# BACHELOR OF COMPUTER APPLICATIONS (BCA)

# (Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-VI

## ASSIGNMENTS

## (July - 2020 & January - 2021)

**(BCS-062,**                 **MCS-022,**

**BCSL-063)**



**SCHOOL OF COMPUTER AND INFORMATION SCIENCES**
**INDIRA GANDHI NATIONAL OPEN UNIVERSITY**
**MAIDAN GARHI, NEW DELHI – 110 068**

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**Important Notes**

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.

2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to BCA Programme Guide.

3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the BCA Programme Guide.

Course Code                 :    BCS-062
Course Title                :    E-Commerce
Assignment Number           :    BCA(6)-062/Assign/2020-21
Maximum Marks               :    100
Weightage                   :    25%
Last Date of Submission     :    31st October, 2020 (For July, 2020 Session)
                                 15th April, 2021 (For January, 2021 Session)


**This assignment has two questions for a total of 80 marks. Answer both the questions. Rest 20 marks are for viva voce.**

**Q1.** Explain the process of designing a secure E-Commerce portal. Make necessary assumptions as well as list them**.**                                              **(40 Marks)**

**Q2.** Give any one example of a Mobile APP using which you can order books. List the features of that APP which you liked and those which you did not like.          **(40 Marks)**

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|---|---|---|
| Course Code | : | MCS-022 |
| Course Title | : | **Operating System Concepts and Networking Management** |
| Assignment Number | : | **BCA(6)/022/Assignment/2020-21** |
| Maximum Marks | : | **100** |
| Weightage | : | **25%** |
| Last Dates for Submission | : | **31st October, 2020 (For July, 2020 Session)** |
| | : | **15th April, 2021 (For January, 2021 Session)** |

**Answer all the questions of the assignment having 80 marks in total. 20 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation. Answer of each part of the question should be confined to about 300 words.**

**Q1.** How are the following concepts improve the system performance?  **(6 Marks)**
- Spooling compared to buffering
- Multiprocessing compared to sequential execution

**Q2.** Discuss the basic design issues in distributed OS which are different from **(5 Marks)** traditional OS and network OS and how are they implemented?

**Q3.** What are the steps involved in configuring IP address in your system? **(6 Marks)** What is the use of DHCP and BOOTP in this process? Why a subnet mask is required as an input for configuring IP address?

**Q4. (a)** Draw DNS hierarchy for ignou.ac.in and explain  **(2 Marks)**

**(b)** Discuss the type of seurity vulnerabilities in DNS and what measures are **(5 Marks)** taken to prevent it?

**Q5.** Answer the following questions related to Linux commands:  **(5 Marks)**
- List all the directories using echo command only
- List all the files within a directory including hidden files
- Display a Calandar for a specific month and year
- What will be the output of the following:

        who| more
        who –a

- What options can be used with a grep command? Show output with each option

**Q6. (a)** What are the objectives of dynamic addressing and directory services in **(4 Marks)** Windows 2000? How are they configured?

**(b)** How is static IP address different from dynamic IP address?  **(2 Marks)**

**Q7.** What is the meaning of map drive in Windows 2000? What are the **(5 Marks)** benefits in mapping a network drive? Write all the steps for mapping a network drive. ?

**Q8.** Answer the following questions related to Windows 2000 server? **(6 Marks)**
- What features and services are provided ?
- How are network resources accessed ?

**Q9.** Define Kerberos ? What are the key benefits of Kerberos? How is it **(7 Marks)** managed in Windows 2000 system ?

**Q10.** **What computer security control measures are applied at your study** **(6 Marks)** **centers?**
Against what kind of attacks these measures are taken? Prepare a brief note .

**Q11. (a)** Differentiate between dial-up connection and and VPN connection for **(6 Marks)** remote access . List the requirements to set up a VPN connection. Explain the steps for configuring Windows 2000 VPN

   **(b)** Discuss the protocols and tools for providing secure VPN services **(4 Marks)**

**Q12.** Explain in details the tasks performed by firewall. What is the need of **(5 Marks)** firewall policy ?

**Q13.** What strategies are used in hardening Windows 2000 OS and its file **(6 Marks)** system? Discuss

Course Code                :       **BCSL-063**

**Course Code**            :       **BCSL-063**
**Course Title**              :       **Operating System Networking Management Lab**
**Assignment Number**     :       **BCA(6)/L-063/Assignment/2020-21**
**Maximum Marks**         :       **50**
**Weightage**                :       **25%**
**Last date of Submission**  :       **31st October, 2020 (For July, 2020 Session)**
                              :       **15th April, 2021 (For January, 2021 Session)**

**Note: Answer all the questions in the assignment having 40 marks in total. 10 marks are for viva voce. You may use illustrations and diagrams to enhance the explanations. Please go through the guidelines regarding assignments given in the Programme Guide for the format of presentation. Make suitable assumption if necessary.**

**Q1.** **(a)** Run the following commands and write/show output        **(5 Marks)**
- IPConfig
- tracert
- pathping
- nettime
- nslookup

     **(b)** Answer the following questions related to the above commands:   **(5 Marks)**
- How is tracert command different from pathping in terms of the output information they produce? Explain
- What is the output of Nslookup command? Explain

     **(c)** Answer the following questions :               **(5 Marks)**
- List all the files within a directory including hidden files
- Which command is used to show files or directory , size, modified date and time, file permission,etc.
- Sort file or directory by file size
- What is the output of: ls-al | more ?
- How to kill a process?

**Q2.** **(a)** Write a shell script to to perform the following tasks:     **(4 Marks)**
- (i) check to see if the file "my_file" exists
- (ii) display file " my_ file passwords are enabled" if it exists.
- (i) check the permission to write to the file "my_file"
- (ii) display " permissions to edit " my_file", if yes,
- (iii) otherwise display " No permissions to edit " my_file*"*

**(b)**   (i) write a shell script that prompts the user for a name                          **(6 Marks***)*
of a file or directory and reports  what type of this  file is : regular file, a
directory, or another type of file.

(ii) Execute an ls command against the file or directory with any two
options you are aware of.

**Q3**       Perform the following tasks and write the procedures :                          **(15 Marks)**
- Configure VPN client as a VPN client
- Set your printer on sharing and assign print permission according
  to different users, configuring printer priority for different groups
- How will you access your account available at a remote machine?
  . Download some files from that machine to your machine