M.Sc., DEGREE EXAMINATION, NOVEMBER 2010
Computer Science (R)
DESIGN AND ANALYSIS OF ALGORITHMS
(CBCS—2008 onwards)

Time : 3 Hours　　　　　　　　　　Maximum : 75 Marks

Part - A　　　　$(10 \times 2 = 20)$

Answer **all** questions.

1. What is need for parallel computation ?

2. State theta notation.

3. What is meant by an internal sort ?

4. State minimal weighted spanning tree.

5. Define 8-Queens problem.

6. State the sum of subsets.

7. Define Graph colouring.

8. What are the Hamiltonian cycles ?

9. Write any one application of travelling sales person problem.

10. How can a graph be stored in a computer ?

Part - B   (5 × 5 = 25)

Answer **all** questions.

11 (a)   Explain Space and Time complexity.

(*Or*)

(b)   Explain Asymptotic notation.

12. (a) Write an Algorithm for Binary Search with an example.

(*Or*)

(b) Write an Algorithm for Merge Sort with an example.

13 (a) Explain aboiut Optimal Binary Search trees.

(*Or*)

(b) Explain the applications of n-queen problem.

14 (a) Explain LC Branch and Bound solution.

(*Or*)

(b) Explain FIFO Branch and Bound solution.

RW-6189

15 (a) Explain non deterministic algorithms of NP Hard and NP-Complete problems.

(*Or*)

(b) Explain the basic concepts of NP Hard and NP-Complete problems.

Part - C   (3 × 10 = 30)

Answer any **three** questions.

16. Describe the various models of computation.

17. Explain Kruskal's method of finding minimum cost spanning tree.

18. What do you mean by back tracking ? Explain with an example.

19. State and explain the travelling salesman proble with an example.

20. Explain Cook's theorem.

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M.Sc., DEGREE EXAMINATION, NOVEMBER 2010
Computer Science (R)
ADVANCED COMPUTER ARCHITECTURE

(CBCS—2008 onwards)

Time : 3 Hours   Maximum : 75 Marks

Part - A   (10 × 2 = 20)

Answer **all** questions.

1. What is an operand ? Give an example.

2. What is indirect addressing mode ?

3. What is Bench cost ?

4. What is VLIW approach ?

5. Define : Miss Rate.

6. What is virtual memory ?

7. Define : Distributed shared memory.

8. Write short note on thread level parallelism.

9. What is a Bus ?

10. What is meant by RAID ?

Part - B (5 × 5 = 25)

Answer **all** questions.

11 (a) Write about quantitative principles of computer design.

(*Or*)

(b) Give an account on type and size of operands.

RW-6190

12. (a) How will you reduce bench cost ? Explain.

(*Or*)

(b) Write note on Static Branch Instruction.

13 (a) How will you reduce miss rate ? Explain.

(*Or*)

(b) How will you reduce hire time ? Explain.

14 (a) Write about symmetric shared memory architecture.

(*Or*)

(b) Explain synchronization.

RW-6190

15 (a) Write about designing of I/O system.

(*Or*)

(b) Discuss multithreading.

Part - C (3 × 10 = 30)

Answer any **three** questions.

16. Write on (a) Instruction on control flow (b) Addressing modes.

17. Give an account on Hardware support for more ILP at compile time.

18. Discuss cross cutting issues in the design of memory hierarchies.

RW-6190

19. Write about (a) Models of memory consistency (b) Cross cutting issues.

20. Write on the issues involved in interconnecting networks.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Computer Science (R)

DISTRIBUTED OPERATING SYSTEM

(CBCS—2008 onwards)

Time : 3 Hours   Maximum : 75 Marks

Part - A   (10 × 2 = 20)

Answer **all** the questions.

1. Define Distributed systems.

2. What do you mean by client ?

3. Define Deadlocks.

4. Define Synchronization.

5. What do you mean by random access files ?

6. Define Sequential access files.

7. What is shared memory ?

8. Define a term Bus.

9. What is MACH ?

10. What do you mean by shared memory ?

Part - B $(5 \times 5 = 25)$

Answer **all** questions.

11. (a) Write a short note on remote procedure call.

    Or

    (b) Discuss about group communications.

12. (a) Describe Mutual exclusion.

    Or

    (b) Explain about election automic transactions.

13. (a) Discuss about trends in distributed file systems.

Or

(b) Write about file system design.

14. (a) Write a short note on ring based multi processors.

Or

(b) Discuss about switched multiprocessors.

15. (a) Write a short note on CHORUS.

Or

(b) Discuss about page based distributed shared memory

Part - C (3 × 10 = 30)

Answer any **three** questions.

16. Explain about ATM networks.

17. Discuss about real time distributed systems.

18. Describe briefly implementation in file system design.

RW-6191

19. Explain NUMA comparision of shared memory systems.

20. Explain about object based distributed shared memory.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Computer Science (R)
NETWORK SECURITY
(CBCS—2008 onwards)

Time : 3 Hours   Maximum : 75 Marks

Part - A $(10 \times 2 = 20)$

Answer **all** questions.

1. What do you mean by interruption ?

2. Define Hijacking.

3. Define Cipher text.

4. What do you mean by Substitution ?

5.   What is meant by Authentication ?

6.   What are the advantages of digital signatures ?

7.   What is Pretty Good Privacy ?

8.   What is meant by SSL server authentication ?

9.   What is the need for Firewall ?

10. Define Intrusion.

Answer **all** questions.

11. (a) Explain various security attacks.

Or

(b) Discuss TCP session hijacking.

12. (a) Explain the conventional encryption principles.

Or

(b) Explain secure hash function.

13. (a) Explain Directory authentication service.

Or

(b) Write short notes on digital certificates.

14. (a) Explain IP security architecture.

Or

(b) Explain Secure Electronic Transaction.

15. (a) Explain the Viruses and its threats.

Or

(b) Discuss Intrusion detection systems.

Part - C (3 × 10 = 30)

Answer any **three** questions.

16. Explain any two security services.

17. Describe the DES algorithm.

18. Explain the RSA algorithm.

RW-6192

19. Explain Encapsulating Security Payload.

20. Explain the Trusted systems.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Computer Science (R)
WEB TECHNOLOGY

[Common for MCA (R) / MCA (W/ E) / M.Sc. Computer Science (R)]

(CBCS—2008 onwards)

Time : 3 Hours   Maximum : 75 Marks

Part - A   (10 × 2 = 20)

Answer **all** questions.

1. Define Schema.

2. What is the advantage of XML ?

3. What are the advantages of JAVA Beans ?

4. Define Interface.

5. What is Tomcat ?

6. What are the functions of HTTP ?

7. What are the applications of JSP ?

8. What do you mean by conditional processing ?

9. What is the purpose of JDBC Driver ?

10. Define Package.

RW-6193

Part - B (5 × 5 = 25)

Answer **all** questions.

11. (a) Write a HTML code to demonstrate Frames.

Or

(b) Write a Java script to display the details of your university.

12. (a) Explain EJB interface with an example.

Or

(b) Discuss the features in BDK.

13. (a) Explain how a HTTP request can be handled.

Or

(b) Explain Java servlet with an example.

14. (a) Explain the anatomy of JSP.

Or

(b) Explain the error handling and debugging in JSP.

15. (a) Explain the various JDBC drivers.

Or

(b) Discuss about Entity Beans.

RW-6193

Answer any **three** questions.

16. Write a HTML code to apply for programmer post in TCS using FORMS.

17. Explain Deployment Descriptors with an example.

18. Write a Java servlet to display a message.

19. Explain the various control structures in JSP with example.

20. Explain Session Java Bean with example.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Computer Science (R)

VISUAL PROGRAMMING

[Common for MCA (R) / MCA (W/ E) / M.Sc., Computer Science (R)]

(CBCS—2008 onwards)

Time : 3 Hours   Maximum : 75 Marks

Part - A   (10 × 2 = 20)

Answer **all** the questions.

1. What are the disadvantages of traditional programming paradigms ?

2. What do you mean by device context ?

3. What is the difference between in built and user defined functions ?

4. What happens when an END statement is encountered in VB ?

5. What is a resource ?

6. Define : Object and Class.

7. What do you mean by MDI form ?

8. List out dialog based applications.

9. Name any two message map macros in VC ++.

10. What is the role of ODBC ?

RW-6194

Answer **all** the questions.

11. (a) Explain the properties of Label box and List box components on VB.

Or

   (b) Explain any one flow control statement in VB.

12. (a) Explain the debugging concept in VB.

Or

   (b) Write a procedure in VB to call a function which prints the factor of the given number.

13. (a) Write briefly the components of VC ++.

Or

(b) Discuss the MFC file handling.

14. (a) Explain the creation of menu shortcuts in VC++.

Or

(b) Discuss the Serialization.

15. (a) Explain the various financial and numeric functions in VB with example.

Or

(b) Explain the database management with ODBC.

Part - C (3 × 10 = 30)

Answer any **three** questions.

16. Explain the steps to create a menu and add menu items in a windows program.

17. Discuss how active controls can be created and used in a VB applications.

18. Write an essay on documentview architecture.

19. Write short notes on :

   (a) Splitter window.

   (b) MDI environment.

20. How will you create a DLL ? Explain with example.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Computer Science (R)

COMMUNICATION SKILLS

[Common for MCA (R) / MCA (W / E) / M.Sc. Computer Science (R)]

(CBCS—2008 onwards)

Time : 3 Hours Maximum : 75 Marks

Part - A (10 × 2 = 20)

Answer **all** questions.

1. What is the most important principle of effective writing ?

2. What are the basic techniques for a fruitful negotiation ?

3. What is the most important trait evaluated by the panellists of a group discussion ?

4. How important is effective communication essential during any interview ?

5. What is the Union's role in communication ?

6. What is meant by intra personal communication ?

7. What are meant by Brain storming sessions ?

8. When do we prepare 'minutes' ?

9. How has telephone become the most important medium for communication ?

10. What are the main requisites for delivering a good presentation ?

Part - B   (5 × 5 = 25)

Answer **all** questions.

11. (a) Prepare a comprehensive agenda for a meeting of your choice.

Or

(b) Define Communication and list out the process of communication.

12. (a) What is the importance, process and objective in conducting National or State level seminars ?

Or

(b) What are the different types of aids that help a person to deliver his address in style ?

13. (a) Why is it that experts have group discussions to assess the capabilities of an individual ?

Or

(b) It is very easy to write that we feel, than to communicate. Do you agree with this statement ?

14. (a) Write a short essay on the commonly experienced barriers to communication.

Or

(b) What is meant by body language ? How do actions speak louder than words ?

15. (a) How can group discussion evaluate good participation ?

Or

(b) What are the strategies to be employed for a negotiation to reach a satisfactory end ?

Part - C　　　　　　(3 × 10 = 30)

Answer any **three** questions.

16. Explain how the sense of unity of purpose and commitment to a single organisational goal can be developed through a persuasive power of communication.

17. Elaborate on how effectiveness of written communication is achieved through the principles of accuracy, brevity and charity.

　　　　　RW-6195

18. Business is eternally plagued with problems which often can be solved through negotiations. What is your opinion ?

19. What is the concept of a good presentation ? What are the characteristics that distinguish it from a written report ?

20. Write short notes on :

    (a) Agenda writing.

    (b) Downward communication.

    (c) Postscript.

    (d) Linear reading.

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M.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Computer Science (R)

C # AND ASP. NET

[Common for MCA (R) / MCA (W / E) / M.Sc. Computer Science (R)]

(CBCS—2008 onwards)

Time : 3 Hours   Maximum : 75 Marks

Part - A   (10 × 2 = 20)

Answer **all** questions.

1.   Give two similarities between C # and NET.

2.   What is meant by unboxing ?

3.   What is CLR ?

4.   Explain any two properties of client control.

5. What is meant by regular expression ?

6. What is the disadvantages of view state ?

7. List out two properties of command class.

8. What is the purpose of data adapter class ?

9. Briefly about any *two* web services.

10. List out any two features of XML.

RW-6196

Part - B (5 × 5 = 25)

Answer **all** questions.

11. (a) What are the condition control statements supported by C # ? Explain.

Or

(b) What are the advantages of delegates ?

12. (a) What are the features of web servers ?

Or

(b) Explain about any *two* client controls.

RW-6196

13. (a) What are the advantages at client side validation ?

Or

(b) Describe about required field validator with an example.

14. (a) Explain data binding concept with an example.

Or

(b) Explain how do display data on web forms.

15. (a) Explain about SOAP.

Or

(b) Explain how do use RMC with XML.

RW-6196

Part - C   (3 × 10 = 30)

Answer any **three** questions.

16. Explain about interfaces and serialization with suitable examples.

17. Describe about ASP. NET frame work with suitable diagrams.

18. Explain application state with an example.

19. Describe the architecture of ADO. NET.

20. Explain the steps involved in buildings and consuming a web service.

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