

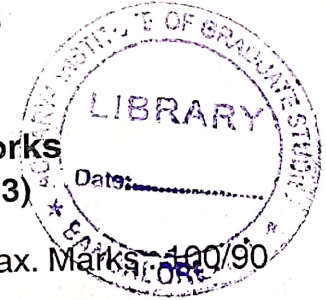


MS – 579

IV Semester B.C.A. Examination, May 2016
(Y2K8 Scheme)

COMPUTER SCIENCE

BCA – 404 : Data Communications and Networks
(100 – 2012 – 13 & Onwards / 90 – Prior to 2012 – 13)



Time : 3 Hours

Max. Marks: 100/90

- Instructions:**
- 1) Section **A, B** and **C** is common to **all**.
 - 2) Section **D** is applicable to **only** the students who have taken admission in **2012 – 13** Onwards.
 - 3) **100** marks for **fresh** students of **2012 – 13** Onwards.
90 marks for **repeaters** students **prior to 2012 – 13**.

SECTION – A



Answer **any 10** questions. **Each** question carries **two** marks.

1. Define Encoding.
2. Define term error.
3. What is multiplexing ? Name them.
4. What is piggybacking ?
5. Define channelization methods.
6. Define bit rate and baud rate.
7. Define synchronous communication.
8. What is protocol ? Give example.
9. What is congestion ?
10. Define Topology. Give example.
11. What is switching ?
12. What is signal ?

P.T.O.





SECTION – B

Answer **any five** questions. **Each** question carries **5** marks.

(5×5=25)

13. Explain the need for multiplexing.
14. Differentiate between Analog and Digital Transmission.
15. Write short notes on FDDI.
16. Write about Message Switching.
17. What is Flooding ? State its advantages and disadvantages.
18. What is Routing Table ? Explain different types of Routing.
19. What are various goals of computer network ? Explain.
20. Differentiate between LAN and WAN.

SECTION – C

Answer **any 3** questions. **Each** question carries **15** marks.

(15×3=45)

21. With a neat diagram explain.
 - a) Stop and wait ARQ. 7
 - b) Go Back N ARQ. 8
22. a) With a neat diagram explain various types of coaxial cables. 8
 - b) With a neat diagram explain SONET multiplexing. 7
23. a) Explain the Frame Format of IEEE 802.3 LAN. 8
 - b) Write short notes on :
 - i) Shortest path algorithm 4
 - ii) Distance vector algorithm. 3



24. With a neat diagram explain the following :

a) Leaky Bucket algorithm.

7

b) Token Bucket algorithm.

8

25. Explain in detail the following CSMA protocols :

a) 1 – persistent

b) Non – persistent

c) P – persistent.

(5+5+5)

SECTION – D

Answer **any one** question. It is applicable for the students who have taken admission in 2012 – 13 Onwards.

(10×1=10)

26. Explain CRC with an example.

10

27. Explain OSI reference model with neat diagram.

10



SA – 914

IV Semester B.C.A. Degree Examination, April/May 2015
(Y2K8 Scheme)

COMPUTER SCIENCE

BCA-404 : Data Communications and Networks
(100 Marks - 2012-13 and Onwards/90 Marks - Prior to 2012-13)

Time : 3 Hours

Max. Marks : 90/100

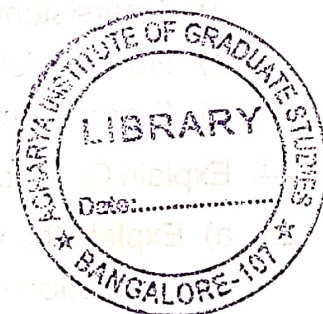
- Instructions :**
- 1) Section A, B and C is common to all.
 - 2) Section D is applicable to **only** the students who have taken admission in **2012-2013** onwards.
 - 3) **100** marks for **fresh** students of **2012-2013** onwards. **90** marks for **repeater** students prior to **2012-13**.

SECTION – A

Answer **any 10** questions. **Each** question carries **two** marks.

(10×2=20)

1. What are the goals of computer network ?
2. Expand DNS and HTTP.
3. What are the various TCP/IP utilities ?
4. What is protocol ? Give example.
5. What is multiplexing ? What are the types of multiplexing ?
6. What is the difference between bit interval and bit rate ?
7. What is Nyquist signalling rate for a noiseless channel ?
8. What is piggy backing ?
9. What is the need for framing ?
10. What is channelization methods ?
11. What are the types of bridges ?
12. What is a repeater ?



SECTION – B

Answer **any five** questions. **Each** question carries **5** marks.

(5×5=25)

13. List the essential elements of network architecture ? Explain.
14. Explain architecture of Telnet.
15. Explain Shannon channel capacity for a noisy channel.

P.T.O.



16. Compare analog and digital transmission.
17. Explain PPP phase diagram.
18. Explain the difference between FDMA and CDMA.
19. Write a short note on FDDI.
20. Write about packet switched network.

SECTION – C

(15×3=45)

Answer any 3 questions. Each question carries 15 marks.

21. a) What are the three different transmission modes ? Explain.
b) Explain TCP/IP model with a diagram.
22. a) Explain unguided medium/wireless medium.
b) Write short notes :
a) Hamming code
b) CRC.
23. Explain in detail the following CSMA protocols :
a) 1-persistent
b) Non-persistent
c) P-persistent.
24. Explain Go-Back-N-ARQ.
25. a) Explain the working of frame format of token ring.
b) Write short notes :
i) Shortest path algorithm
ii) Distance vector algorithm.

8

(5+5+5)

15

8

7

SECTION – D

Answer any one question. It is applicable for the students who have taken admission in 2012-13 onwards.

(10×1=10)

10

26. Explain OSI reference model with neat diagram.

27. Write short notes on :

- a) Congestion control
- b) Routers.

(5+5)

IV Semester B.C.A. Degree Examination, April/May 2015
(Y2K8 Scheme)

COMPUTER SCIENCE

BCA 405 : Visual Programming

(70 Marks – 2012-13 and Onwards/60 Marks – Prior to 2012-13)

Time : 3 Hours

Max. Marks : 60/70

Instructions : Sections A, B, C are common to all. Section – D is applicable to students who were admitted in 2011-12 and onwards only.

SECTION – A

Answer any ten questions. Each question carries one mark. (10×1=10)

1. What is a resource ?
2. What is meant by SDK ?
3. What is meant by explicit variable declaration ?
4. What is form-layout window ?
5. What is passwordchar property of a textbox ?
6. What is the use of WITH-ENDWITH statement ?
7. How do you declare an array in VB ? Give an example.
8. When is lostfocus event executed ?
9. What is variant datatype ?
10. What is MFC ?
11. What is MDI ?
12. Expand ODBC.

P.T.O.



SECTION - B

Answer any five questions. Each question carries three marks.

(5×3=15)

13. What is a handle ? Briefly explain any two commonly used handles.
14. Explain any three string functions used in VB.
15. Define an event. What are different types of events in VB ?
16. Explain msgbox function with syntax and example.
17. Explain the following properties :
 - a) VISIBLE
 - b) INDEX
 - c) WINDOWSTATE.
18. Explain message-map in VC++.
19. What is a dialog box ? What are different types of dialog boxes in VC++ ?
20. What is DLL ? Explain the advantages of using DLL.

SECTION - C

Answer any five questions. Each question carries seven marks :

(5×7=35)

21. Explain different help formats available in WINDOWS.
22. What is a device context ? Explain different types of device context.
23. Explain various looping control structures used in VB.
24. a) Explain open method of connection object with syntax and example.
b) Explain the following methods of a recordset :
 - i) AddNew
 - ii) Update
 - iii) MoveNext
 - iv) Delete.



- 25. a) Explain any four properties of a combo box. 4
- b) What are the different methods of passing arguments to a function ? 3
- 26. Explain document/view architecture. 7
- 27. a) Briefly explain exception handling mechanism in VC++. 4
- b) Explain ODBC and components used for implementing ODBC. 3
- 28. Explain splitter windows and their types in VC++. 7

SECTION - D

Answer **any one** question. **Each** question carries **ten** marks. (1×10=10)

- 29. Write a VB program to maintain ITEM DETAILS like ITEM NO, ITEMNAME, PRICE, QUANTITY in a database. The program should have options like ADD, SAVE, DELETE, SEARCH and navigation of records. (Make necessary assumptions) 10
- 30. a) Write a VC++ program to create and load a simple menu in a window. 6
- b) Explain serialisation. 4



SA – 916

IV Semester B.C.A. Degree Examination, April/May 2015
(Y2K8 Scheme)

COMPUTER SCIENCE

BCA 406 : Unix Programming

(70 Marks – 2012-13 and Onwards / 60 Marks – Prior to 2012-13)

Time : 3 Hours

Max. Marks : 60/70

Instructions : 1) Answer *all* the Sections.

2) Section **D** is students for **2012-13** and onwards (**70**).

SECTION – A

Answer **any ten** questions. **Each** question carries **one** mark. (10×1=10)

1. What is the use of WHO command ?
2. List the different parts of a UNIX file system.
3. Mention different states of a process.
4. What is the use of rice command ?
5. Name the command used to make the file system in UNIX.
6. What is meant by redirection ?
7. What is a pipe ?
8. What is the use of set command ?
9. Mention the different types of shell variables.
10. What is the use of PS1 ?
11. What is the use of wall command ?
12. What is file encryption ?

SECTION – B

Answer **any five** questions. **Each** question carries **three** marks. (5×3=15)

13. Explain any three features of UNIX operating system.
14. Explain the process scheduling commands.
15. Explain the mounting of file system in UNIX.

P.T.O.





16. Explain the WC command with different options.
17. Explain the different modes of vi editor.
18. Explain the use of test command.
19. Explain the use of finger command.
20. Explain the super user's privileges.

SECTION - C

Answer **any five** questions. **Each** question carries **seven** marks.

(5×7=35)

21. Explain with a neat diagram the UNIX system architecture.
22. Explain the different file access permissions and different types of users.
23. Explain the mechanism of process creation.
24. a) Explain file compression.
b) Explain disk related commands.
25. What is a filter ? Explain any three filter commands with example.
26. a) Explain the different use of sort command.
b) Explain disk partitioning.
27. Write a shell program to check if a string is a palindrome.
28. Explain domain name system with a neat diagram.

SECTION - D

Answer **any one** question. **Each** question carries **ten** marks.

(1×10=10)

29. a) Explain the use of grep command.
b) Write note on SED.
30. Write a menu driven shell program to implement the following UNIX commands.
a) rm -r b) uniq c) tail d) cmp



MS - 511

IV Semester B.C.A. Degree Examination, May/June 2013

((F+R) Y2K8 Scheme)

(F-100-2012-13 & Onwards/R-90 - Prior to 2012-13)

COMPUTER SCIENCE

BCA 404 : Data Communication and Networks

Time : 3 Hours

Max. Marks : 90/100

- Instructions :**
- 1) Section **A, B & C** is common to **all**.
 - 2) Section **'D'** is applicable to **only** the students who have taken admission in **2012-2013** onwards.
 - 3) **100** marks for **Fresh** students of **2012-2013** onwards.
90 marks for **Repeater** students Prior to **2012-2013**.

SECTION - A

Answer any **10** questions. **Each** question carries **two** marks. (10×2=20)

1. Define computer network.
2. What are the different characteristics for analog signals ?
3. Compare LAN and WAN.
4. Define client server network.
5. What is TFTP ?
6. Define NETSTAT command.
7. What is Shannon capacity formula ?
8. What is piggy backing ?
9. Define Checksum.
10. What is token passing ?
11. Explain different types of bridges.
12. Define Routing.



P.T.O.





MS – 511

SECTION – B

(5x5=25)

Answer any five questions. Each question carries 5 marks.

13. What are the essential elements of network architecture ? Explain each.

14. Explain TCP/IP reference model.

15. With neat diagram, explain FTP.

16. Write short notes on :

- i) Infrared waves
- ii) Optical fiber

17. Define CRC with example.

18. Explain multiplexing.

19. Explain FDDI.

20. Describe Token Bucket Algorithm.

SECTION – C

(15x3=45)

Answer any 3 questions. Each question carries 15 marks.

21. a) Explain different types of switching techniques.

b) Explain the working of OSI model.

22. a) Describe digital to analog conversion.

b) What is Hamming Code ? Explain it with a binary data '1001101'.

23. a) Explain sliding window ARQ.

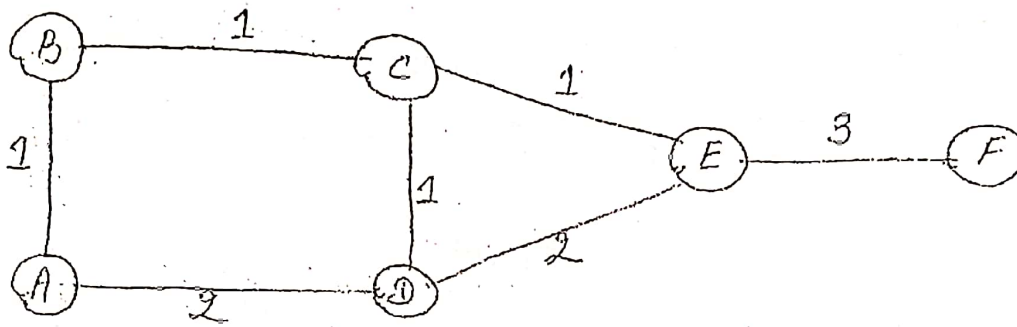
b) Describe HDLC.

24. a) Explain pure ALOHA and slotted ALOHA.

b) Explain the architecture of IEEE.802.11.



- 25. a) Describe space division switch and time division switch.
- b) Explain the transition phases in PPP.
- c) Using Dijkstra's algorithm, find out the shortest path from node A to F. (5+5+5)



SECTION - D

- 1) Answer **any one** question. (10×1=10)
- 2) It is **applicable** for the students who have taken admission in **2012-2013** onwards.
- 26. Explain IEEE 802.3 : ETHERNET. 10
- 27. a) With neat diagram, explain remote login architecture.
- b) What is congestion ? Explain congestion control. (5+5)