

Total No. of Questions : 10 ] [ Total No. of Printed Pages : 3

Roll No. ....

## MCA-503(N)

M. C. A. (Fifth Semester) EXAMINATION, June, 2008

(New Course)

INTERNET AND ITS APPLICATIONS

[MCA-503(N)]

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

**Note :** Question paper is divided into five Units. Attempt *one* question from each Unit. All questions carry equal marks.

### Unit-I

1. (a) Explain internet architecture in detail.  
(b) Describe in brief about the following :
  - (i) Telenet
  - (ii) Virtual terminal

*Or*

2. (a) What are the services provided by Internet ? Explain.  
(b) Describe the structure of Domain name. Compare it with IP addresses.

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## Unit-II

3. (a) Describe error reporting mechanisms in IP. List various types of errors reported through ICMP.  
(b) Explain RARP. How does it affect the reliability of a network ?

*Or*

4. (a) Give an algorithm for routing IP datagrams.  
(b) Explain about subnet and supernet addressing in detail.

## Unit--III

5. (a) How is UDP server designed ? Explain.  
(b) Explain core routers in detail.

*Or*

6. (a) What are the properties of a reliable delivery service ?  
(b) Write in brief about UDP encapsulation and protocol layering.

## Unit-IV

7. (a) Compare FTP and SMTP.  
(b) Write the user capabilities and limitations of firewall.

*Or*

8. (a) Explain various types of firewalls.  
(b) Explain about the following :  
(i) IMAP-4  
(ii) SNMP  
(iii) FTP

Unit – V

9. (a) What are the various elements of web ? Explain.  
(b) Describe the following tags with example :  
(i) <HTML>  
(ii) <TITLE>

Or

10. (a) What do you understand by DHTML ? Explain.  
(b) What is web publishing ? Explain.

Total No. of Questions : 10 ] [ Total No. of Printed Pages : 3

## **MCA-503(N)**

**M. C. A. (Fifth Semester)**  
**EXAMINATION, Nov.-Dec., 2007**  
(New Course)

**INTERNET AND ITS APPLICATIONS**

**[MCA-503 (N)]**

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

**Note :** Question paper is divided into five Units. Attempt one question from each Unit. All questions carry equal marks.

### **Unit - I**

1. (a) Describe in brief the services and features provided on the internet.  
(b) What is meant by TCP/IP ? Discuss in detail. Compare TCP/IP account with shell account.  
*(Or)*
2. (a) What is Internet addressing ? Explain in detail about various electronic addressing.  
(b) Explain the following networks :
  - (i) FDDI
  - (ii) WAN
  - (iii) ATM

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## Unit-II

3. (a) What are the uses of Proxy ARP and subnet addressing ? Explain.  
(b) Compare datagram and virtual circuit. Write a brief note on datagram delivery.

*Or*

4. (a) Write an algorithm for routing IP datagrams.  
(b) Explain RARP. How does it affect the reliability of a network ?

## Unit-III

5. (a) Explain the functions of UDP header and UDP checksum.  
(b) Explain the TCP three-way handshaking operations in detail.

*Or*

6. (a) Describe UDP multiplexing and demultiplexing in detail.  
(b) Explain the simultaneous open and close of TCP.

## Unit-IV

7. (a) List and explain the features of some FTP client software programs that you can freely download from web.  
(b) Write the uses, capabilities and limitations of firewall.

*Or*

8. (a) Write short notes on the following :  
(i) POP3

- (ii) SMTP
- (iii) MIME
- (b) Discuss in detail about internet security threats.

Unit – V

9. (a) What is web publishing ? Explain.
- (b) Explain the following :
- (i) Java script
  - (ii) Servlet

Or

10. (a) Explain different stages of website planning cycle.
- (b) Write short notes on the following :
- (i) Portal
  - (ii) URL

Total No. of Questions : 8 ] [ Total No. of Printed Pages : 3

## **MCA-503**

**M. C. A. (Fifth Semester)**  
**EXAMINATION, May/June, 2006**  
**INTERNET AND ITS APPLICATIONS**  
**(MCA-503)**

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

**Note :** Attempt any *five* questions. All questions carry equal marks.

1. (a) Why and which topology do you suggest of a LAN in :
  - (i) a computer laboratory ?
  - (ii) a campus having many computer laboratories connected by fiber optic cables ?
- (b) List the protocols for the various layers in a TCP/IP network. Mention the use of each of the protocol listed.
2. (a) How does the domain name convert to an IP address ? Explain with the help of an example. 8
- (b) Explain the following terms : 12
  - (i) JPEG and jpg file
  - (ii) MPEG and mpg file
  - (iii) gif file

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- (iv) Winsock
  - (v) Socket
  - (vi) UDP header
  - (vii) Dialup PPP account
3. (a) What are the differences between an anonymous FTP and non-anonymous FTP ? 5
- (b) What do you mean by a virtual terminal ? How does the TELNET provide the virtual terminal ? 10
- (c) What are the various features of Internet Relay Chat ? 5
4. (a) What are the functions of a proxy server at the client end as well as server end ? 10
- (b) What do you mean by downloading and uploading the documents ? 5
- (c) How does a web server link physically on the internet ? 5
5. (a) Differentiate between the following : 12
- (i) Symmetric and asymmetric key
  - (ii) Digital certificate and digital signature
  - (iii) POP 3 and IMAP-4
- (b) Is fragmentation needed in concatenated virtual circuit internets or only in datagram systems ? 8
6. (a) Define the following tags of HTML for the purpose they use with the help of an example : 10
- (i) FORMS
  - (ii) STYLE
  - (iii) IFRAME
  - (iv) A
  - (v) TITLE



- (b) What are the various buttons used in FORM ? Explain any *four* with example. 10
- 7. (a) What are the *five* important techniques for searching from the web ? 10
- (b) How one can embed and intersperse the scripting language codes into an HTML page ? Give any *one* example of each. 10
- 8. Write short notes on any *four* of the following : 20
  - (a) Introduction to AAA
  - (b) DHTML
  - (c) e-Commerce
  - (d) Usenet
  - (e) RFC
  - (f) Website planning

- (b) Write short notes on the following : 10
- E-mail routing
  - List servers
5. (a) Explain Usenet and Internet relay chat. What are the advantages of using IRC ? 10
- (b) Explain, how the multiple websites can be configure on one server. Elaborate various web server softwares. 10
6. (a) Write HTML code for displaying the following form over the website : 10

Guest Registration		
Name :	<input type="text"/>	
DOB :	<input type="text"/>	Phone : <input type="text"/>
Address :	<input type="text"/>	
	<input type="text"/>	
City :	<input type="text"/>	
Country :	<input type="text"/>	<input type="button" value="Submit"/>

- (b) Explain the various types of list and headings tags used in HTML document. 10
7. (a) Explain the use of VB script in website design. Elaborate various control statements in VB script. 10
- (b) Write short notes on the following : 10
- Active X
  - DHTML
8. (a) Elaborate the use and working of firewall. 10
- (b) Explain the telnet protocol. What do you understand by telnet client ? 10

Total No. of Questions : 8 ] - [ Total No. of Printed Pages : 3

## MCA-503

M. C. A. (Fifth Semester) EXAMINATION, June, 2005

INTERNET AND ITS APPLICATIONS

(MCA-503)

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

**Note :** Attempt any five questions. All questions carry equal marks.

1. (a) Does network standard byte order differ from your local machine's byte order ? Justify your answer.  
(b) "ARP (Address Resolution Protocol) is often cited as a security weakness." Comment.  
(c) Explain how sending IP packets to non-existent address on a remote ethernet can generate excess broadcast traffic on that network.  
(d) An IP router must perform a computation that takes time proportional to the length of the datagram header each time it processes a datagram. Explain.
2. (a) Lost TCP acknowledgements do not necessarily force retransmissions. Explain why.  
(b) If we extended the domain name syntax to include a dot after the top-level domain, names and

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abbreviations would be unambiguous. What are the advantages and disadvantages of the extension ?

- (c) What are the major features of FTP ? Explain also the FTP process model.
  - (d) What are the main characteristics of Hypertext Transfer Protocol ?
3. (a) What are the advantages and disadvantages of the operations performed by the POP 3 ? 8
- (b) What are the main features of a packet filter for a commercially available router ? 6
- (c) Differentiate between the following : 6
- (i) BCC and CC
  - (ii) POP and SMTP
4. (a) In the Telnet environment how can the symmetric Do/Don't-will/won't option negotiation produce an endless loop of responses if the other party always acknowledges a request ? 8
- (b) What are the advantages and disadvantages of HTML as a means to present multimedia ? 6
- (c) What are the important principles to be kept in mind while designing the web page ? 6
5. (a) What are the different types of lists offered by HTML ? Explain each with appropriate examples.
- (b) Describe main features of a web browser.
- (c) Explain the < Table > element with the help of an example.
6. (a) What are the rules of nesting the various types of elements in HTML ?
- (b) What does a pound sign ( # ) followed by a string mean at the end of a URL ?

- (c) Differentiate between static web page and dynamic web page.
- (d) Write down the procedure to register the site with search directories.
7. (a) What is the importance of `<!DOCTYPE...>` in HTML document ? Describe each element of DOCTYPE. 5
- (b) What is the purpose of `<META>` tag ? Why is it advisable to include in the HTML documents ? 5
- (c) Write the HTML document for the following form : 10

Username	<input type="text"/>		
Password	<input type="password"/>		
Address	City	<input type="text"/>	State <input type="text"/>
	Pin-code	<input type="text"/>	e-mail <input type="text"/>
Qualification	<input type="text"/>		Scroll Bar
<input type="button" value="Reset"/>		<input type="button" value="Submit"/>	

8. Write short notes on any *four* of the following : 20
- Frames
  - VRML
  - Types of Connections
  - Search Engine
  - Internet address
  - e-Commerce

Total No. of Questions : 8 ] [ Total No. of Printed Pages : 3

## **MCA-503**

**M. C. A. (Fifth Semester) EXAMINATION, Dec., 2004**

**INTERNET AND ITS APPLICATIONS**

**(MCA-503)**

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

**Note :** Attempt any *five* questions. All questions carry equal marks.

1. (a) List out various advantages and disadvantages of LAN over WAN.  
(b) What are the different types of connectivity provided by the internet ?  
(c) Is fragmentation needed in concatenated virtual circuit internets or only in datagram systems ?
2. (a) List complete command sequence to copy following image files from an anonymous FTP serve wild.pictures.com to your account on a UNIX machine. Assume that you are already logged into your account  
(i) LION.TIFF and (ii) SNAKE-JPG.  
(b) Describe the main features of web browser.
3. (a) What are the weaknesses in Internet addressing ?

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- (b) Does network standard byte order differ from your local machine's byte order ? Justify your answer.
  - (c) Explain how sending IP packets to non-existent addresses on a remote ethernet can generate excess broadcast traffic on that network.
4. (a) What is Telnet's remote procedure call ?
- (b) What are the chief advantages of using separate TCP connections for control and data transfer ?
- (c) What are the basic features of FTP ?
5. (a) List out the various steps to registers a web site on search engine.
- (b) If a browser does not send an HTTP content length header before a request, how does a server respond ?
- (c) What are the different aspects of protection which any information security system encompasses ?
6. (a) Write HTML code to embed an applet in an HTML document. The name as class name of the applet is "Index" and the applet code is at 'http : //www. xyz.com'. The size of applet window is 300 × 200. Two parameter values to be passed are :  
name 1 = value 1 and name 2 = value 2.
- (b) Define the tags for the following purpose with the help of an example :
- (i) Image
  - (ii) Forms
  - (iii) Section heading
  - (iv) List

7. (a) Write HTML code for displaying the following table :

Number of Server on Internet				
S. No.	Description	2002	2003	2004
1	Worldwide	5,00,000	20,00,000	50,00,000
2	In India	1,00,000	5,00,000	10,00,000

- (b) What are the various advantages and disadvantages of E-commerce ?
8. Write short notes on any *five* of the following :
- (a) URLs
  - (b) VRML
  - (c) VB script
  - (d) Terminal Emulation
  - (e) POP-3
  - (f) Internet Relay Chet
  - (g) Firewalls



Total No. of Questions : 8 ] [ Total No. of Printed Pages : 1

## MCA-503

M. C. A. (Fifth Semester) EXAMINATION, June, 2004

INTERNET AND ITS APPLICATIONS

(MCA-503)

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

Note : Attempt any five questions.

1. (a) Elaborate the dial-up, leased line and VSA connectivity issues for Internet. 10
- (b) Explain the Class-A, B and C. IP addressing scheme. What do you understand by Reserve address ? 10
2. (a) Write a HTML Program to display the following table : 10

ROLL NO.	NAME	SUBJECT			TOTAL
		SUB 1	SUB 2	SUB 3	
123	AJAY	82	65	60	227
125	VIJAY	80	60	50	190
126	SANJAY	50	50	60	160

- (b) Explain various formatting tags used in HTML.. 10
3. (a) Elaborate various steps involved to Host web site of your Institution. 10

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- (b) Write short notes on the following : 10
- (i) Usenet
  - (ii) Internet Relay Chart
4. (a) Elaborate the Internet security threats. 10
- (b) Explain the use and working of Firewalls. 10
5. (a) Differentiate between Web based mail and POP mail service by using appropriate example. 10
- (b) Write short notes on the following : 10
- (i) SMTP
  - (ii) X-400
6. (a) Explain Telnet Protocol. Elaborate the use of Telnet protocol for terminal emulation. 10
- (b) Elaborate the use of FTP. 10
7. (a) Write the syntax of the following in HTML : 10
- (i) Provide Hyperlink to text within the same page.
  - (ii) Hyperlink to text for a website [www.google.com](http://www.google.com).
  - (iii) Hyperlink to Image, which takes the control to the another page.
  - (iv) Hyperlink to text, which takes the control to the another page.
- (b) Write short notes on the following : 10
- (i) DHTML
  - (ii) VRML
8. (a) Elaborate the advantages and limitations of E-commerce. 10
- (b) What are EDI software agents ? List various Electronic Payment System used in E-commerce. 10

Total No. of Questions : 8 ] [ Total No. of Printed Pages : 3

## MCA-503

M. C. A. (Fifth Semester) EXAMINATION, Dec., 2003

INTERNET AND ITS APPLICATIONS

(MCA - 503)

*Time : Three Hours*

*Maximum Marks : 100*

*Minimum Pass Marks : 40*

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) What does a router do with the "Time to Live" value in an IP header ?  
(b) What do you mean by Proxy Server ?  
(c) Lost TCP acknowledgements do not necessarily force retransmissions. Explain why.  
(d) Should ARP software modify the cache even when it receives information without specifically requesting it ? Why or why not ?
2. (a) What are the important characteristics of HTTP ? 8  
(b) What is a remote procedure call ? 5  
(c) How does JAVA interact with VRML ? What is the MIME type for VRML ? 7
3. (a) How one can choose a web service provider ? 6

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- (b) What are the advantages and disadvantages of the client/server model for managing and delivering information ? 8
- (c) Differentiate between the following : 6
- (i) Shell account and TCP/IP account
  - (ii) Container and Empty Tags
4. (a) Differentiate between the following : 6
- (i) Portal and Search Engine
  - (ii) POP-3 and IMAP-4
- (b) What are the aspects of protection that any information security must encompass ? 6
- (c) What do you understand by URLs ? Explain the different types of URLs with its advantages and disadvantages. 8
5. (a) Why should each name server know the IP address of its parents instead of the domain name of its parents ? 5
- (b) Explain what will happen if a remote site tries to ping a machine with domain name "localhost. compse. RGPV. edu". 5
- (c) Explain the concept of ordered and unordered list with the help of an example. 10
6. Write short notes on any *four* of the following : 20
- (a) Web Browsers
  - (b) FTP
  - (c) E-commerce
  - (d) Search Engines
  - (e) WWW—a publicity medium
  - (f) RFC
  - (g) Chatting

7. (a) Write HTML code for displaying the following table :

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Apples			Mango		
Flavour	Sweet	Tart	Flavour	Sweet	Tart
Size	Small	Large	Size	Small	Large

  

Apples			Mango		
Flavour	Sweet	Tart	Flavour	Sweet	Tart
Size	Small	Large	Size	Small	Large

- (b) Write down the brief note on Web Publishing. 5

8. (a) Describe the following tags with the help of an example :

- (i) <form>
- (ii) <A>
- (iii) <script>
- (iv) <IMG>
- (v) <Title>

- (b) Some organizations use firewalls to isolate groups of user internally. Give examples of ways that internal firewalls can improve network performance and examples of ways internal firewalls can degrade network performance.