JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY-BUSIA
LEARNING CENTRE

END OF JANUARY-APRIL SEMESTER EXAMS
SCS306: COURRSE TITLE: INTERNET COMPUTING
COURSE INSTRUCTOR: CHARLES OWUOR OMOGA

Question 1 30 marks;

a) Define internet computing   (2marks)
b) Explain four internet access tools   (4marks)
a) Explain the meaning of the following terms   (6 marks)
   i. FTP
   ii. ICMP
   iii. SMTP
   iv. TCP/IP
   v. RARP
c) What is OSI reference model? Compare it with TCP/IP reference model and explain Why TCP/IP reference model is more popular than OSI model   (10 marks)
d) Explain what an autonomous system is and give examples of routing protocols that fall within the autonomous system   (5marks)

Question 2 20 marks

a) List and explain the seven OSI model layers.   (7marks)
b) Convert the following 32-bit Internet address into dotted decimal format:
   01011110000101001100001111011100   ```   3marks
c) . List out the advantages and drawbacks of bus topology.   (6marks)
d) Explain the difference between class A and C IP addressing   4marks
e)

Q-3:

   a)   Describe ring network topology   (4marks)

(b) Discuss the advantages and drawbacks of ring topology.   (8marks)

c) discuss the various classifications of routing protocols. Give examples   (8marks)

Q4; Differentiate between the following terms;

   a)   Link state and Distance Vector Routing algorithm(2marks)

   b)   Link state and distance vector routing protocols, giving an example of each.(2marks)

b)Compare distance-vector and link-state routing protocols. What are the advantages of link-state routing compared to distance-vector routing? 6marks)

Q5)

(a) Which tcp/IP layer is used for the following   (4marks)
    (i) To route packets
    (ii) To convert packets to frame
    (iii) To detect and correct errors
(iv) To run services like FTP, Telnet etc.

(b)Choose the selection that best matches the following statements   (4marks)

 PHP is a _____ scripting language based on the _____ engine. It is primarily used to develop dynamic _____ content, although it can be used to generate _____ documents (among others) as well.
A. Dynamic, PHP, Database, HTML
B. Embedded, Zend, HTML, XML
C. Perl-based, PHP, Web, Static
D. Embedded, Zend, Docbook, MySQL

(c) What is displayed when the following php script is executed? (2marks)
```
1        <?php
2        define(myvalue, "10");
3          $myarray[10] = "Dog";
4          $myarray[] = "Human";
```

```
5          $myarray['myvalue'] = "Cat";
6          $myarray["Dog"] = "Cat";
7          print "The value is: ";
8          print $myarray[myvalue]."\n";
9       ?>
```

A. The value is: Dog
B. The value is: Cat
C. The value is: Human
D. The value is: 10
E. Dog

(d) Write short notes on the following internet programming languages ;(10 marks)

    i.   Python
    ii.   Ruby on rails
    iii.   HTML
    iv.   Perl
    v.   java