Bachelor of Computer Application (B.C.A.) Semester—II Examination
SYSTEM ANALYSIS AND DESIGN
Paper—II

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (a) Explain SDLC in detail.   5

   (b) Write short notes on :

   (i) Interviews

   (ii) Brain storming.   5

OR

   (c) What do you mean by feasibility study ? Explain any two feasibility studies.   5

   (d) Explain open and closed system.   5

EITHER

2. (a) Explain following terms :

   (i) Decision Tree

   (ii) Data dictionary.   5

   (b) Draw DFD for library management system.   5

OR

   (c) Explain the concept of structured English with example.   5

   (d) Explain principle of code design.   5

EITHER

3. (a) Explain Parallel and pilot method for conversion.   5

   (b) Explain test evaluation and acceptance.   5

OR

   (c) What is testing ? Explain levels of testing.   5

   (d) Write short note on change strategy.   5

EITHER

4. (a) What is software reuse ? Why software reuse is required ?   5

   (b) Write short notes on :

   (i) Software reliability

   (ii) Software quality.   5

OR

(c) Write short notes on :

    (i) Gantt Chart

    (ii) PERT Chart.   5

(d) Explain project estimation. Explain project planning in detail.   5

5. (a) Explain system and subsystem. $2\frac{1}{2}$

    (b) Write the principles of form design. $2\frac{1}{2}$

    (c) Explain the concept of system evaluation. $2\frac{1}{2}$

    (d) Write the characteristics of software maintenance. $2\frac{1}{2}$

SUBJECT – System Analysis And Design

Time-3 Hours   **Marks: 50**

Note: (1) All questions are compulsory.

(2) **Draw a neat labeled diagram wherever necessary.**

ITHER

(a) Define the system? Explain open and closed system. (5)

(b) Explain the system development life cycle. (5)

OR

(c) Explain the feasibility study. (5)

(d) Discuss any two information gathering tools. (5)

EITHER

2. (a) What is structured analysis? Explain in detail. (5)

(b) What is DFD? What are symbol used in drawing a DFD. (5)

OR

(c) Explain the Decision tree with a suitable example. (5)

(d) What is system design? Explain in detail. (5)

EITHER

3. (a) What is system testing ? Explain the levels of testing. (5)

(b) Write short note on: i) Cold Turkey   ii) Parallel system (5)

OR

(c) Why do we need user training? (5)

(d) Explain objectives of system testing ? (5)

EITHER

4. (a) Explain GANTT charts with example. (5)

(b) Explain the software reuse ? (5)

OR

(c) What is Risk management. (5)

(d) Explain the project planning in detail. (5)

5. Attempt ALL question:-

1) Definition of system analysis and design. ($2^{1/2}$)

2) What is mean by analysis. ($2^{1/2}$)

3) What is form design. ($2^{1/2}$)

4) Role of analyst. ($2^{1/2}$)

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Bachelor of Computer Application (B.C.A.) Semester-II (C.B.S.) Examination
SYSTEM ANALYSIS AND DESIGN
Paper—II

[Maximum Marks : 50

Time Three Hours]

Note :— (1) All questions are compulsory and carry equal marks
(2) Draw neat and labelled diagrams wherever necessary.

EITHER

(A) What is system ? Explain components of computerized information system. 5

(B) Explain organizational and technological feasibility study in detail. 5

OR

(C) Discuss in detail duties of system analyst. 5

(D) Write notes on the following data collection techniques :
   (i) Interviews
   (ii) Questionnaires. 5

EITHER

2. (A) Explain DFD with suitable example 5

(B) What is form ? Summarise the characteristics of action memory and report form. 5

OR

(C) What audit considerations are included in system design ? Why are they important ? 5

(D) Explain principles of code design. 5

EITHER

3. (A) Write a note on change strategies 5

(B) List and explain the factors that affect the quality of a system. 5

OR

(C) Describe the role of following people in testing :
   (i) Analyst
   (ii) Programmer
   (iii) End users. 5

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(D) Explain the role of database administrator. 5

EITHER

4. (A) What are the main responsibilities, functions and activities of project management ? Which of these should be assigned to :
   (i) Project committee 5
   (ii) Project review committee ? 5

(B) What is project scheduling ? Explain any one technique of project scheduling.

OR

(C) Describe desirable facilities/features to be provided by a computer industry while launching a software in the market. 5

(D) Discuss the basic issues in reusing a software. 5

5. Attempt All :
   (A) Define system and subsystem. List different types of systems. 2½
   (B) Write a note on data dictionary. 2½
   (C) Discuss importance of testing. 2½
   (D) Write a note on software reliability. 2½

NRT/KS/19/2220

Bachelor of Computer Application (B.C.A.) Semester—II Examination
SYSTEM ANALYSIS AND DESIGN
Paper—II

Time : Three Hours]   [Maximum Marks : 50

Note :— (1) **All** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (A) What are the roles of sysem analyst ? Explain.   5

(B) What is feasibility study ? Explain any two types of feasibility study in brief.   5

OR

(C) What are different components of a computerized information system ? Explain.   5

(D) Explain interview data collection technique in detail.   5

EITHER

2. (A) What is DFD ? Explain different symbols used in DFD with example.   5

(B) List main categories of output. Expain each in brief.   5

OR

(C) Expain the concept of system tolerance in detail.   5

(D) Explain the principle of Code Design.   5

EITHER

3. (A) What is Testing ? Explain why testing is required and what are the levels of testing.   5

(B) What is Conversion ? Discuss any two conversion methods in brief.   5

OR

(C) Write short note on change strategies.   5

(D) Explain system evaluation.   5

EITHER

4. (A) What is software reuse ? Why sosftware reuse is required ? Also discuss basic issues with
         software reuse.   5

(B) Explain function point metric method used to estimate project size.   5

OR

(C) Explain risk management in detail.   5

(D) Explain various activities carried out in project planning.   5

5. Attempt **all** :

(A) What is prototyping ? Explain.   2½

(B) What is data dictionary ? Explain.   2½

(C) Explain "cold turkey" method in brief.   2½

(D) Explain Gantt Chart.   2½

CLS—20202

NJR/KS/18/3220

Bachelor of Computer Application (B.C.A.) Semester–II (C.B.S.) Examination
SYSTEM ANALYSIS AND DESIGN
Paper—II

Time : Three Hours]   [Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.
                 (2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (A) What is system ? Explain components of computerized information system.   5
    (B) Explain organizational and technological feasibility study in detail.   5

OR

    (C) Discuss in detail duties of system analyst.   5
    (D) Write notes on the following data collection techniques :
         (i)   Interviews
         (ii) Questionnaires.   5

EITHER

2. (A) Explain DFD with suitable example.   5
    (B) What is form ? Summarise the characteristics of action memory and report form.   5

OR

    (C) What audit considerations are included in system design ? Why are they important ?   5
    (D) Explain principles of code design.   5

EITHER

3. (A) Write a note on change strategies.   5
    (B) List and explain the factors that affect the quality of a system.   5

OR

    (C) Describe the role of following people in testing :
         (i)   Analyst
         (ii) Programmer
         (iii) End users.   5
    (D) Explain the role of database administrator.   5

EITHER

4. (A) What are the main responsibilities, functions and activities of project management ? Which of
         these should be assigned to :
         (i)   Project committee
         (ii) Project review committee ?   5
    (B) What is project scheduling ? Explain any one technique of project scheduling.   5

OR

    (C) Describe desirable facilities/features to be provided by a computer industry while launching a
         software in the market.   5
    (D) Discuss the basic issues in reusing a software.   5

5. Attempt **All** :
    (A) Define system and subsystem. List different types of systems.   2½
    (B) Write a note on data dictionary.   2½
    (C) Discuss importance of testing.   2½
    (D) Write a note on software reliability.   2½

5. Attempt **ALL** :—

    (a) Explain Brainstorming.   2½

    (b) Write a short note on system tolerance.   2½

    (c) Explain cold turkey method.   2½

    (d) Explain Gantt charts.   2½

Bachelor of Computer Application (B.C.A.)
Semester—II (C.B.S.) Examination
SYSTEM ANALYSIS AND DESIGN
Paper—II

Time—Three Hours]   [Maximum Marks—50

Note :— (1) All questions are compulsory and carry equal marks.

    (2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (a) Why is feasibility study important in the development of an information system ? Explain how feasibility decision is taken.   5

    (b) Who is system analyst ? Give reasons why system analyst plays a role of :

        (i) Confronters

        (ii) Detective

        (iii) Architect

        (iv) Imposer.   5

OR

(c) Write guidelines to design a questionnaire. Give one example of open ended question. 5

(d) Write short notes on prototyping. 5

EITHER

2. (a) Outline five validation rules for data. Give example of rules that might be used to validate date of birth for a

    (i) Student file

    (ii) Employee personnel file. 5

(b) List main categories of output. Explain each in brief. 5

OR

(c) What are the conventions for writing structured English ? Give one example to illustrate structured English tool. 5

(d) Write short notes on :

    (i) Process charts

    (ii) SOP. 5

EITHER

3. (a) Discuss change strategies in brief. 5

(b) Write short notes on :

    (i) Test Evaluation

    (ii) Test Acceptance. 5

OR

(c) Explain how evaluation helps in system development process and when it should take place ? 5

(d) Why is training important ? Discuss training methods in brief. 5

EITHER

4. (a) Explain various Activities carried out in project planning. 5

(b) Explain function point metric method used to estimate project size. 5

OR

(c) Explain Project risk, Business risk and Technical risk in brief. 5

(d) Explain software maintenance process model. 5

Bachelor of Computer Application (B.C.A.) Semester—II (C.B.S.) Examination
SYSTEM ANALYSIS AND DESIGN
Paper–II

Time : Three Hours]   [Maximum Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labeled diagram wherever necessary.

EITHER

1. (a) Why is the development of an information system a cyclic process ? Explain steps of SDLC.
5

(b) What is Prototyping ? Give two examples when use of prototyping.   5

OR

(c) Is it sufficient to concentrate solely on development costs in feasibility study ? If no, what other considerations should be taken into account ?   5

(d) What important factors are needed to be considered while deciding a candidate system ? Explain.
5

EITHER

2. (a) What is System Planning ? Explain how it helps in system development.   5

(b) Explain guidelines for questionnaire formulation. Write questionnaire to be sent to end-users of a computer system to determine their level of satisfaction with the output.   5

OR

(c) What are the conventions for writing structured English ?   5

(d) What are the factors for Designing System ? Explain human factor consideration while designing a system. Explain system tolerance with example.   5

EITHER

3. (a) Explain why testing is necessary. Explain Test execution. 5

   (b) List conversion methods and explain any two. 5

   OR

   (c) List Training Methods. Explain any two. 5

   (d) Write short note on Change Strategies. 5

EITHER

4. (a) Write a short note on reliability growth model. 5

   (b) What items associated with software development can be reused ? 5

   OR

   (c) How Gantt charts are used in software project management ? Explain giving suitable example. 5

   (d) Explain various activities carried out in project planning. 5

5. Attempt **ALL** :

   (a) Draw (SDLC) System Development Life Cycle. 2½

   (b) State common causes of invalid data and error. 2½

   (c) Explain how testing responsibility lies on both system personnel and end users. 2½

   (d) Write key attributes of software quality. 2½

Second Semester Bachelor of Computer Application (BCA) Examination

Paper – II

SYSTEM ANALYSIS AND DESIGN

Time : Three Hours]   [Max. Marks : 50

N. B. : (1) All questions are compulsory and carry equal marks.
   (2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (A) What are the roles of System AnalysT ?   5

   (B) Explain SDLC in detail.   5

OR

   (C) What is Interview ? What are the different types of interview ?   5

   (D) What is Feasibility Study ? What are the phases of Feasibility Study ?   5

EITHER

2. (A) What is DFD ? Explain different symbols used in DFD.   5

   (B) What is output ? What are the ways for analysis of Quality of forms ?   5

OR

(C) Explain the following :—

    (i)   Input validation.

    (ii)   Data Dictionary.   5

(D) Explain input design in system development.

                                            5

EITHER

3.   (A) What is testing ? Explain why testing is required and what are the level of testing.   5

    (B) Differentiate betweenn Modular and sequential method.   5

OR

(C) Explain why operational training is required in S/W implementation.   5

(D) Explain system evaluation in detail.   5

EITHER

4.   (A) What is S/W Reuse ? Why S/W Reuse is required ?   5

    (B) What are the factors required for finding S/W reliability and S/W quality ?   5

OR

(C) Differentiate between Gantt Chart and PERT Chart.

                                            5

(D) What is Project Planning ? What are the techniques used in project estimation ? 5

5. Attempt any **ten** questions :—

(a) What is system ?

(b) What is the purpose of document search technique ?

(c) Why problem idenification is required in system development ?

(d) Explain Structured English.

(e) Explain decision tree.

(f) How observation helps in collection of facts ?

(g) What is testing ?

(h) What is pilot conversion ?

(i) What is process chart ?

(j) What is ISO 9000 ?

(k) What is CPM ?

(l) How work breakdown structure is scheduled ?

1 x 10

Bachelor of Computer Application (B.C.A.) Semester—II (C.B.S.) Examination

SYSTEM ANALYSIS AND DESIGN

Paper—II

Time : Three Hours] [Maximum Marks : 50

N.B. :— (1) **All** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (a) What are different components of a computerized information system ? Discuss each component. 5

   (b) Explain following data collection techniques :

       (i) Observation (ii) Document search. 5

   OR

   (c) Draw System Development Life Cycle (SDLC) diagram. Explain different phases of SDLC in brief. 5

   (d) What is feasibility study ? Discuss economical and financial feasibility. 5

   EITHER

2. (a) What is DFD ? List various symbols used in drawing DFD with their meaning. Give one example of it. 5

   (b) Write principles of code design. List various types of codes. Explain any two of them. 5

   OR

   (c) Explain decision tree with suitable example. 5

   (d) Write short notes on following :

       (i) Input validation (ii) Control of output. 5

   EITHER

3. (a) What is conversion ? Discuss following conversion methods :

       (i) Pilot (ii) Sequential. 5

   (b) Why is testing necessary ? Explain the different levels of testing. 5

   OR

   (c) What training methods can an organization use ? List and explain. 5

   (d) Explain system evaluation. 5

   EITHER

4. (a) List the major responsibilities of a software project manager. 5

   (b) Explain risk management in detail. 5

   OR

   (c) Explain work breakdown structure and activity network model. 5

   (d) Discuss basic issues related to software reuse. 5

5. (a) What is prototyping ? Write benefits of prototyping. 2½

   (b) List different categories of output. 2½

   (c) Write short note on implementation of a new system. 2½

   (d) What is software maintenance ? Give characteristics of software maintenance. 2½

Bachelor of Computer Application (B.C.A.) Semester–II Examination

SYSTEM ANALYSIS AND DESIGN

Paper–II

Time : Three Hours] [Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (a) Explain open system and closed system with example. 5

(b) Draw and explain system development life cycle. 5

OR

(c) Explain the following data collection techniques :

(i) Brain storming

(ii) Interview. 5

(d) What is feasibility study ? Discuss technological and organizational feasibility. 5

EITHER

2. (a) Explain DFD giving suitable example. 5

(b) Write principles of output design. 5

OR

(c) Write short note on Data Dictionary. 5

(d) Write principles of code design. 5

EITHER

3. (a) Explain the following conversion methods :

(i) Cold Turkey

(ii) Parallel. 5

(b) Write short note on system Evaluation. 5

OR

    (c)   What training methods can an organization use ? List and explain.   5

    (d)   Why is testing necessary ? Explain the different levels of testing.   5

EITHER

4.   (a)   What is project scheduling ? Explain PERT chart in brief.   5

    (b)   List major responsibilities of a software project manager.   5

OR

    (c)   Explain work breakdown structure and activity network model.   5

    (d)   Write short note on risk management.   5

5.   Attempt all :

    (a)   What is cost benefit analysis ? Explain in brief.   2½

    (b)   What are different components of a computerized system ?   2½

    (c)   Write principles of Input design.   2½

    (d)   What is ISO 9000 certification ?   2½