



**Computer Fundamentals – Summer**  
**Final term Examination**

**Time Allowed: 2hrs**

**Max Marks: 60**

**DIRECTIONS:**

1. *Solve on the question paper. No additional papers are required.*
2. *Sharing of calculators, rulers, writing material not allowed.*

1) What is a **Bit** in terms of computing? (2)

2) In how many bits, we can represent the decimal number **19**? (2)

3) What is the decimal equivalent of **10001000B**? (3)



4) Convert  $(100)_7$  to Decimal. (4)

5) Convert  $(444)_5$  to Binary. (6)



6) What type of User Interface is provided by older version of Linux, Unix and DOS? (1)

7) An interface designer first wrote codes and then made visual interface for calling those codes and functions. What type of UI did they make? Why they hide codes from a layman? (2)

8) What is a router? How is it different from a Hub? (4)



9) Are Microsoft Word, Excel, Windows Media player, Operating Systems (OS)? Support your answer with a technical example. (3)

10) Why is Trojan horse not harmful to most of the computers? (5)



11) An antivirus deletes a file that seems suspicious to the programming algorithm or harms the files/applications that are useful to the OS or its user. On the other hand, a firewall doesn't allow suspicious applications to get installed and run on the OS. Based on the above assumptions, how can you define a computer virus? How it is different from an antivirus? (3+3)

12) Connect the devices given in Fig. 1 in BUS and Star topologies. (4)

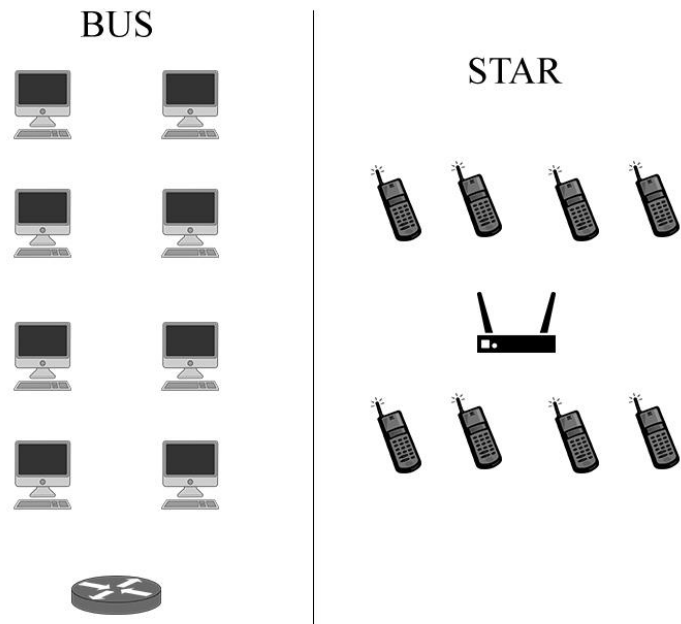


Fig. 1



13) Connect the devices given in Fig. 2 using mesh networking, in the best way, to form a single network such that the maximum number of connection on each routing node is 4 and maximum number of connection to each mobile node is 1. How many mobile nodes are left from being connected to the network? (5+5)

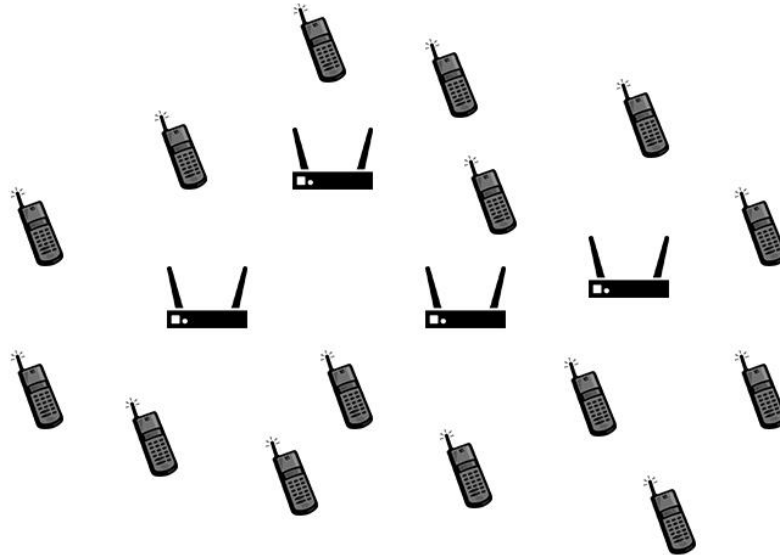


Fig. 2

Devices left: \_\_\_\_\_

14) What is the difference between a network switch and a gateway? (2)



15) How an application software enhances the productivity of an OS? Support your answer with example? (3)

16) What is the main difference between a database and a datacenter? Is Microsoft Azure a database? (3)

**THE END**