B.C.A. DEGREE EXAMINATION, APRIL 2011

First Semester

Computer Application

DISCRETE MATHEMATICS

(Non-CBCS—2004 onwards)

Time : 3 Hours 　　　　　　　　　　　　Maximum : 100 Marks

Section A 　　　　　　(10 × 1 = 10)

Answer **all** questions.

Choose the correct answer :

1. Which one of the following is not a statement ?

    (a) 4 ÷ 5 = 9

    (b) Blood of human being is white.

    (c) Canada is a country.

    (d) Close the door.

2. The conjunction of any two tautologies is also :

   (a) a contingency.

   (b) a tautology.

   (c) bi-conditional.

   (d) conditional.

3. Let $(<, \leq)$ be a Lattice, $a, b, c \in L$, then $a \leq C \Leftrightarrow$ $a \oplus (b * c) \leq$ ————.

   (a) $a * (b \oplus c)$

   (b) $(a \oplus b) * c$

   (c) $b * (a \oplus c)$

   (d) $b * (c \oplus a)$

AFN-1653

4. Let $(B, *, \oplus, ', 0, 1)$ be a Boolean algebra, and $f : B^n \to B,$ which is associated with a Boolean expression in n-variable is called

    (a) Special lattices.

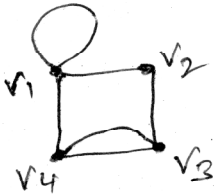   (b) Sub lattices.

    (c) Boolean function.

    (d) Lattices

5. If $A = \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix}, \ B = \begin{pmatrix} 3 & 1 \\ 4 & 2 \end{pmatrix}, C = \begin{pmatrix} 5 & 1 \\ 7 & 4 \end{pmatrix}$ show that

    (a) $(A + B) C = AC + BC,$

    (b) $(A + C) B = AB + AC$

    (c) $(C + B) A = CA + CB$

    (d) $(AB) \cdot C = AC - AB$

AFN-1653

6. If $A = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 4 & 7 \\ 3 & 6 & 10 \end{pmatrix}$ then the rank of the matrix A is

    (a)   Two.

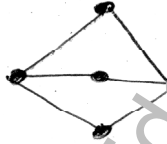   (b)   Three.

    (c)   One.

    (d)   None of these.

7.

In this graph, the degree of V_1 is

    (a)   2

    (b)   1

    (c)   3

    (d)   4

8. In $K_{3,3}$ the number of edges is

(a) 6

(b) 9

(c) 13

(d) 10

9. This graph is

(a) Non Hamiltonian as well as non Eulerian.

(b) Eulerian but not Hamiltonian.

(c) Hamiltonian as well as Eulerian.

(d) Hamiltonian but not Eulerian.

10. The Number of vertices in a tree with 10 edges is

    (a)   10

    (b)   11

    (c)   9

    (d)   12.

Section B $(5 \times 6 = 30)$

Answer any **five** questions.

11. Construct the truth table for the formula

$$\rceil\left(P \vee (Q \wedge R)\right)\left((P \vee Q) \wedge (P \vee R)\right)$$

12. Prove that every chain is a distributive lattice.

13. Find the inverse of $\begin{pmatrix} 2 & 3 & 1 \\ 1 & 2 & -1 \\ 2 & -1 & 1 \end{pmatrix}$

AFN-1653

14. Find the characteristic roots of $\begin{pmatrix} 1 & 2 & 1 \\ 0 & 1 & -1 \\ 3 & -1 & 1 \end{pmatrix}$

15. Write short notes of Isomorphism of two groups.

16. Prove that the sum of the degree of all vertices in G is twice the number of edges in G.

17. Prove that a vertexn V of a tree is a cut vertex if and only if d (V) > 1.

Section C (5 × 12 = 60)

Answer any **five** questions.

18. Construct the truth table for the formula

(a) $\rceil \left[\rceil P \wedge Q \right]$

(b) $P \wedge \rceil (Q \vee P)$

(c) Check if $((P \rightarrow Q) \rightarrow (Q \rightarrow P))$ is a tautology.

19. Simplify the Boolean function $f(x, y, z) = \Sigma (0, 3, 4, 5)$

20. Verify Cayley-Hamilton theorem for $A = \begin{pmatrix} 1 & 0 & 3 \\ 2 & 1 & -1 \\ 1 & -1 & 1 \end{pmatrix}$.

Hence find its inverse.

21. Find the Eigenvalues and the Eigenvectors of the

Matrix $\begin{pmatrix} 2 & -2 & 3 \\ 1 & 1 & 1 \\ 1 & 3 & -1 \end{pmatrix}$.

22. Prove that the maximum number of edges in a simple

graph with n-vertices is $\dfrac{n(n-1)}{2}$

AFN-1653

23. Prove that a graph is bipartite iff it contains no odd cycle.

24. Prove that a non empty connected graph is Eulerian iff it has no vertices of odd degree.

25. Use the algorithm of Kruskal, find a shortest spanning tree in the graph.

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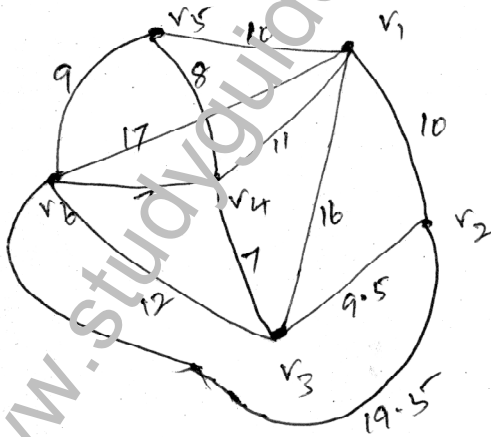
BCA1M2/BIT1M2/ BCE2M3/BSO2M3

B.Sc./B.C.A. DEGREE EXAMINATION , APRIL 2011

First Semester

Computer Science/Computer Applications/ I.T./Software

COBOL PROGRAMMING AND BUSINESS APPLICATIONS

(Non-CBCS—2004 onwards)

[Common for Computer Science/Computer Applications/ I.T./Software]

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer all questions.

1. What is User-defined word ?

2. What is the last statement of a COBOL program ?

3. List out the picture clause used for data description.

4. State the use of level number 66.

5. Name the clause that is associated with table handling.

6. Give the syntax of MOVE statement.

7. Name the file which must be opened with I-O mode.

8. What do you mean by master file ?

9. What is meant by information ?

10. Define order processing.

Part B $(5 \times 6 = 30)$

Answer any **five** questions.

11. Give a brief note on liberal and figurative constants.

12. Write a program to find whether the given number is even or not.

2

13. Give the syntax of SEARCH verb. Explain with an example.

14. Explain RENAMES clause with an example.

15. Illustrate Nested IF statement with suitable example.

16. Write the syntax of MERGE statement with various options.

17. Write a note on multimedia.

Part C $(5 \times 12 = 60)$

Answer any **five** questions.

18. Give the syntax of various arithmetic verbs. Explain with examples.

19. Write a program to transpose the given matrix.

AFN-1534

20. Explain PERFORM verb and its various forms.

21. Explain different kinds of picture clauses in detail.

22. With an example, illustrate vested IF statement and
     GOTO . . . DEPENDING ON.

23. Write a program to sort a student file. on student
     register number.

24. Describe indexed sequential file organization.

25. Discuss, in detail, any two applications of computer.

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B.Sc./B.C.A. DEGREE EXAMINATION, APRIL 2011

First Semester

Computer Science/Computer Applications/I.T./ Software

DIGITAL ELECTRONICS

(Non-CBCS—2004 onwards)

[Common for Computer Science/Computer Applications/ I.T./Software]

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer **all** questions.

Choose the correct answer.

1. Convert 10.10001_2 to decimal :

    (a) 2.53152   (b) 2.53125

    (c) 2.51352   (d) 2.53521

2. Transmitting a large number of information units over a smaller number of channels or lines is called :

    (a) Multiplexing.   (b) Demultiplexing.

    (c) Encoding.   (d) Decoding.

3. PLA refers to :

    (a) Programmable Linked Array

    (b) Programmable Logic Array.

    (c) Procedure Logic Array.

    (d) Procedure Logic Application.

4. An electronic circuit that has two stable states :

    (a) Buffer register.

    (b) Setup time.

    (c) Flip-Flop

    (d) Hold time.

AFN-1535

5. The amount of time it takes for the output to change states after an input trigger :

   (a) Propagation delay.

   (b) Setup time.

   (c) Hold time.

   (d) Synchronous

Fill in the blanks :

6. An asynchronous counter in which each flip-flop is triggered by the output of the previous flip-flop is _____.

7. A basic counter synchronous or asynchronous that is capable of counting either in upward or a downward direction is _____.

8. DAC refers to ——————— ———————.

9. The process of converting a number of digital input signals to one equivalent analog output voltage is ———————.

10. SAR refers to ———————————————— ——————— .

Answer any **five** questions.

Each question carries six marks.

11. Convert the following binary numbers to decimal then into octal.

   (a) 1110.10001 (b) 101110.0101 (c) 1110101.110.

12. Explain full adder with necessary diagram and truth table.

AFN-1535

13. Explain multiplexers with diagrams.

14. Explain RS flip-flop with circuit diagram and truth table.

15. Explain RTL and DTL circuits.

16. Discuss binary ladder with circuit diagram.

17. Write short notes on A/D accuracy and resolution.

Part C (5 × 12 = 60)

Answer any **five** questions.

Each question carries 12 marks.

18. Explain Canonical and standard forms.

19. Simplify the Boolean function :

$F(w, x, y, z) = \Sigma(1, 3, 7, 11, 15)$ and the don't care conditions
$d(w, x, y, z) = \Sigma(0, 2, 5)$.

AFN-1535

20. Explain binary adder and subtractor with necessary diagram.

21. Explain encoders with necessary diagram.

22. Explain shift registers-serial-in-serial out with with necessary diagrams.

23. Explain asynchronous counters with necessary diagrams.

24. Discuss bipolar transistor characteristics.

25. Explain D/A converter with necessary diagram.

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AFN-1535

B.Sc./B.C.A. DEGREE EXAMINATION, APRIL 2011

Computer Science/ Computer Applications/

I.T/Software

BASIC COMPUTER STSTEM ARCHITECTURE AND DESIGN

(Non-CBCS—2004 onwards)

[Common for Computer Science/ Computer Applications/ I.T/ Software]

Time : 3 Hours　　　　　　　　Maximum : 100 Marks

Part A　　　　(10 × 1 = 10)

Answer all questions.

1. A control function is a ——— variable.

2. The output generated by the compilier is called the ——— program.

3. The signed – 1's complements of – 14 is ——— if a word is 8 bits.

4. A sequence of microinstruction constitutes a ———
.

5. An item that is delected from stack is called ———— operation.

6. Expand RISC.

7. What is effective address ?

8. Define Strobe.

9. Define Address space.

10. What is meant by logical address ?

Part B (5 × 6 = 30)

Answer any **five** questions.

11. Briefly explain the complement and its types.

12. Explain defferent kinds of computer instructions formats.

AFN-1538

13. Explain control memory.

14. Explain Instruction pipeline.

15. Explain priority Interrupt briefly.

16. Explian the concept of page Replacement.

17. Write a not on Cache coherence.

Part C (5 × 12 = 60)

Answer any **five** questions.

18. Explain timing and control in detail.

19. Discuss Basic Computer Registers. With a diagram.

20. Explain microinstruction format with a neat diagram.

AFN-1538

21. Explain pipeline processing with an example.

22. Discuss Asynchronous serial transfer in detail.

23. Explain DMA controller with a neat diagram.

24. Describe the organization of associative memory with a neat diagram.

25. Explain Direct mapping process in Cache memory.

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AFN-1539

BCA/BCE/BIT/ BSO3M3

B.Sc. / B.C.A. DEGREE EXAMINATION, APRIL 2011

Computer Science/Computer Application/

I.T./Software

OBJECT–ORIENTED PROGRAMMING IN C++

[Common for Computer Science / Computer Application / I.T. / Software]

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 2 = 20)

Answer all questions.

1. Write any four names of object–oriented languages.

2. Write any two applications of OOP.

3. What is Pointer ?

4. What is the use of scope resolution operation ?

5. What is class ?

6. How do you identify a functions is a constructor ?

7. Write the definition of single inheritance.

8. State the use of set w ( ).

9. Write the syntax of open ( ) function.

10. What is template ?

Part   3 $(5 \times 4 = 20)$

Answer any **five** questions.

11. Mention the disadvantage of procedure oriented programming.

12. Write the syntax of friend function. Explain its characteristics.

AFN-1539

13. Illustrate the use of inline functions with suitable example.

14. What is copy constructor ? Give an example.

15. Explain how do you achieve polymorphism.

16. Give the declaration of function template with an example.

17. Write a note an error handling functions.

Answer any **five** questions.

18. Discuss the difference between OOP and POP.

19. Explain the following :

   (i) Return by reference.

   (ii) Function prototyping.

   (iii) Function overloading.

20. Write a program to overload + operator to add two complex class objects.

21. What is type conversions ? Explain the situations with suitable example.

22. Explain the following :

   (a)   Managing console I/O operations.

   (b)   Hybrid inheritance.

23. Explain exception handling mechanism in detail.

24. Write a program to illustrate the concept command – line arguments.

25. Explain the following :

    (a)   Class template.

    (b)   Function template.

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B.Sc./B.C.A. DEGREE EXAMINATION, APRIL 2011

Fourth Semester

Computer Applications/Information Technology

PROGRAMMING IN JAVA

[Common for Computer Applications/Information Technology]

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer all questions.

1. ——— contains data and code to manipulate that data.

2. ———— supports the concept of hierarchical classification.

3. An applet can run only within a ———.

4. ——— is a group of contiguous or related data items that share a common name.

5. A class that cannot be subclassed is called a ———— class.

6. ———— is a dynamic array which can hold objects of any type and any number.

7. Every applet has its own area of the screen known as ————, where it creates its display.

8. ————— is the method in which the thread's behaviour can be implemented.

9. The ability of a language to support multithreads is referred to as ————.

10. When an applet is opened by the browser, the method ———— is automatically called.

AFN-1540

Part B $(5 \times 6 = 30)$

Answer any **five** questions out of seven.

11. Explain Java Virtual Machine.

12. Discuss on general structure of a java program.

13. Write short notes on Type conversions.

14. Explain constructors with an example.

15. Explain the similarities between interfaces and classes.

16. Explain any four methods of Thread class.

17. Explain the Applet life cycle in detail.

AFN-1540

Part C $(5 \times 12 = 60)$

Answer any **five** questions.

18. Explain various control statements in Java with examples.

19. Write a Java program to find the sum of the series
$$\text{sum} = 1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + ... \text{ using}$$

    (a) for loop.

    (b) do – whole loop.

20. Write a Java program to arrange the given matrix of order $m \times n$ row wise ascending order.

21. Explain interface in detail with an example.

22. Explain the life cycle of a thread.

23. Discuss about creating and designing a web page.

24. Write short notes on :

   (a) Graphics class.

   (b) Line Graphs.

25. Write a Java program to create a package named "Student". Assume your own data.

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AFN-1540

B.C.A./B.Sc. DEGREE EXAMINATION, APRIL 2011

Computer Science/Computer Applications/ Software

COMPUTER ORIENTED NUMERICAL METHODS

(Non-CBCS—2004 onwards)

[Common for Computer Science/Computer Applications/ Software]

Time : 3 Hours   Maximum : 100 Marks

Section A   (10 × 1 = 10)

Answer **all** questions.

1. Write the iterative procedure of Gauss Seidal Method.

2. Give the steps involved in Horner's Rule.

3. List the normal equations of Least Square.

4. State the Newton Forward Interpolation formula.

5. Write down the relation between Δ and E.

6. Construct the divided difference table.

7. State Simpson's $\frac{1}{3}$ Rule.

8. Give the Trapezoidal formula.

9. Write the formula of Miline's Method.

10. Give the predictor - corrector formula.

Section B $(5 \times 6 = 30)$

Answer any **five** questions.

11. Find the positive real root of $x^3 - x = 1$ by Bisection Method.

12. Find the real root of $x - \cos x = 0$ by Newton Raphson Method.

AFN-1541

13. Using Least Square method to fit a straight line for the following data :

X :	10	15	25	35	50	70
Y :	12	18	14	17	60	55

14. Find the 7th term of the sequence 2, 9, 28, 65, 126, ... and also find the general term.

15. From the following table find $f(x)$.

x	:	1	2	7	8
$f(x)$	:	1	5	5	4

16. Evaluate $\int_{4}^{5.2} \log_e x \, dx$ using Simpson's $\frac{1}{3}$ Rule with $h = 0.2$.

AFN-1541

17. Using Taylor series method, find correct to four decimal places, the value of $y(0.1)$, given $\dfrac{dy}{dx} = x^2 + y^2$ and $y(0) = 1$.

<div align="center">Section C</div> $(5 \times 12 = 60)$

<div align="center">Answer any five questions.</div>

18. Solve by Crout's Method, the following equations

$x + y + z = 3, \ 2x - y + 3z = 16, \ 3x + y - z = -3$.

19. Solve by Gauss-Seidel Method.

$8x - 3y + 2z = 20, \ 4x + 11y - z = 33,$

$6x + 3y + 12z = 35$

20. Find the eigenvalues and eigenvectors of the matrix

$$\begin{pmatrix} -2 & 7 & 8 \\ 7 & -3 & 2 \\ 1 & -4 & 5 \end{pmatrix}.$$

AFN-1541

21. Using Lagrange's Interpolation formula, find the age corresponding to the annuity value 13.6 given the table.

Age (x)	:	30	35	40	45	50
Annuity Value (y)	:	15.9	14.9	14.1	13.3	12.5

22. By dividing the range into ten equal parts, evaluate $\int_{0}^{\pi} \sin x \, dx$ by Trapezoidal and Simpson's rule. Verify your answer with integration.

23. Compute $y(0.3)$ given $\dfrac{dy}{dx} + y + xy^2 = 0$, $y(0) = 1$ by taking $h = 0.1$ using Runge-Kutta fourth order method.

24. Using Milne's method find $y(4.4)$ given $5xy^1 + y^2 - 2 = 0$ given $y(4) = 1$, $y(4.1) = 1.0049$, $y(4.2) = 1.0097$, and $y(4.3) = 1.0143$.

25. Using Improved Euler method find y at $x = 0.1$ and y at $x = 0.2$ given $\dfrac{dy}{dx} = y - \dfrac{2x}{y}$, $y(0) = 1$.

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AFN-1541

B.Sc./B.C.A. DEGREE EXAMINATION, APRIL 2011

Computer Application / Computer Science

Information Technology/Software

OPERATING SYSTEMS

[Common for Computer Application / Computer Science/ Informational Technology / Software]

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part A $(10 \times 1 = 10)$

Answer all questions.

1. What is multiprocessing ?

2. What are the general categories of process State ?

3. What is Synchronous message ?

4. Define circular waiting.

5. Expand KMOS.

6. Write any two file attributes.

7. What is Polling ?

8. What is called digital signature ?

9. Define UMA.

10. What does the dump command in UNIX do ?

<div align="center">

Part B $(5 \times 6 = 30)$

Answer any **five** questions.

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11. Write a note an batch Operating System ?

12. What are the process control block ?

13. Write short notes on fragmentation.

AFN-1542

14. Discuss on synchronous and asynchronous message.

15. Write short notes on virtual memory.

16. Discuss on :

      (a)   Hypercube.

      (b)   Three dimensional topology.

17. What are the authentication ?

<div align="center">

Part C $(5 \times 12 = 60)$

Answer any **five** questions.

</div>

18. Explain the different views of the Operating systems.

19. Discuss on the various scheduler.

20. Write about the paging.

AFN-1542

21. Explain the Semaphores.

22. Explain the following :—

       (a)   Butter register.

       (b)   Command register

       (c)   Interrupt service routine.

23. Explain the RSA algorithm.

24. Discuss on the protection and access control.

25. Describe the PC-DOS operating system.

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B.C.A./B.Sc. DEGREE EXAMINATION, APRIL 2011

Computer Applications / Computer Science /

Information Technology/Software

DATABASE MANAGEMENT SYSTEM

[Common for Computer Applications / Computer Science /

Information Technology /Software]

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer all questions.

1. Define DBMS.

2. Define Weak entity set.

3. What is Datalog ?

4. What is QBE ?

5. When a domain is atomic ?

6. What is WORM ?

7. What is block ?

8. List out the two basic kinds of indices.

9. List out the storage types.

10. What is LAN, WAN ?

Part B $(5 \times 6 = 30)$

Answer any **five** questions.

11. Explain the major components of an Entity-Relationship diagram.

12. Write a short note on record-based data Models.

AFN-1543

13. Explain Domain Constraints.

14. Explain triggers.

15. Explain object identity and pointers of a persistent object.

16. Compare Ordered indexing and Hashing.

17. Explain checkpoints.

Part C $(5 \times 12 = 60)$

Answer any **five** questions.

18. Explain the Overall System structure with a diagram.

19. Explain mapping constraints.

20. Explain Functional Dependencies.

AFN-1543

21. Explain tuple relational calculus.

22. Explain Object Oriented Data model.

23. Explain organization of records in files.

24. Describe Static hashing.

25. Describe Advanced recovery techniques.

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B.C.A./B.Sc. DEGREE EXAMINATION, APRIL 2011

Information Technology / Computer Applications Software

COMPUTER GRAPHICS AND MULTIMEDIA SYSTEM

(Non-CBCS—2004 onwards)

Time : 3 Hours　　　　　　　　　Maximum : 100 Marks

Section A　　　　(10 × 1 = 10)

Answer **all** questions.

Choose the correct answer :

1.　The buffer holding the display list is usually called a ————.

　　(a)　Information Buffer.

　　(b)　Carbage Buffer.

　　(c)　Refresh Buffer.

　　(d)　All the above.

2.　Good graphics pKg simplifies the program task and make it possible to write ————.

　　(a)　Normal program.

　　(b)　Portable program.

(c)   Program.

(d)   All above.

3.   A sequence of transformation can be combined into one transformation by the ————.

(a)   Graphics Process.

(b)   Software Process.

(c)   Concatenation Process.

(d)   H/W process.

4.   The Acoustic Tablet depends on the use of ———— which are mounted along two adjacent edges of the tablet.

(a)   Strip Microphone.

(b)   Microphone.

(c)   Ceramic Microphone.

(d)   All the above.

5. The Perspective transformation units of measurement of parameter ————.

   (a) S and D.

   (b) D and S.

   (c) DS.

   (d) All the above.

6. Technique for achieving Realism for basic problem addressed by visualization technique is ————.

   (a) Depth cueing.

   (b) Cueing.

   (c) Depth.

   (d) All the above.

7. DHTML :

    (a)   Dynamic Hyber text Markup Language.

    (b)   Dynamic Hypertext Markup Language.

    (c)   Dynamic Hebertext Markup Language.

    (d)   Dynamic Hepertext Markup Language.

8. Read only memory is not ————.

    (a)   Volatile.

    (b)   Non-volatite.

    (c)   Input / Output.

    (d)   ROM.

9. MIDI stands for ————.

    a)   Musical Instrument Digital Interaction.

    (b)   Musical Instrument Digital Interface.

AFN-1545

(c)   Musiecal Instrument Digital Interface.

(d)   All the above.

10.   SECAM is ————.

(a)   Sequential Colar and Menu.

(b)   Sequential Colar and Memory.

(c)   Segment Colour and Memory.

(d)   Segment Colour and Memory.

Section B   (5 × 6 = 30)

Answer any **five** questions.

11.   How do we display stright line ? How are curves drawn on the display ?

12.   Describe the Graphics hardware.

13.   Explain the Geometric modeling.

14. Describe the application of Raster scan graphics.

15. Describe the details of animations.

16. Explain the Architecture of distributed multi media system.

17. Explain operating system support for continuous media applications.

Section C $(5 \times 12 = 60)$

Answer any **five** questions.

18. Explain the basic Raster graphics algorithm for 2-D primitives.

19. Explain how to implement instance transformations.

AFN-1545

20. Explain the following :

   (a)   Viewing 3D objects.

   (b)   Object hierarchy and simple PHICS.

   (c)   Input devices.

21. Write about the basic rules of Animations.

22. Explain Architecture and issues for distributed multimedia system in detail.

23. Briefly explain the image compression.

24. Briefly explain the multimedia interchange, and knowledge based multimedia systems.

25. Explain in detail the Multimedia Authoring Tools.

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AFN-1545

B.C.A./B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Computer Applications Computer Science/I.T./Software

SOFTWARE ENGINEERING

(Non-CBCS—2004 onwards)

[Common For Computer Applications Computer Science/I.T./ Software]

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer **all** questions.

1.   Define Software.

2.   Define Software Reliability

3.   How software cost can be made ?

4. What is the objective of algorithmic cost estimates.

5. What are the STACK operations ?

6. What is data dictionary ?

7. What is meant by HIPO diagrams ?

8. What do you mean by decision table ?

9. What are formal verification ?

10. What is verification ?

Part B   (5 × 6 = 30)

Answer any **five** questions.

11. Describe Small and Large projects.

12. What are the factors influence quality and productivity ?

13. Explain Product complexity.

14. Describe desirable properties in software requirements specification.

15. Explain HIPO diagrams.

16. Describe walk throughs.

17. Write the *four* categories of tests.

Part C   (5 × 12 = 60)

Answer any **five** questions.

18. Discuss managerial issues in a software project.

19. Explain planning a software project.

20. What are major factors influence software cost and explain.

21. Discuss fundamental design concepts.

22. Explain all design notations.

23. Discuss format of a software requirement specification.

24. Explain software quality assurance.

25. Write all the development activities that enhance software maintain ability.

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B.C.A. / B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Computer Application/Computer Science

INTERNET CONCEPTS AND MARKUP LANGUAGES

(Non-CBCS—2004 onwards)

[Common for Computer Application / Computer Science]

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer **all** questions.

1. For a browser to read your file properly, save it with a
    file name with extension ———— or ————.

2. Two major components of HTML are ———— and
    ————.

3. A URL is a uniform way to refer to ————— and ————— on the internet.

4. A telnet protocol allows a user to open an interactive terminal session on a remote host computer. (True/False)

5. ————— and ————— attributes provide great flexibility for creating style rules.

6. ————— provides two main ways to define media types for style sheets.

7. The expansion of CGI is —————.

8. Linux is a popular web hosting platform (True/False).

9. ————— is the only browser supporting ECMA script in full.

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10. Real Audio data is delivered in an interleaved fashion (True/False).

Part B $(5 \times 6 = 30)$

Answer any **five** questions.

11. Explain the phases of web site development.

12. Explain block-level elements.

13. Explain relative URLS.

14. Explain GIF images.

15. Explain Font properties in style sheet formation.

16. Write short note on Java Script.

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17. Explain embedding XML into HTML documents.

Answer any **five** questions.

18. Explain the implementation phase of the web publishing process.

19. Describe < META > element.

20. Explain the approaches used to insert objects into a web page.

21. Describe Frames in detail.

22. Write a detailed note on Video Support.

23. Describe the working of a common Gateway interface.

24. Describe the script events defined in HTML 4.

25. Explain the basic principles and components of SGML.

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B.C.A. / B.Sc. DEGREE EXAMINATION, APRIL 2011

Sixth Semester

Computer Applications/Information Technology

LINUX PROGRAMMING

(Non-CBCS—2004 onwards)

[Common For Computer Applications / Information Technology]

Time : 3 Hours   Maximum : 100 Marks

Part A   (10 × 1 = 10)

Answer all questions.

1. Minix is a —————.

2. Multiprogramming is another name for —————.

3. The directory that holds all other directories in Linus is —————.

4. ———— Command is used to remove a file.

5. Echo command is used to ———— a string.

6. The expansion for grep is ———.

7. The output of one process is given as input to another process is knows as ————.

8. Message queue is created using ———— function.

9. ———— is an open source RDBMS application.

10. Signals are raised by some ———— conditions.

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Part B (5 × 6 = 30)

Answer any **five** questions

11. Explain about Minix History.

12. Explain Multitasking and Multiuser operating systems.

13. Explain how do you change file permissions.

14. Explain the 'case' statement in shell programming.

15. Write a shell program to find whether the file is a directory or not.

16. Write short note on message queues.

17. Describe briefly about the 'X' server system.

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Answer any **five** questions.

18. Write short notes on :

    (a) Booting Linux

    (b) Linux distributions.

19. Explain in detail about environment variables and parameter variables.

20. Explain the following commands :—

    (a) pwd

    (b) cd.

    (c) cat.

21. Write a shell program to find the sum of digits of a given number.

22. Explain the following statements in Linux :—

    (a) The ' for ' statement

    (b) The 'while' statement.

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23. Explain in detail about processes.

24. Explain how do you create a database and a table using MYSQL.

24. Explain how signals are used in Linux.

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