's name and supply the necessary details from the patient's record including the patient's ID number. After each examination or checking session, the assistant will mark the appointment as completed, add comments and the schedule the patient for the next visit if appropriate.

The system will answer queries by patient's name and date. Supporting details from the patient's record are displayed along with the appointment information. The receptionist can cancel the appointments. The receptionist can print out a notification list for making reminder calls 2 days before appointments. The system includes patient's phone number from the patient records. The receptionist can also print out daily and weekly work schedules with all the patients.

Draw data flow diagrams, use case diagrams and associated activity diagrams for the above system. **[16]**

Q2) Assuming suitable data, state what are the deliverables of the design phase of a software project. Answer should include both the high level design as well as the detailed design stages. **[16]**

P.T.O.

- Q3)** Which method of software estimation was introduced by Albrecht? What are the five parts relating to the functions of any applications which are used by this method? What are the steps to generate the final effort metric using Albrecht's method? What is the primary reason for using this method? [16]
- Q4)** a) State what is meant by CMM process framework for software processes? What is its objective?
b) Explain the terms software process capability and process performance. What are different levels of maturity?
c) What are key process areas (KPA s) and their goals? Explain with suitable example assuming a particular maturity level. [16]
- Q5)** Write short notes on the following:
a) Project risk management.
b) Configuration Management.
c) Client management issues. [18]

SECTION - II

- Q6)** For the appointment management system of Q 1 draw suitable sequence diagrams. [16]
- Q7)** a) State what is the de-facto industry standard for defining quality.
b) Explain how quality control activities are planned and managed using procedural and quantitative approaches.
c) How defect prediction is used in quality management. [16]
- Q8)** a) State what is meant by peer reviews.
b) What are the advantages of peer reviews.
c) Explain the process of peer reviews.
d) What are the roles and responsibilities of various participants of peer reviews. [16]
- Q9)** Write short notes on the following:
a) Process data base, process capability baseline and process metrics.
b) Statistical process control applied to software quality characteristics.
c) Project scheduling. [18]

Q10) With respect to the task of organising a project team identify the basic requirements of the following subtasks:

- a) Accessing internal skills.
- b) Create roles and responsibility matrix.
- c) Creating a team.
- d) Defining project manager power.
- e) Managing team issues.

[16]

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