6/H–73 (vii) (Syllabus–2015)

2018

(April)

COMPUTER SCIENCE

(Honours)

(Software Engineering)

(CS-601 T)

Marks : 37

Time : 2 hours

The figures in the margin indicate full marks for the questions

Answer **one** question from each Unit

UNIT—I

1. *(a)* What is a System? What is system analysis? What are the characteristics of a system? 1+1+2=4

   (b) Elaborate on the interpersonal and technical skills of a system analyst. 4

2. *(a)* What is an information system? Explain MIS organization. 1+5=6

   (b) Briefly explain the importance of a feasibility study. 2

UNIT—II

3. (a) Identify the two important techniques that software engineering uses to tackle the problem of exponential growth of problem complexity with its size.

(b) Explain the *Prototyping* model for software development, highlighting its advantages and disadvantages.

4. With the help of a diagram, explain the *Waterfall* model of software development. What are its merits and demerits? 4+2=6

UNIT—III

5. (a) Elaborate on the requirement gathering and analysis activity.

(b) Write down the differences among organic, semidetached and embedded software products.

(c) Give a brief explanation on the classification of cohesiveness of a module.

6. (a) Explain when you should use PERT charts and when you should use Gantt charts while you are performing the duties of a project manager. 1+2=3

(Continued)

(b) List some important activities that a software project manager performs during software project planning. 3

(c) Bring out the differences between chief programmer team structure and democratic team structure. 3

UNIT—IV

7. (a) What is meant by 'balancing a DFD'? Briefly elaborate on some commonly made errors while constructing a DFD model. 1+3=4

(b) What are the characteristics of a good user interface? Explain. 4

8. (a) What is the aim of structured design? Explain a structure chart with the help of an example. 1+3=4

(b) What is an activity diagram? How does it compare with a flowchart? 2+2=4

UNIT—V

9. (a) Explain how code inspection and code walk-throughs are performed. 3

(b) What factors determine the quality of software? 3

(Turn Over)

10. *(a)* Differentiate between black-box testing and white-box testing. 3

(b) How is verification different from validation? 3

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