# CHAPTER 28

# Network Management: SNMP

## Solutions to Odd-Numbered Review Questions and Exercises

### Review Questions

1. *Network management* is defined as monitoring, testing, configuring, and trouble-shooting network components to meet a set of requirements defined by an organization.

3. The *configuration management* system updates information about the status of each entity and its relation to other entities.

5. *Fault management* supervises the operation of the network, which depends on the proper operation of each individual component and its relation to other components.

7. *Performance management* monitors and controls the network to ensure that it is running as efficiently as possible.

9. *Security management* is responsible for controlling access to the network based on the predefined policy.

### Exercises

11.

   INTEGER tag: **02**

   length: **04**

   value: **00 00 05 B0**

   **-------------------------**

   Answer: **02 04 00 00 05 B0**

13.

   OCTET STRING tag: **04**

   length of the length field (2 bytes) (10000010) = **82**

   length (1000 bytes) = **03 E8**

   value (1000 character)

   ------------------------------------------------------------------

   Answer: **04 82 03 E8** (**Plus 1000 bytes of characters**)

15.

```
30 15                                    sequence, length
   43 04 00 00 2E E0                     TIME TICK, length, value (1200)
   02 04 00 00 38 E4                     INTEGER, length, value (14564)
   06 07 01 03 06 01 02 01 07            Object ID, length, value (1.3.6.2.1.7)
```

17.

```
30 43                                    sequence, length
   30 41                                 sequence, length
      02 04 00 00 09 29                  INTEGER, length, value (2345)
      04 08 43 4F 4D 50 55 54 45 52      OCTET STRING, length, value (COMPUTER)
      41 04 00 00 01 59                  counter, length, value (345)
      30 29                              sequence, length
         02 04 00 00 04 63               INTEGER, length, value (1123)
         04 04 44 49 53 4B               OCTET STRING, length, value (DISK)
         41 04 00 00 05 96               counter, length, value (1430)
         30 15                           sequence, length
            02 04 00 00 0D 80            INTEGER, length, value (3456)
            04 07 4D 4F 4E 49 54 4F 52   OCTET STRING, length, value (MONITOR)
            41 04 00 00 09 09            counter, length, value (2313)
```