

# **PROCESS SPECIFICATION**

## **OBJECTIVE QUESTIONS**

**There are 4 alternative answers to each question. One of them is correct. Pick the correct answer. Do not guess. A key is given at the end of the module for you to verify your answer**

### **LEARNING UNIT 1**

#### **6.1.1 Structured English is used to describe**

- (a) how programs are to be written
- (b) processes in a DFD in a reasonably precise manner
- (c) how DFDs are used in data processing
- (d) data flows in DFD

#### **6.1.2 Structured English is a**

- (a) structured programming language
- (b) description of processes in simple English
- (c) method of describing computational procedures reasonably precisely in English
- (d) natural language based algorithmic language

#### **6.1.3 The objective of using structured English is to**

- (a) describe computational procedures reasonably precisely which can be understood by any user
- (b) expand a DFD so that a user can understand it
- (c) develop algorithms corresponding to processes in a DFD
- (d) ease writing programs for DFDs

#### **6.1.4 Structured English description of processes**

- (i) should be understandable to a user of a computer based system**
  - (ii) should be understandable to a programmer**
  - (iii) can be descriptive in nature**
  - (iv) should be translatable by a compiler**
- (a) i and iii
  - (b) ii and iv
  - (c) i, ii and iv
  - (d) i and ii

**6.1.5 A decision table is**

- (a) a truth table
- (b) a table which facilitates taking decisions
- (c) a table listing conditions and actions to be taken based on the testing of conditions
- (d) a table in a Decision Support System

**6.1.6 A decision table**

- (a) has a structured English equivalent representation
- (b) cannot be represented using structured English
- (c) does not have an equivalent algorithmic representation
- (d) cannot be used to represent processes in a DFD

**6.1.7 A decision table is preferable when the number of**

- (a) conditions to be checked in a procedure is small
- (b) conditions to be checked in a procedure is large
- (c) actions to be carried out are large
- (d) actions to be carried out are small

**6.1.8 Select from the following list which are appropriate to use in structured English description of a process**

- (i) process inventory records
  - (ii) find the sum of outstanding billed amounts
  - (iii) check if outstanding amount  $\geq$  Rs. 5000
  - (iv) check if stock is low
- (a) i and ii
  - (b) i and iii
  - (c) iii and iv
  - (d) ii and iii

**6.1.9 Structured English statements must be**

- (a) short and clear
- (b) specified quantitatively
- (c) specified qualitatively
- (d) detailed and descriptive

**6.1.10 Select statements from the following list which may be used in structured English**

- (i) if marks are too low fail student
  - (ii) if marks  $\geq 60$  enter first class
  - (iii) if average height select candidate
  - (iv) if weight  $< 40$  kg. reject candidate
- (a) i and ii
  - (b) ii and iii
  - (c) iii and iv
  - (d) ii and iv

**6.1.11 Select correct decision structures from the following**

- (i) **if** total marks  $\geq 75$   
    **then** enter distinction in student record  
    **end if**
- (ii) **if** total marks  $\geq 50$   
    **then** enter pass in student record  
    **else** enter fail in student record  
    **end if**
- (iii) **if** total marks  $\geq 60$   
    **then** enter first class in student record  
    **else if** total marks  $\geq 50$   
        **then** enter second class in student record  
    **else**  
        enter fail in student record  
    **end if**
- end if**
- (iv) **if** attendance  $< 30\%$   
    **then**  
        do not admit in examination  
    **else**

- (a) ii and iii                      (b) i and ii  
(c) iii and iv                      (d) i and iv

**6.1.12 The following structured English procedure is incorrect because**

```
if balance in account  $\leq 0$   
    then  
        { issue exception note to dept.  
          mark "stop future issues" in  
          departments record }  
    else  
        if balance in account  $<$  minimum balance  
            then  
                { issue item to dept.  
                  issue warning to dept. }  
        end if  
    end if
```

- (a) **end if** in second if is not needed  
(b) nesting of **ifs** is not correct  
(c) no action is specified when balance in account  $\geq$  minimum balance  
(d) the value of minimum balance is not specified

**6.1.13 The following structural English is incorrect because**

**case** (income slab)

Income slab =1 : tax= 10%

Income slab =2 or 3 : tax= 20%

Income slab =5 : tax= 30%

**end case**

- (a) no action is specified for income slab of 4
- (b) income slab has to be rupees
- (c) income slab =2 or 3 is wrong
- (d) number of cases is too small

**6.1.14 The following structured English procedure is incorrect because**

**case** (code)

Code=2 : **if** purchase amount  $\geq$ 5000

**then** discount=5%

Code=1 : discount=2%

Code=3 : **if** purchase amount  $\geq$ 4000

**then** discount =2%

**else if** code=4

**then** discount =5%

**end if**

None of the above codes : discount=0

**end case**

- (a) code=2 should appear after code=1
- (b) if statement cannot be used within a case
- (c) code=4 should not be used in the action for code=3
- (d) The statement is correct

**6.1.15 The following while structure is wrong because**

balance =500

**while** balance  $\leq$ 1000 do

**Write** (amount due – balance)

**Read** next record

**end while**

- (a) read must appear before write
  - (b) this loop will never terminate
  - (c) no read allowed in a loop
- the contents of next record is not known

## LEARNING UNIT 2

### **6.2.1 Structured English description of data processing is a**

- (a) non-procedural specification
- (b) procedural specification
- (c) purely descriptive specification
- (d) very imprecise specification

### **6.2.2 Decision table description of data processing is**

- (a) non-procedural specification
- (b) procedural specification
- (c) purely descriptive specification
- (d) very imprecise specification

### **6.2.3 In the following word statement the conditions are:**

**“if a student gets 50 marks or more in mathematics and 40 marks or more in English he passes the examination, otherwise he fails”**

- (a) student passes the examination
- (b) student fails the examination
- (c) student gets 50 marks or more in mathematics
- (d) student mathematics marks  $\geq 50$  and student English marks  $\geq 40$

### **6.2.4 In the following word statement the actions are**

**“if a student gets 50 marks or more in mathematics and 40 marks or more in English he passes the examination, otherwise he fails”**

- (i) student passes the examination
  - (ii) student fails the examination
  - (iii) student gets 50 marks or more in mathematics
  - (iv) student mathematics marks  $\geq 50$  and student English marks  $\geq 40$
- (a) i and ii
  - (b) i and iii
  - (c) ii and iii
  - (d) iii and iv

### **6.2.5 In a limited entry decision table the condition stub**

- (a) lists X or – corresponding to actions to be executed
- (b) lists the conditions to be tested
- (c) has Y or N or – entries
- (d) lists the actions to be taken

### **6.2.6 In a limited entry decision table the condition entries**

- (a) list X or – corresponding to actions to be executed
- (b) list the conditions to be tested
- (c) have Y or N or – entries
- (d) list the actions to be taken

**6.2.7 In a limited entry decision table the action stub**

- (a) lists X or – corresponding to actions to be executed
- (b) lists the conditions to be tested
- (c) has Y or N or – entries
- (d) lists the actions to be taken

**6.2.8 In a limited entry decision table the action entries**

- (a) list X or – corresponding to actions to be executed
- (b) list the conditions to be tested
- (c) have Y or N or – entries
- (d) list the actions to be taken

**6.2.9 In a limited entry decision table the condition entries may be**

- (a) Y or N only
- (b) Y, N or –
- (c) A binary digit
- (d) Any integer

**6.2.10 In a limited entry decision table a—entry against a condition signifies that**

- (a) the outcome of testing the condition is irrelevant
- (b) it is an important condition
- (c) the condition should be tested
- (d) the condition is a Boolean condition

**6.2.11 A rule in a limited entry decision table is a**

- (a) row of the table consisting of condition entries
- (b) row of the table consisting of action entries
- (c) column of the table consisting of condition entries and the corresponding action entries
- (d) columns of the tables consisting of conditions of the stub

**6.2.12 The conditions in the condition stub of a limited entry decision table**

- (a) must be in sequential order
- (b) must be in the order in which they are to be tested
- (c) may be in any order
- (d) must be in the order in which they are to be executed

**6.2.13 The actions in the action stub of a limited entry decision table**

- (a) must be in sequential order
- (b) must be in the order in which they are to be tested
- (c) may be in any order
- (d) must be in the order in which they are to be executed

**6.2.14 A X against an action in an action row signifies that the**

- (a) action is not to be taken
- (b) action is to be taken
- (c) action is important
- (d) action is not important

**6.2.15 A—against an action in an action row signifies that the**

- (a) action is not to be taken
- (b) action is to be taken
- (c) action is important
- (d) action is not important

**6.2.16 An extended entry decision table has**

- (a) only Y, N or – entries
- (b) entries which extend the condition
- (c) questions asked extended into the condition entry part of the table
- (d) only numerical entries

**6.2.17 An extended entry decision table**

- (a) has no limited entry equivalent
- (b) cannot be replaced by a table with only Y, or – entries
- (c) may have Yes, No answers to conditions
- (d) can always be converted to an equivalent limited entry decision table

**6.2.18 An extended entry decision table is**

- (a) very difficult to understand
- (b) quite concise compared to a limited entry decision table developed for the same task
- (c) large compared to a limited entry table developed for the same task
- (d) is not very often used

**6.2.19 A mixed entry decision table**

- (a) may have some conditions with Y, N, or – entries
- (b) may not have any Y, N, or – entry
- (c) may have only non-numerical entries
- (d) may mix numerical and non-numerical entries

**Given a decision table “test” shown below**

	R1	R2	R3
C1	Y	N	Y
C2	N	–	Y
A1	X	–	
A2	–	X	–
A3	X	–	X

Decision table—“test”

**Answer the following questions:**

**6.2.20 Rule R1 is interpreted as follows:**

- (a) If C1 is TRUE and C2 is FALSE then perform action A2
- (b) If C1 is TRUE and C2 is FALSE then perform action A1 and then action A2
- (c) If C1 is TRUE and C2 is FALSE then perform action A3 and then action A1
- (d) If C1 is TRUE and C2 is FALSE then perform action A1 and then action A3

**6.2.21 Rule R3 is interpreted as follows:**

- (a) If C1 is TRUE and C2 is TRUE then perform action A1 and A2
- (b) If C1 is TRUE or C2 is TRUE then perform action A3
- (c) If C1 is TRUE and C2 is TRUE then perform action A1 or A2
- (d) If C1 is TRUE and C2 is TRUE then perform action A3

**6.2.22 Structured English equivalent of the decision table “test” are given below**

- (i) **if** C1 TRUE  
    **then if** C2 TRUE  
        **then** do A3  
        **else** do A1 and A3  
    **end if**  
    **else** do A2  
    **end if**
- (ii) **if** C1 FALSE  
    **then** do A2  
    **else if** C2 TRUE  
        **then** do A3  
        **else** do A1 and A3  
    **end if**  
    **end if**
- (iii) **if** C2 TRUE  
    **then if** C1 TRUE  
        **then** do A3  
        **else** do A2  
    **end if**  
    **else** do A1 and A3  
    **end if**
- (iv) **if** C2 FALSE  
    **then if** C1 TRUE  
        **then** do A1 and A3  
        **else** do A2  
    **end if**  
    **else** do A3  
    **end if**



Which of the following are correct?

- (a) i and iii  
(b) i and ii  
(c) iii and iv  
(d) ii and iv

**6.2.23 Structured English equivalents of decision table “test” are given below. Pick the right ones**

- (i) **if C1 TRUE and C2 FALSE then R=1 end if**  
**if C1 FALSE then R=2 end if**  
**if C1 TRUE and C2 TRUE then R=3 end if**  
**case (R)**  
 R=1; perform actions A1 and A3  
 R=2; perform action A2  
 R=3; perform action A3  
**end case**
- (ii) **if C1 TRUE and C2 FALSE then perform actions A1, A3 end if**  
**if C1 FALSE then perform action A2 end if**  
**if C1 TRUE and C2 TRUE then perform action A3 end if**
- (iii) **case (C1 TRUE and C2 FALSE) Rule R1**  
**case (C1 FALSE) Rule R2**  
**case (C1 TRUE and C2 TRUE) Rule R3**  
**end case**
- (iv) **if C1 TRUE and C2 TRUE then do Rule R3 end if**  
**if C1 TRUE and C2 FALSE then do Rule R1 end if**  
**if C1 TRUE then do Rule R2 end if**
- (a) i and ii  
(b) i and iii  
(c) ii and iii  
(d) iii and iv

**6.2.24 The Elementary Rule Decision Table equivalent of decision table “test” is**

C1	Y	N	Y
C2	N	N	Y
A1	X	-	-
A2	-	X	-
A3	X	-	X

C1	Y	N	Y
C2	N	Y	Y
A1	X	-	-
A2	-	X	-
A3	X	-	X

(c)	C1	Y	N	N	Y
	C2	N	N	Y	Y
<hr/>					
	A1	X	-	-	-
	A2	-	X	X	-
	A3	X	-	-	X

(d)	C1	Y	N	N	Y
	C2	N	N	Y	Y
<hr/>					
	A1	X	-	-	-
	A2	-	X	-	-
	A3	X	-	X	X

### LEARNING UNIT 3

#### 6.3.1 The decision table “test” is

- (a) ambiguous
- (b) contradictory
- (c) incomplete
- (d) complete

Answer the following referring to the decision table “test2”

	R1	R2
C1 : $x \leq 50$	N	-
C2 : $x \geq 70$	-	N
<hr/>		
A1	X	-
A2	-	X

**Decision Table: “test2”**

#### 6.3.2 Decision table “test2” is

- (a) really incomplete
- (b) complete
- (c) apparently incomplete
- (d) apparently complete

#### 6.3.3 Decision table “test2”

- (a) has a real ambiguity
- (b) has an apparent ambiguity
- (c) is logically correct
- (d) is incomplete

C1	N	-
C2	-	N
A1	Y	-
A2	-	Y

**DECISION TABLE “testing”**

**6.3.4 Decision table “testing” can be made complete**

- (i) by putting an ELSE rule
  - (ii) is as it is complete and does not need any more rules
  - (iii) by specifying actions when C1 = Y and C2 = Y
  - (iv) by specifying actions when C1 = N and C2 = N
- (a) (i), (ii)
  - (b) (i), (iii)
  - (c) (ii), (iii)
  - (d) (ii), (iv)

**6.3.5 The K-map equivalent of decision table “test2” is**

a)

		C1	
		Y	N
C2	Y		A1
	N	A2	A1

b)

		C1	
		Y	N
C2	Y	A1	A2
	N	A2	A1

c)

		C1	
		Y	N
C2	Y		A1
	N	A2	A1,A2

d)

		C1	
		Y	N
C2	Y		A1
	N	A2	A2

**6.3.6 The decision table equivalent of the following structured English statement is**

```

if      C2  TRUE
then   if   C1  TRUE
          then do  A3
          else do  A2
          end if
        else do  A1 and A3
end if

```

(a)

C1	C2	Y	Y	N
		Y	N	-
A1		-	-	X
A2		-	X	-
A3		X	-	X

(b)

C2	C1	Y	Y	N
		Y	N	N
A1		-	-	X
A2		-	X	-
A3		X	-	X

(c)

C1	C2	Y	N	-
		Y	Y	N
A1		-	-	X
A2		-	X	-
A3		X	-	X

(d)

C1	C2	Y	N	Y
		Y	Y	N
A1		-	-	X
A2		-	X	-
A3		X	-	X

**6.3.7 The decision table equivalent of the following structured English statement is**

```

if    balance in account <=0
    then {issue exception note to dept. and mark “stop future issues”}
    else if    balance in account <min. balance
        then    {issue item to dept.
                    issue warning to dept.}
        else    {issue item to dept.}
    end if
end if
  
```

C1=balance in account <=0;

C2=balance in account < min. balance

A1=issue exception note and mark “no future issues”

A2=issue item to dept

A3=issue warning to dept.

(a)

C1	Y	N	N
C2	-	Y	N
A1	X	-	-
A2	-	X	X
A3	-	X	-

(b)

C1	Y	N	N	Y
C2	N	Y	N	Y
A1	X	-	-	-
A2	-	X	X	X
A3	-	X	-	-

(c)

C1	N	N	N
C2	-	Y	N
A1	X	-	-
A2	-	X	X
A3	-	X	-

(d)

C1	Y	N	Y
C2	N	Y	N
A1	X	-	-
A2	-	X	X
A3	-	X	-

6.3.8 The decision table given in answer (a) of question 9.4.3 is

- (a) incomplete
- (b) apparently ambiguous
- (c) has contradictory specifications
- (d) logically complete

6.3.9 The rule  $C1=Y, C2=Y$  in the decision table given in answer (a) of question 6.3.7 is

- (a) logically impossible
- (b) logically possible
- (c) has no action specified
- (d) has multiple actions specified

6.3.10 If  $\text{min. balance} > 0$  then the rule  $C1=Y, C2=-$  in the decision table given in answer (a) of question 6.3.7 may be replaced by the rule

- (a)  $C1=Y, C2=N$
- (b)  $C1=Y, C2=Y$
- (c)  $C1=-, C2=Y$
- (d)  $C1=-, C2=N$

### LEARNING UNIT 4

6.4.1 The actions of a decision table are mapped on a K-map shown below:

The boxes marked X denote impossible rules

		C1C2			
		NN	NY	YY	YN
C3	Y	A1	A1	A2	X
	N	A1	A2	A2	X

The rule for action A1 may be represented by the following minimal Boolean expression

- (a)  $\overline{C1}.\overline{C2} + \overline{C1}.C2.C3$
- (b)  $\overline{C1}.\overline{C2}.\overline{C3} + \overline{C1}.C3$
- (c)  $\overline{C1}.C3 + \overline{C2}$
- (d)  $\overline{C1}.C3 + \overline{C2}.\overline{C1}$

6.4.2 The following decision table may be replaced by its best equivalent shown below:

C1	N	N	N	N	Y	Y	Y	Y
C2	N	N	Y	Y	Y	Y	N	N
C3	Y	N	N	Y	Y	N	N	Y
A1	X	-	-	X	-	-	X	X
A2	-	X	X	-	X	X	X	X

(a)

C1	N	N	Y	Y
C2	-	-	Y	N
C3	Y	N	-	-
A1	X	-	-	X
A2	-	X	X	X

(b)

C1	-	Y	N	Y
C2	-	-	-	N
C3	N	-	Y	-
A1	-	-	X	X
A2	X	X	-	X

(c)

C1	N	-	Y	N	Y
C2	-	Y	Y	-	N
C3	N	N	-	Y	-
A1	-	-	-	X	X
A2	X	X	X	-	X

(d)

C1	Y	N	N	Y
C2	-	-	-	N
C3	-	N	Y	-
A1	-	-	X	X
A2	X	X	-	X

6.4.3 The following decision table may be replaced by its best equivalent shown below:

C1	N	Y	Y	N	N	Y	N	Y	N	N	Y	Y	N	Y	N	Y
C2	N	N	N	N	Y	Y	Y	Y	N	N	N	N	Y	Y	Y	Y
C3	N	N	Y	Y	N	N	Y	Y	N	Y	N	Y	N	N	Y	Y
C4	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N

A1	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-
A2	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-
A3	-	-	-	-	-	-	-	-	X	X	X	X	-	-	-	-
A4	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	X

(a)

C1	Y	N	N	N	N	Y	-	-
C2	N	N	-	-	N	N	Y	Y
C3	-	-	N	Y	-	-	N	Y
C4	N	N	Y	Y	Y	Y	N	N

A1	X	X	-	-	-	-	-	-
A2	-	-	X	X	-	-	-	-
A3	-	-	-	-	X	X	-	-
A4	-	-	-	-	-	-	X	X

(b)

C2	N	Y	N	Y
C4	N	Y	Y	N

A1	X	-	-	-
A2	-	X	-	-
A3	-	-	X	-
A4	-	-	-	X

(c)

C1	-	N	Y	-	-
C2	-	N	N	Y	-
C3	N	-	-	-	Y
C4	N	Y	Y	Y	N

A1	X	-	-	-	X
A2	-	-	-	X	-
A3	-	X	X	-	-
A4	X	-	-	-	X



(d)	C2	-	N	Y	-
	C3	-	-	-	Y
	C4	N	Y	Y	N
<hr/>					
	A1	X	-	-	X
	A2	-	-	X	-
	A3	-	X	-	-
	A4	X	-	-	X

Given the decision table “test 3” answer the following questions:

		R1	R2	R3	R4	R5	R6	R7	R8
	$x \geq 20$	Y	Y	Y	Y	N	N	N	N
	$x <= 30$	Y	Y	N	N	Y	Y	N	N
	$y \geq x$	Y	N	Y	N	Y	N	Y	N
<hr/>									
	A1	X	X	X	X	-	-	-	-
	A2	-	-	-	-	X	X	-	-
	A3	-	-	-	-	-	-	X	X

- 6.4.4 (a) Rules R7, R8 are logically impossible  
 (b) Rules R5, R6 are logically impossible  
 (c) Rules R3, R4 are logically impossible  
 (d) Rules R1, R2 are logically impossible

6.4.5 Pick the correct equivalent of “test 3”

(a)

C1	Y	N
A1	X	-
A2	-	X

(b)

C1	Y	N	N
C2	-	Y	N
A1	X	-	-
A2	-	X	-
A3	-	-	X

(c)

C1	Y	Y	N	N
C3	N	Y	N	Y
C2	-	-	-	-
A1	X	X	-	-
A2	-	-	X	X

(d)

C1	Y	N	N
C2	-	Y	N
A1	X	-	-
A2	-	X	-
A3	-	-	X

**6.4.6 The decision table “test 3“ is**

- (a) incomplete
- (b) ambiguous
- (c) incorrect
- (d) has redundancies

**6.4.7 The decision table equivalent of the following Boolean expression is**

$$A1 = \bar{C}3.C1.C2 + \bar{C}2.C3.C1$$

$$A2 = C1.C3 + C3.\bar{C}2.\bar{C}1 + \bar{C}1.\bar{C}2.C\bar{3}$$

(a)

C1	Y	Y	Y	N	N
C2	Y	N	-	N	N
C3	N	Y	Y	Y	N
A1	X	X	-	-	-
A2	-	-	X	X	X

(b)

C1	Y	Y	Y	N	N
C2	Y	N	N	N	N
C3	Y	Y	-	Y	N
A1	X	X	-	-	-
A2	-	-	X	X	X

(c)

C2	Y	Y	Y	N	N
C1	Y	N	-	N	N
C3	N	Y	Y	Y	N
A1	X	X	-	-	-
A2	-	-	X	X	X

(d)

C1	Y	Y	Y	N	N
C2	Y	N	-	N	N
C3	N	Y	Y	Y	N
A1	X	X	-	-	-
A2	X	X	X	X	X

**6.4.8 A decision table “test 4” is given below**

C1	Y	Y	N	-	-	N	Y	N
C2	Y	-	N	Y	-	N	N	-
C3	Y	Y	Y	-	Y	N	N	N
C4	-	Y	-	Y	N	-	-	N
A1	X	X	X	-	-	-	-	-
A2	-	-	-	X	X	-	-	-
A3	-	-	-	-	-	X	X	-
?	-	-	-	-	-	-	-	I

where I indicates impossible rule

The contradictory rules are

- (a) YYYYY, NYYY, NNYY
- (b) YYYN, NYYN, NNYN
- (c) YYYYY, YYYN, NNYN
- (d) There are no contradictory rules

**6.4.9 In “test 4” the contradictory actions are:**

- (a) A1, A3
- (b) A1, A2
- (c) A2, A3
- (d) A2, I

**6.4.10 In “test 4” missing rule is:**

- (a) NYNN
- (b) NYYN
- (c) YYNN
- (d) YNYN

**6.4.11 If in “test 4” the rules where the contradictory actions or unspecified actions are present, the action is replaced by A2 only, the reduced decision table using impossible rules also for reduction is:**

(a)

C1	-	-	-	-	-	N
C2	N	-	Y	Y	-	N
C3	Y	Y	-	Y	N	N
C4	Y	N	Y	-	N	-
A1	X	-	-	-	-	-
A2	-	X	X	X	-	-
A3	-	-	-	-	X	X

(b)

C1	N	Y	-	-	-	N	N
C2	N	N	Y	Y	-	-	N
C3	Y	Y	N	Y	Y	N	N
C4	Y	Y	Y	-	N	N	-
<hr/>							
A1	X	X	-	-	-	-	-
A2	-	-	X	X	X	-	-
A3	-	-	-	-	-	X	X

(c)

C1	-	-	-	-	N
C2	N	-	Y	-	N
C3	Y	Y	-	N	N
C4	Y	N	Y	N	-
<hr/>					
A1	X	-	-	-	-
A2	-	X	X	-	-
A3	-	-	-	X	X

(d)

C2	N	Y	-	N
C3	Y	-	Y	N
C4	Y	-	N	-
<hr/>				
A1	X	-	-	-
A2	-	X	X	-
A3	-	-	-	X

### 6.5.1 Decision Trees are preferred when

- Too many conditions need to be tested
- Sequencing of testing conditions is important
- When there are many loops to be performed
- When too many actions are to be taken

### 6.5.2 Decision Tables are preferred when

- Too many conditions need to be tested
- Sequencing of testing conditions is important
- When there are many loops to be performed
- When too many actions are to be taken

**6.5.3 Structured English is preferred when**

- a) Too many conditions need to be tested
- b) Sequencing of testing conditions is important
- c) When there are many loops to be performed
- d) When too many actions are to be taken

**6.5.4 The objective of using decision trees is to**

- a) Expand a DFD so that a user can understand it
- b) To specify sequence of conditions to be tested and actions to be taken
- c) Describe a computational procedure that can be easily understood by a person
- c) Use it as a tool in decision support system

**6.5.5 Decision trees are superior to decision tables when**

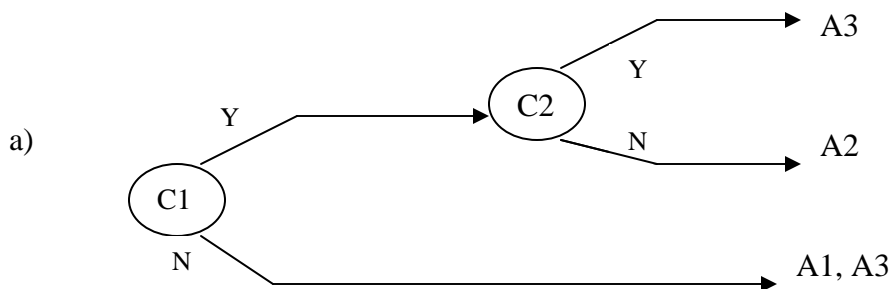
- a) The number of conditions to be tested is very large
- b) When sequence of testing conditions is not particularly important
- c) When sequence of testing conditions is not particularly important
- c) When a large number of actions are to be specified

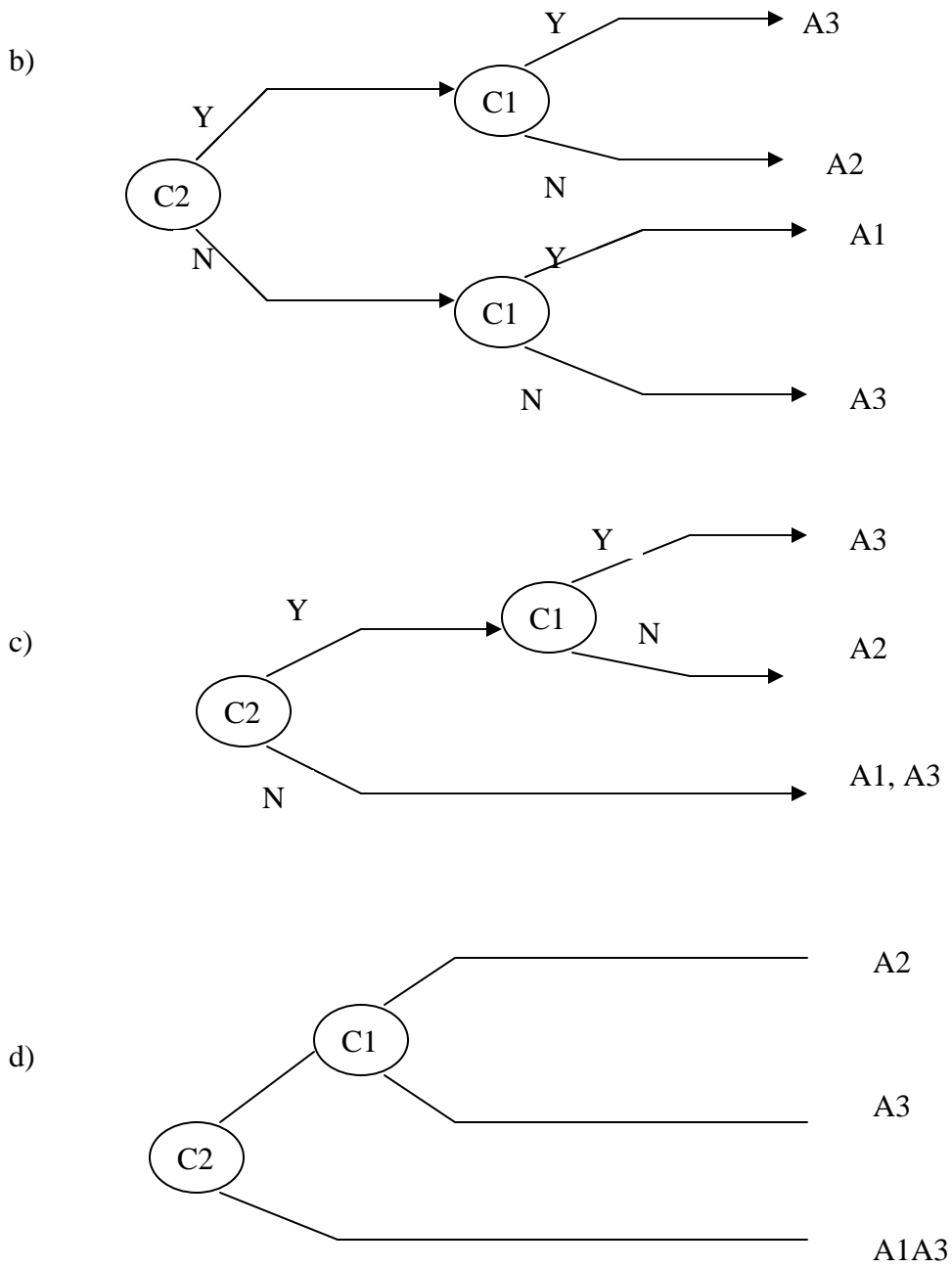
**6.5.6 Logical correctness of a specifications can be systematically checked by**

- a) Using decision trees
- b) Using structured English
- c) Using DFD's
- d) Using decision tables

**6.5.7 The decision tree equivalent of the following structured English is**

```
if C2 then
    if C1
        then A3
        else A2
    endif
else A1,A3
endif
```





**6.5.8 Decision tables are better than Decision trees when**

- a) Conditions are to be isolated from actions in a word statement
- b) Condition sequences are to be found from a word statement
- c) Logical correctness of a word statement is to be established
- d) Large number of actions is to be performed

**6.5.9 The decision table equivalent of the Decision tree of choice (a) of 6.5.7 is**

a)

C2	Y	N	N	Y
C1	N	Y	N	Y
A1	X	-	X	-
A2	-	X	X	-
A3	X	-	-	X

b)

C1	Y	Y	N
C2	Y	N	-
A1	-	-	X
A2	-	X	-
A3	X	-	X

c)

C1	Y	Y	N
C2	Y	N	Y
A1	-	-	X
A2	-	X	-
A3	X	-	X

d)

C1	Y	Y	N	Else
C2	Y	N	Y	
A1	-	-	X	Error
A2	-	X	-	
A3	X	-	X	

## KEY TO OBJECTIVE QUESTIONS

6.1.1	b	6.1.2	c	6.1.3	a	6.1.4	d	6.1.5	c	6.1.6	a
6.1.7	b	6.1.8	d	6.1.9	b	6.1.10	d	6.1.11	a	6.1.12	c
6.1.13	a	6.1.14	c	6.1.15	b	6.2.1	b	6.2.2	a	6.2.3	d
6.2.4	a	6.2.5	b	6.2.6	c	6.2.7	d	6.2.8	a	6.2.9	b
6.2.10	a	6.2.11	c	6.2.12	c	6.2.13	d	6.2.14	b	6.2.15	a
6.2.16	c	6.2.17	d	6.2.18	b	6.2.19	a	6.2.20	d	6.2.21	d
6.2.22	b	6.2.23	a	6.2.24	c	6.3.1	d	6.3.2	c	6.3.3	a
6.3.4	b	6.3.5	c	6.3.6	c	6.3.7	a	6.3.8	d	6.3.9	b
6.3.10	b	6.4.1	c	6.4.2	a	6.4.3	b	6.4.4	a	6.4.5	a
6.4.6	d	6.4.7	a	6.4.8	c	6.4.9	b	6.4.10	c	6.4.11	d
6.5.1	b	6.5.2	a	6.5.3	c	6.5.4	b	6.5.5	c	6.5.6	d
6.5.7	c	6.5.8	c	6.5.9	b						