

V Semester B. Tech. (Computer Sci)

Winter – 2011

Course Code : CS 501

Course Name : System Analysis & Design

Time : 2 Hrs. 30 Min.

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Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and state the assumptions made.
- 3) Diagrams/sketches should be given wherever required.
- 4) Figures to the right indicate full marks.

01. Solve any two –

- a) Discuss the role of system analyst while conducting interviews to collect required data. 6
- b) What do you mean by management culture? 6
Describe the project fundamentals.
- c) What are the issues to be consider while designing the questionnaire? 6

02. Solve any two –

- a) What is prototyping? Explain the designing parameters to develop prototyping. 6
- b) Differentiate the logical and physical DFDs. 6
Explain DFD with an example.

c) Define data dictionary and discuss the imp of data repository.

03. Solve any two –

a) Explain the role of decision tree in support system. Give an example.

b) Describe the goal of creating specifications. Hence discuss the specification format.

c) What are the steps to use Structured English. Give advantages of Structured English.

04. a) Describe ascertaining Hardware and S needs.

b) What is Analytic Hierarchy Processing
Explain steps in AHP and give advantage

05. a) Discuss the major topics for succ implementing the information system.

b) Describe the way to model object- systems particularly Coad and Y methodology.

Government College of Engineering, Amravati

(An Autonomous Institute of Government of Maharashtra)



V Semester B. Tech. (Computer Sci. & Engg.)

Summer - 2010

Course Code : CS501

Course Name : System Analysis & Design

Time : 2 hr.30min.

Max. Marks : 60

Instructions to Candidate

- 1) All questions are compulsory.
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- 3) Diagrams/sketches should be given wherever necessary
- 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
- 5) Figures to the right indicate full marks.

1. Solve any Two.

- (a) Explain Technical feasibility, Economic feasibility, Operational feasibility.
- (b) Explain PERT diagrams for system projects. How they differ from Gantt Chart ? Explain with example.
- (c) Explain the different roles of System Analyst.

- 2.** Solve any Two.
- (a) Explain the method of sample size selection when sampling data on Variables. 6
 - (b) Calculate sample size n if $i=0.02$, $z=2.58$, $p=0.05$ also List steps required to calculate sample size 6
(n) if company asks you to determine What perchantage of order contain mistakes if sampling data on attributes.
 - (c) Define joint application design? Explain benefits of using JAD? 6
- 3** Solve any Three.
- (a) What are the attributes that makes STROBE a systematic approach to observe decision maker physical environment.? 4
 - (b) Draw DFD for following events using Event response table. 4
 - i) Customer browsing Items for purchasing from departmental store website.
 - ii) Customer gets Items purchsing list from departmental store website.
 - (c) Explain input and output data flow in creating data dictionary. 4
 - (d) What are criterias for deciding whether a system should be prototyped. 4
- 4** Solve any Two.
- (a) Explain different dimensions of semistructured decisions. 6

- (b) Explain following multiple criteria decision making methods.
- i) Analytic Hierarchy processing
 - ii) Using sequential elimination by Lexicography
- (c) List steps in building the decision tree for theater festival, fill requests for tickets and draw decision tree

5

Solve any Two.

- (a) Explain following Techniques for comparing the costs & benefits for system
- i) Cash flow analysis.
 - ii) Present value analysis.
- (b) Explain the guidelines for screen design.
- (c) Explain a five layer model for object oriented analysis.

Government College of Engineering, Amravati

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V Semester B. Tech. (Computer Sci. & Engg.)

Winter - 2009

Course Code : CS501

Course Name : System Analysis & Design

Time : 2 Hr.30 Min.

Max. Marks : 6(

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Figures to the right indicate full marks.

1. Solve any two questions 1

- a) Define three types of feasibility and identify if implementation of a distributed "Patient Information System" for a hospital within three months of time with two house programmers at the cost of rupees two lacs is feasible or not? Justify your answer. (6)
- b) Explain project fundamental in brief. Also state the five criteria for system Project Selection. (6)
- c) What kind of information sought in Interviewing? Explain Joint Application Design in brief. (6)

Contd..

2. **Solve any two questions** 10
- a) Define term data dictionary. Define metadata list (5) and explain the four steps in compiling a data dictionary.
 - b) What are the various types of approaches to (5) prototyping? Explain.
 - c) Differentiate between Logical and Physical Data (5) Flow Diagram.
3. **Solve any two questions** 12
- a) What are the various conventions used in (6) Structured English? Give an example.
 - b) Differentiate Decision Support System (DSS) for (6) an analytic decision maker from DSS for a heuristic decision maker.
 - c) Explain SEMI-STRUCTURED Decisions. What (6) do you mean by dimensions of Semi-structured decisions.
4. **Solve any two question** 14
- a) List and explain the ten main sections of the (7) System Proposal.
 - b) What are the criteria for evaluating System (7) Hardware? List main categories for software grade.
 - c) List and Explain factors in choosing an output (7) technology.

5.

Solve any two question

12

- a) List and explain the six basic ideas that characterize object-oriented programming? (6)
- b) Explain the situation when object oriented analysis and design is good to use. Also explain Inheritance and Polymorphism. (6)
- c) Explain object-oriented analysis five-layer model based on Codd-Yourdon. (6)

Government College of Engineering, Amravati
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V Sem B. Tech.(Comp.Sci.& Engg)
Summer Term- 2010

Course Code : CS 501

Course Name : System Analysis & Design

Time : 2 hr.30min.

Max. Marks : 60

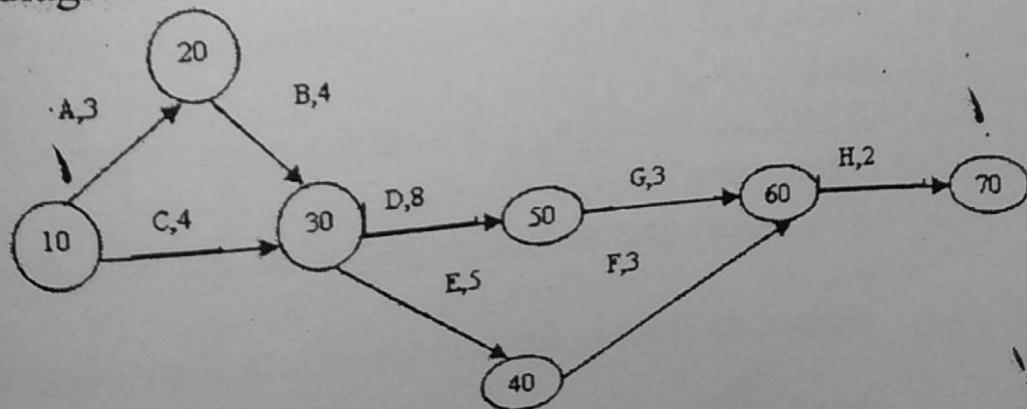
Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
- 5) Figures to the right indicate full marks.

1. Solve any Two.

(a) List & explain different levels of management. 6

(b) List activities for use in drawing following PERT diagram & draw Gantt chart from the following PERT diagram. 6



(c) Explain seven phases of SDLC.

2. Solve any Two.

(a) Explain the method of sample size selection when sampling data on attributes.

(b) Define various structures for organizing Interviews? Explain how they are useful?

(c) Calculate sample size n
if $i=0.02$, $z=2.58$, $p=0.05$

also List steps required to calculate sample size (n) if company asks you to determine What perchantage of order contain mistakes if sampling data on attributes.

3. Solve any Three.

(a) Explain following application strategies for applying STROBE.

i) Checklist /likert scale approach.

ii) Anecdotal list(with symbol, observation/narrative comparison)

(b) List & Explain guidelines for developing a prototype.

(c) Draw DFD for following events using Event response table.

i) Student browsing subjects for registration for a semester.

ii) Student gets subject registration list with details.

(d) How data flow is defined on a Data flow diagram.

4. Solve any Two.

(a) Construct decision table for deciding which catalog to

send customer who order only from selected catalogs.

- (a) Draw a decision tree to show the noncash purchase approval actions for a department store. 6
- (b) Explain following multiple criteria decision making methods. 6
- i) Using weighting methods
 - ii) Using sequential elimination by Lexicography

Solve any Two.

- (a) Explain following Techniques for comparing the costs & benefits for a system. 6
- i) Break even analysis
 - ii) Present value analysis
- (b) Explain a five layer model for object oriented analysis. 6
- (c) Explain the guidelines for screen design. 6

Government College of Engineering, Amravati
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V Sem B. Tech

Summer Term 2009

Course Code : CS501 Course Name : Software Analysis & Design

Time : 2 hr.30min.

Max. Marks : 60

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
- 5) Figures to the right indicate full marks.
- 6) (Other special instruction, if any)

1. **Solve any two.**
- a) Explain in which traditional project management differs from e-commerce project management 6M
- b) Define three types of feasibility? Identify if implemented of a distributed "Student information system" in a collage within three months time with two in house programmers at the cost of rupees fifty thousands is feasible or not justify your answer. 6M

- c) Explain following terms : 6M
(i) Environments for organizational system
(ii) System feedback for planning & control in organization as system.

2. **Solve any two.**

- a) What are various structures used in interviewing? 6M
- b) Explain various methods for administrating the questionaries? Give Advantages & disadvantages for questionaries? 6M
- c) Explain the concept of JOINT APPLICATION DESIGN? 6M

Solve any two.

- a) Which are certain factors determine whether a system is more or less suitable for developing prototyping? 6M
- b) Explain the progression of models from logical to physical model by giving one example? 6M
- c) Draw DFD(logical or physical) for Customer order processing system. using following:
Customer order, inventory control department, picking slips, shipping statement, customer record, item record, accounting, warehouse, customer billing statement 6M

Solve any two.

- a) What are the various function of decision support system? 6M
- b) Explain the concept of sequential elimination? 6M
- c) Explain following terms :
 - (i)Decision table
 - (ii)Decision tree6M

Solve any two.

- a) What is trends?List & Explain the different techniques for estimating trends 6M
- b) Explain Break even analysis & Cash flow analysis in detail. 6M
- c) Explain the concept of object oriented design. 6M

Government College of Engineering, Amravati
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V Semester B. Tech. (Information Tech.)

Winter - 2009

Course Code : IT501

Course Name : System Analysis and Design

Time : 2 hr.30min.

Max. Marks : 60

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
- 5) Figures to the right indicate full marks.

1. Explain Any Two 12

- (a) Explain the phases of systems development life cycle .
- (b) Explain organizations as systems? Explain any 5 functions.
- (c) Explain the steps for planning the interview.

2. Explain Any Two 12

- (a) What are the three attributes make “STROBE”. List the things to be observed while observing the physical environment of decision maker.
- (b) What are the various guidelines that a system analyst should observe in developing prototype?

(c) Define the top-down approach as it relates to drawing data flow diagram.

3. Explain Any Two

(a) Define the term Data Dictionary. Define metadata. List and explain the four steps in compiling a data dictionary.

(b) What four elements must be known for the systems analyst to design systems for structured decisions?

(c) What are the decision making concepts relevant to DSS.

4. Explain Any Two

(a) What are the different methods used in system proposals material. Explain in brief.

(b) List 10 main sections of the systems proposal. Which sections of the systems proposal should include the solution the analyst thinks is *most* workable?

(c) List six objectives for design output. Explain in detail.

5. Explain Any Two

(a) What are the different criteria that can be used to help determine whether a new class of objects is justified.

(b) Explain designing the problem domain component.

(c) Explain the six ideas of object oriented programming. Explain object oriented analysis.

Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)

5th Semester B. Tech. (Information Technology)

Winter- 2015

Course Code: ITU501

Course Name: System Analysis and Design

Time: 2 Hrs. 30 Min.

Max. Marks: 60

Instructions to Candidate

- 1) All questions are compulsory.
 - 2) Assume suitable data wherever necessary and clearly state the assumptions made.
 - 3) Diagrams/sketches should be given wherever necessary.
 - 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
 - 5) Figures to the right indicate full marks.

1 Solve any two

Explain in detail

- (a) i) Technical Feasibility
ii) Economic Feasibility
iii) Operational Feasibility

(b) List and explain steps in Interview preparation. 6M

(c) Draw PERT diagram and Gantt Chart for scheduling activities with the help of any example. **6M**

2

Solve

- (a) What are different approaches to prototyping?
Explain with the help of diagram.

Q (b) What are the seven steps in developing data flow diagram? Differentiate between Logical and Physical Data flow diagrams in detail. 6M

3 Solve any two

(a) What is Joint Application Design? Explain potential benefits and drawbacks of using JAD in the place of interviewing. 6M

(b) Define Data Dictionary. Explain how data dictionaries relate to data flow diagrams. 6M

(c) What are various conventions used in Structured English? Give an example. 6M

Solve

Q (a) What three advantages do decision trees have over decision table? 6M

(b) Explain guidelines for form design that should be observed for designing useful forms. 6M

Solve any two

(a) Illustrate a store's policy of customer checkout with four set of rules and four possible actions using decision table. 6M

(b) What are the objectives for design output? Explain in detail. 6M

(c) What is Object Oriented System Analysis and design? Explain in detail. 6M

Government College of Engineering, Amravati

(An Autonomous Institute of Government of Maharashtra)



V Semester B. Tech. (Computer Sci. & Engg.)

Winter - 2009

Course Code : CS501

Course Name : System Analysis & Design

Time : 2 Hr.30 Min.

Max. Marks : 6

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Figures to the right indicate full marks.

1. Solve any two questions

1

- a) Define three types of feasibility and identify if implementation of a distributed "Patient Information System" for a hospital within three months of time with two house programmers at the cost of rupees two lacs is feasible or not? Justify your answer.
- b) Explain project fundamental in brief. Also state the five criteria for system Project Selection.
- c) What kind of information sought in Interviewing? Explain Joint Application Design in brief.

Contd..

2. **Solve any two questions** 10
- a) Define term data dictionary. Define metadata list and explain the four steps in compiling a data dictionary. (5)
 - b) What are the various types of approaches to prototyping? Explain. (5)
 - c) Differentiate between Logical and Physical Data Flow Diagram. (5)
3. **Solve any two questions** 12
- a) What are the various conventions used in Structured English? Give an example. (6)
 - b) Differentiate Decision Support System (DSS) for an analytic decision maker from DSS for a heuristic decision maker. (6)
 - c) Explain SEMI-STRUCTURED Decisions. What do you mean by dimensions of Semi-structured decisions. (6)
4. **Solve any two question** 14
- a) List and explain the ten main sections of the System Proposal. (7)
 - b) What are the criteria for evaluating System Hardware? List main categories for software grade. (7)
 - c) List and Explain factors in choosing an output technology. (7)

5.

Solve any two question

- a) List and explain the six basic ideas that characterize object-oriented programming?
- b) Explain the situation when object oriented analysis and design is good to use. Also explain Inheritance and Polymorphism.
- c) Explain object-oriented analysis five-layer model based on Codd-Yourdon.

Government College of Engineering, Amravati

(An Autonomous Institute of Government of Maharashtra)



V Semester B. Tech. (Computer Sci. & Engg.)

Summer - 2010

Course Code : CS501

Course Name : System Analysis & Design

Time : 2 hr.30min.

Max. Marks : 60

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
- 5) Figures to the right indicate full marks.

1. Solve any Two.

- (a) Explain Technical feasibility, Economic feasibility, Operational feasibility. 6
- (b) Explain PERT diagrams for system projects. How they are differ from Gantt Chart ? Explain with example. 6
- (c) Explain the different roles of System Analyst. 6

2. Solve any Two.

- (a) Explain the method of sample size selection when sampling data on Variables. 6
- (b) Calculate sample size n if $\alpha=0.02$, $z=2.58$, $p=0.05$ 6
also List steps required to calculate sample size
(n) if company asks you to determine What percentage of order contain mistakes if sampling data on attributes.
- (c) Define joint application design? Explain benefits of using JAD? 6

3 Solve any Three.

- (a) What are the attributes that makes STROBE a systematic approach to observe decision maker physical environment.? 4
- (b) Draw DFD for following events using Event response table. 4
i) Customer browsing Items for purchasing from departmental store website.
ii) Customer gets Items purchasing list from departmental store website.
- (c) Explain input and output data flow in creating data dictionary. 4
- (d) What are criterias for deciding whether a system should be prototyped. 4

4 Solve any Two.

- (a) Explain different dimensions of semistructured decisions. 6

- (b) Explain following multiple criteria decision making methods. 6
i) Analytic Hierarchy processing
ii) Using sequential elimination by Lexicography
- (c) List steps in building the decision tree for theater festival, fill requests for tickets and draw decision tree 6

5 Solve any Two.

- (a) Explain following Techniques for comparing the costs & benefits for system 6
i) Cash flow analysis.
ii) Present value analysis.
- (b) Explain the guidelines for screen design. 6
- (c) Explain a five layer model for object oriented analysis. 6

Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)



V Semester II. Tech. (Computer Sci. & Engg.)

Winter - 2009

Course Code : CS501

Course Name : System Analysis & Design

Time : 2 Hr.30 Min.

Max. Marks : 60

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Figures to the right indicate full marks.

I. Solve any two questions 12

- a) Define three types of feasibility and identify if (6) implementation of a distributed "Patient Information System" for a hospital within three months of time with two house programmers at the cost of rupees two lacs is feasible or not? Justify your answer.
- b) Explain project fundamental in brief. Also state (6) the five criteria for system Project Selection.
- c) What kind of information sought in Interviewing? (6) Explain Joint Application Design in brief.

Contd.

2. Solve any two questions 10
- a) Define term data dictionary. Define metadata list (5) and explain the four steps in compiling a data dictionary.
 - b) What are the various types of approaches to (5) prototyping? Explain.
 - c) Differentiate between Logical and Physical Data (5) Flow Diagram.
3. Solve any two questions 12
- a) What are the various conventions used in (6) Structured English? Give an example.
 - b) Differentiate Decision Support System (DSS) for (6) an analytic decision maker from DSS for a heuristic decision maker.
 - c) Explain SEMI-STRUCTURED Decisions. What (6) do you mean by dimensions of Semi-structured decisions.
4. Solve any two question 14
- a) List and explain the ten main sections of the (7) System Proposal.
 - b) What are the criteria for evaluating System (7) Hardware? List main categories for software grade.
 - c) List and Explain factors in choosing an output (7) technology.

5. Solve any two question 12

- a) List and explain the six basic ideas that (6) characterize object-oriented programming?
- b) Explain the situation when object oriented (6) analysis and design is good to use. Also explain Inheritance and Polymorphism.
- c) Explain object-oriented analysis five-layer model (6) based on Coad's Viewpoint.

**Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)**



V Semester II, Tech. (Computer Sci. & Engg.)

Summer - 2019

Course Code : CG501

Course Name : System Analysis & Design

Time : 2 hr.30min.

Max. Marks : 60

Instructions to Candidate

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary and clearly state the assumptions made.
- 3) Diagrams/sketches should be given wherever necessary.
- 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
- 5) Figures to the right indicate full marks.

1. Solve any Two.

- (a) Explain Technical feasibility, Economic feasibility, Operational feasibility. 6
- (b) Explain PERT diagrams for system projects. How they are differ from Gantt Chart ? Explain with example. 6
- (c) Explain the different roles of System Analyst. 6

Answer

1 Solve any Two.

- (a) Explain the method of sample size selection when sampling data on Variables. 6
- (b) Calculate sample size n if $\alpha=0.02$, $z=2.58$, $p=0.05$ also List steps required to calculate sample size
(ii) if company asks you to determine What percentage of order contain mistakes if sampling data on attributes. 6
- (c) Define joint application design? Explain benefits of using JAD? 6

2 Solve any Three.

- (a) What are the attributes that makes STROBE a systematic approach to observe decision maker physical environment.? 4
- (b) Draw DFD for following events using Event response table.
i) Customer browsing Items for purchasing from departmental store website.
ii) Customer gets Items purchasing list from departmental store website. 4
- (c) Explain input and output data flow in creating data dictionary. 4
- (d) What are criterias for deciding whether a system should be prototyped. 4

3 Solve any Two.

- (a) Explain different dimensions of semistructured decisions. 6

- (b) Explain following multiple criteria decision making methods. 6
i) Analytic Hierarchy processing
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- (c) List steps in building the decision tree for theater festival, fill requests for tickets and draw decision tree 6

5 Solve any Two.

- (a) Explain following Techniques for comparing the costs & benefits for system 6
i) Cash flow analysis.
ii) Present value analysis.
- (b) Explain the guidelines for screen design. 6
- (c) Explain a five layer model for object oriented analysis. 6

Government College of Engineering, Amravati
(An Autonomous Institute of Government of Maharashtra)

Fifth Semester B. Tech. (Information Technology)

Winter– 2015

Course Code: ITU501

Course Name: System Analysis and Design

Time: 2 Hrs. 30 Min.

Max. Marks: 60

Instructions to Candidate

- 1) All questions are compulsory.
 - 2) Assume suitable data wherever necessary and clearly state the assumptions made.
 - 3) Diagrams/sketches should be given wherever necessary.
 - 4) Use of logarithmic table, drawing instruments and non-programmable calculators is permitted.
 - 5) Figures to the right indicate full marks.

(b) What are the seven steps in developing data flow diagram? Differentiate between Logical and Physical Data flow diagrams in detail. **6M**

3 Solve any two

(a) What is Joint Application Design? Explain potential benefits and drawbacks of using JAD in the place of interviewing. **6M**

(b) Define Data Dictionary. Explain how data dictionaries relate to data flow diagrams. **6M**

(c) What are various conventions used in Structured English? Give an example. **6M**

4 Solve

(a) What three advantages do decision trees have over decision table? **6M**

(b) Explain guidelines for form design that should be observed for designing useful forms. **6M**

5 Solve any two

(a) Illustrate a store's policy of customer checkout with four set of rules and four possible actions using decision table. **6M**

(b) What are the objectives for design output? Explain in detail. **6M**

(c) What is Object Oriented System Analysis and design? Explain in detail. **6M**

