

MODULE 12

**CONTROL, AUDIT AND SECURITY OF  
INFORMATION SYSTEM**

**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**

**12.1.1 Control in design of an information system is used to**

- (a) inspect the system and check that it is built as per specifications
- (b) protect data from accidental or intentional loss
- (c) ensure that the system processes data as it was designed to and that the results are reliable
- (d) ensure privacy of data processed by it

**12.1.2 Controls are necessary in information systems as**

- (i) massive amounts of data are processed and human errors are expected in data entry**
  - (ii) accidental errors can lead to loss of money and credibility in a system**
  - (iii) to protect the system from virus attack**
  - (iv) data may be lost due to disk crashes**
- (a) i and ii
  - (b) i and iii
  - (c) i and iv
  - (d) ii and iii

**12.1.3 The major objectives of control are**

- (i) guard against frauds in data entry/processing**
  - (ii) check clerical handling of data before it enters a computer**
  - (iii) to provide a method to trace the steps and find where error has occurred**
  - (iv) automatically correct errors in data entry/processing**
- (a) i, ii and iv
  - (b) i, ii, iii and iv
  - (c) i, ii and iii
  - (d) i and iii

**12.1.4 Organizational measures in control mean**

- (a) a set of well organized methods
- (b) assignment of appropriate responsibilities to individuals in data processing in an organization
- (c) proper organization of data
- (d) creation of an organization for controlling system

**12.1.5 Proof figures are used to check**

- (i) arithmetic errors in processing**
  - (ii) data entry errors in processing**
  - (iii) loop errors in program**
  - (iv) proof of program correctness**
- (a) i and ii
  - (b) i and iii
  - (c) ii and iv
  - (d) iii and iv

**12.1.6 A proof figure is**

- (a) a figure used to prove the correctness of data entry
- (b) an additional data entered with each record to facilitate detection of arithmetic error
- (c) a number used during data entry
- (d) a modulus-11 check digit

**12.1.7 A two way check**

- (a) calculates the same quantity in two different ways and compares them for equality
- (b) calculates the quantities and compares them for equality
- (c) checks a data item in two different ways
- (d) enters data two times and cross-checks them

**12.1.8 A two-way check is used to**

- (i) check program correctness**
  - (ii) find data entry errors**
  - (iii) find multiplication errors**
  - (iv) find arithmetic error in processing**
- (a) i and ii
  - (b) ii and iii
  - (c) ii and iv
  - (d) i and iv

### **12.1.9 A relationship check**

- (a) is concerned with checking a relation
- (b) uses an entity-relationship model for checking
- (c) finds out if a relationship is satisfied in computation
- (d) uses the fact that a known relationship exists between two data elements and checks if it is satisfied during computation

### **12.1.10 A check-point procedure**

- (a) checks program correctness at certain points
- (b) divides a program into smaller parts
- (c) breaks a programs into portions at the end of each of which a check point program is executed
- (d) finds points in a program where it is convenient to check it

### **12.1.11 At each check-point**

- (i) quantities such as control totals and proof figures are checked for correctness**
  - (ii) process state is stored in secondary storage**
  - (iii) a program halts for check by programmers**
  - (iv) a self-checking system is invoked by the analyst**
- (a) i and iv                      (b) ii and iii  
(c) i and ii                      (d) i and iii

## **LEARNING UNIT 2**

### **12.2.1 Audit in the design of information system is used to**

- (a) inspect the system and check that it is built as per specifications
- (b) protect data from accidental or intentional loss
- (c) ensure that the system processes data as it was designed to and that the results are reliable
- (d) ensure privacy of data processed by it

### **12.2.2 Auditing of information systems is primarily required to ensure that**

- (i) all input records are correct and are included in processing**
  - (ii) the system has ample protection against frauds**
  - (iii) the processing performance is reliable**
  - (iv) the system is developed at low cost**
- (a) i and ii                      (b) iii and iv  
(c) ii and iii                      (d) i, ii and iii

**12.2.3 By auditing around the computer we mean**

- (a) the inputs and the corresponding outputs are compared and checked for correctness
- (b) the programs and procedures are checked for correctness
- (c) special synthetic data is input and outputs checked for correctness
- (d) programs are written to check the functioning of the computer hardware

**12.2.4 By auditing with a computer we mean**

- (a) the inputs and the corresponding outputs are compared and checked for correctness
- (b) the programs and procedures are checked for correctness
- (c) special synthetic data is input and outputs checked for correctness
- (d) programs are written to check the functioning of the computer hardware

**12.2.5 By auditing through the computer we mean**

- (a) the inputs and the corresponding outputs are compared and checked for correctness
- (b) the programs and procedures are checked for correctness
- (c) special synthetic data is input and outputs checked for correctness
- (d) programs are written to check the functioning of the computer hardware

**12.2.6 An audit trail is established in a system to**

- (a) detect errors in a system
- (b) enable auditing of a system
- (c) localize the source of an error in a system
- (d) trail a program

**12.2.7 Some audit and control procedures in a system**

- (i) detect and correct errors in programs**
  - (ii) selectively print records in a system which meet certain criteria**
  - (iii) examine credit and debit balances in an accounting system and check if they balance**
  - (iv) provide a facility to trace a variable value through processing steps and print intermediate values when required**
- (a) i and ii                                      (b) ii and iii  
(c) i, ii, iii                                      (d) ii, iii, iv

**12.2.8 It is advisable for an auditor to require an operational information system to**

- (i) keep logs of all system runs and people involved**
  - (ii) ensure that the programs and system operation are well documented**
  - (iii) ensure that no changes are allowed**
  - (iv) ensure that the inputs and batch controls are properly designed**
- (a) i, ii, iii                                      (b) ii, iii, iv  
(c) i, ii, iv                                      (d) i, ii

### **12.2.9 In auditing with a computer**

- (a) auditing programs are designed and used to check a system
- (b) the hardware of the computer is thoroughly checked for malfunctions
- (c) system software is thoroughly checked to ensure error free operations
- (d) auditors check system with a computer

### **12.2.10 Some of the features of audit package used to check systems are:**

- (i) facility to total specified items based on some criteria**
- (ii) extracting items based on some criteria for checking**
- (iii) check-pointing and restart facility**
- (iv) hardware faults recovery**

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

## **LEARNING UNIT 3**

### **12.3.1 By information system testing we mean**

- (a) testing an information system correctly
- (b) determining whether a system is performing as per specifications
- (c) determining whether a system is performing optimally
- (d) ensuring proper function of a system

### **12.3.2 The main objectives of testing are**

- (i) when correct inputs are fed to the system the outputs are correct**
- (ii) when incorrect inputs are fed to the system they are detected and rejected**
- (iii) the requirement specifications are correct**
- (iv) verify that the controls incorporated in the system function correctly**

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

### **12.3.3 The scope of the system test includes**

- (a) both computerized and manual procedures
- (b) only test of computer procedures
- (c) computerized procedures, manual procedures, computer operations and controls
- (d) mainly computerized procedures and operations controls

**12.3.4 Program tests use test data to**

- (i) **exercise all paths taken by a program**
  - (ii) **test loop counters**
  - (iii) **test with values which change state of logical variables**
  - (iv) **comprehensively exercise program**
- (a) i, ii
  - (b) i, ii, iii
  - (c) i, ii, iii, iv
  - (d) i, ii, iv

**12.3.5 By string test we mean**

- (a) a test which tests operations with strings
- (b) a string of tests on programs
- (c) Test on related programs
- (d) The output of a program is sent as input to related program(s) to see if data is transferred correctly

**12.3.6 Parallel runs are used**

- (a) during regular operation of an information system
- (b) when a system is initially implemented
- (c) whenever errors are found in a computerized system
- (d) whenever management insists

**12.3.7 The purpose of parallel run is to**

- (a) to see whether outputs of a newly computerized system matches those of currently running manual or legacy system
- (b) have redundancy for reliability
- (c) test an operational information system
- (d) test a system being newly designed

## **LEARNING UNIT 4**

**12.4.1 Security in the design of information system is used to**

- (a) inspect the system and check that it is built as per the specifications
- (b) protect data and programs from accidental or intentional loss
- (c) ensure that the system processes data as it was designed to and that the results are reliable
- (d) ensure privacy of data processed by it



**12.4.7 A firewall is used in a system connected to a wide area network to**

- (a) prevent spread of fire in the network
- (b) prevent unauthorized access by hackers
- (c) to scan for viruses in files
- (d) to extinguish fire spreading via network cables

**KEY TO OBJECTIVE QUESTIONS**

12.1.1 c	12.1.2 a	12.1.3 c	12.1.4 c	12.1.5 a	12.1.6 b
12.1.7 a	12.1.8 c	12.1.9 d	12.1.10 c	12.1.11 c	12.2.1 a
12.2.2 d	12.2.3 a	12.2.4 c	12.2.5 b	12.2.6 c	12.2.7 d
12.2.8 c	12.2.9 a	12.2.10 b	12.3.1 b	12.3.2 d	12.3.3 c
12.3.4 b	12.3.5 d	12.3.6 b	12.3.7 a	12.4.1 b	12.4.2 c
12.4.3 d	12.4.4 a	12.4.5 c	12.4.6 b	12.4.7 b	