Total No. of Questions : 9]   [Total No. of Printed Pages : 7

(1049)

B.C.A. (CBCS) RUSA IVth Semester Examination

4392

SYSTEM ANALYSIS AND DESIGN
Paper : BCA–0403

Time : 3 Hours]   [Maximum Marks : 70

Note :– Attempt *five* questions in all, selecting at least *one* out of two from each Unit. All questions carry equal marks. Question No. **1** is Compulsory.

(Compulsory Question)

1. (i) In top down analysis and design :

    (a)   Each succeeding phase is more detailed than the phase before it

    (b)   Each succeeding phase is as detailed as the phase before it

    (c)   Each succeeding phase is less detailed than the phase before it

(d) All of these

(e) None of these

(ii) The .... symbol is used in a flowchart to represent a calculation task.

(a) Input

(b) Output

(c) Process

(d) Start

(e) Stop

(iii) System prototyping helps the designer in :

(a) Making the programmers understand how the system will function

(b) Communicating to the user, quickly, how the system, when developed, will look like and get a feedback.

(c) Giving a demo of the software, to the system manager to whom he reports

(d) Both (a) and (b)

(e) None of these

(iv) Which of the following systems implementation approaches should be used if you want to run the old system and the new system at the same time for a specified period ?

(a) Direct

(b) Pilot

(c) Parallel

(d) Phased

(e) None of these

(v) Main characteristic of "ring", in Data structure, is :

(a) First record points only to the last record

(b) Last record points to the first record

(c) Many records point to one record

(d) Each record points to all other records

(e) None of these

(vi) Which of the following is not considered as a tool at the system design phase ?

(a) Piechart

(b) Data-flow diagram

(c) Decision table

(d) Systems flowchart

(e) None of these

(vii) To avoid errors in transcription and transposition, during data entry, the System Analyst should :

(a) Provide for a check digit

(b) Provide for a hash totals

(c) Provide batch totals

(d) All of these

(viii) Sequential or series testing is :

(a) Running the system with line data by the actual user

(b) Making sure that the new programs do in fact process certain transactions according to Specifications

(c) Is checking the logic of one or more programs in the candidate system

(d) Testing changes made in an existing or a new program

(e) None of these

(ix) A consideration evaluated by management when planning to convert to a computer system is :

(a) Maintenance

(b) Available software

(c) CPU sized speed

(d) All of these

(e) None of these

(x) Direct-access organization :

(a) Means storing records in contiguous blocks according to a key.

(b) Stores records sequentially but uses an index to locate records

(c) Uses an index for each key type

(d) Has records placed randomly throughout the file

(e) None of these   1×10=10

(Objective Type Questions)

(xi) What is a system ? What are its characteristics ?

(xii) What is the role of documentation in a system ? Explain.

(xiii) Explain any *three* methods of fact gathering.

(xiv) What do you mean by the quality of software ?

(xv) Explain what is testing and debugging.   5×4=20

Note :– Attempt any *four* questions, selecting *one* from each Unit. All questions carry 10 marks each.

Unit–I

2. Discuss in detail every phases of system development life cycle.

3. Discuss the need of system analysis. What problems can occur if we ignore it ? Discuss its impact on each phase.

Unit–II

4. Is Feasibility Study is necessary in software development ? Discuss it with different Feasibility Study.

5. What is the need of SRS ? Explain important characteristics of good SRS. Discuss cost and benefit analysis for feasibility study.

Unit–III

6. Explain any *two* of the following :

   (i)   Data flow diagram

   (ii) Decision tree

   (iii) Fact finding techniques

7. (a) Discuss Top down and Bottom up variance in detail.

   (b) What do you mean by audit trail ?

Unit–IV

8. What do you understand by software maintenance ? What are the various types of maintenance ? When it starts and why is it costly ?

9. What are the various approaches to design a good system ? How Database and Files assist in designing ?