B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

First Semester

Computer Science

MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Section - A   (10 × 1 = 10)

Answer **all** questions.

1. Define Contradiction.

2. Construct the truth table for $P \vee \neg Q$.

3. Obtain the PDNF of $\neg P \vee Q$.

4. Give the rules of Inference.

5. Define the degree of the vertices in a graph.

6. Give an example of subgraphs.

7. Define Hamiltonian graph.

8. When do you say that a tree is spanning tree ?

9. State distributive lattice.

10. Give an example of Equivalence relation.

Section - B   (5 × 6 = 30)

Answer any **five** questions.

11. State and prove DeMorgan's Law.

12. Show that $(P \to Q) \rightleftharpoons (\neg P \vee Q)$ is a tautology.

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13. Obtain CNF of the following :

$\neg(P \vee Q) \leftrightarrow (P \wedge Q)$

14. Prove that $R \to S$ can be derived from the premises $P \to (Q \to S)$, $\neg R \vee P$ and Q.

15. Show that in any graph there is an even number of odd degree vertices.

16. Explain cut set and cutvertices with an example.

17. For any a, b, in A.

    prove that (i) $a \vee (a \wedge b) = a$;

    (ii) $a \wedge (a \vee b) = a$

Answer any **five** questions.

18. Obtain the PDNF of the following :

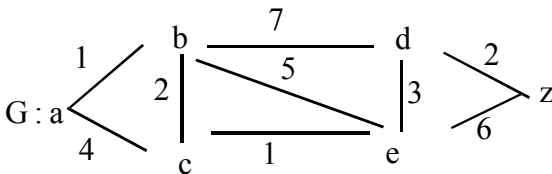   (i) $P \rightarrow ((P \rightarrow Q) \wedge \neg(\neg Q \vee \neg P))$

    (ii) $(\neg PV \vee \neg Q) \rightarrow (P \leftrightarrow \neg Q)$.

19. Show that :

    $(x)(p(x) \rightarrow Q(x) \wedge (x)(Q(x) \rightarrow R(x) \Rightarrow (x)(p(x) \rightarrow R(x))$

20. Prove that a connected graph G is Eulerian if and only if every vertex of G has even degree.

21. Explain Dijkstra's Algorithm and find a shortest path from a to z in G using Dijkstra's Algorithm.

22. Show that any connected graph with 'n' vertices and $(n-1)$ edges in a tree.

23. Define spanning tree. Prove that every connected graph has at least one spanning tree.

24. Prove that in a Lattice both the join and meet operations are associative.

25. Show that in a distributive lattice, if an element has a complement then this complement is unique.

———— *** ————

B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

First Semester

Computer Science

PROGRAMMING IN C

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. ———— bytes are required for storing a double variable.

2. State the difference between get C () and getchar () in C.

3. ——— function finds the square root of a value in C.

Say True or False

4. & Operator is used to perform logical AND operation in C.

5. A ————— is a variable that contains the address of a variable in C.

6. A sequence of characters in double quotes is called as —————.

Say True of False

7. 'Size of' is a unary operator in C.

8. How will you transfer a complete structure to a function ?

9. Name the two categories of stream - oriented data files.

Say True or false

10. Printf ( ) performs unformatted write operation in C.

Part - B (5 × 6 = 30)

Answer any **five** questions.

11. List out the various data types in C. Give examples.

12. Explain the uses of the following in C :

(a) Exit. (b) Continue.

13. State the use of the following in C :

(a) Automatic variables.

(b) Static variables.

14. Write a program in C to find whether the given number is even or not.

15. Explain with an example how you will pass structures to functions.

16. Discuss about pointers to structures.

17. Explain about the command line parameters in C.

Part - C   (5 × 12 = 60)

Answer any **five** questions.

18. Describe the various types of operators in C.

19. Explain with an example :

    (a) do-while loop.

    (b) for-loop.

20. Define recursion. Write a program in C using recursion.

21. How will you pass arguments to a function ? Give an example.

22. Write a program in C to declare a two - dimensional array, also include the code to accept and display its values.

23. Describe dynamic memory allocation. Write a program in C to create a linked list with each node containing two fields i.e., rollno and name.

24. Write a program in C to define structure with the following fields : empno., name, department, designation and salary. Read and display data using pointer to structures.

25. Explain in detail the steps involved in file operations.

————— *** —————

B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Second Semester

Computer Science

PROBABILITY AND STATISTICS

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. Write down the relation between mean, median and mode.

2. Define Kurtosis.

3. Give the formula of Standard Deviation.

4. Write the formula of Rank Correlation.

5. List the equations of Regression.

6. State the formula of Lagranges method.

7. Differentiate interpolation and entrapolation.

8. Give one example of discrete random variable.

9. Define m.g.f.

10. Find Mean of Poisson distribution.

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

Answer any **five** questions.

11. Find the Coefficient of Quartile Deviation for the following data :

X	:	10	20	30	40	50	60
Y	:	7	8	9	4	3	2

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12. Verify the relation between the three means for the following data :

X	:	5	15	25	35	45	55	65
Y	:	7	8	2	4	6	7	9

13. Prove that $r = \sqrt{bxy\ byx}$.

14. From the following data interpolate the value of Y when X = 1.5.

X	:	1	1.2	1.4	1.6	1.8	2.0
Y	:	5	6	7.5	9.5	12.0	16.0

15. State and prove addition theorem of m.g.f.

16. Find the constant K for following p.d.f.

$$f(x) = \begin{cases} Kx^2, 0 < x < 3 \\ 0, \quad \text{elsewhere.} \end{cases}$$

17. Obtain m.g.f. of Poisson distribution.

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

Answer any **five** questions.

18. Calculate the Coefficient of Skewness for the following data :

Class :	0-20	20-40	40-60	60-80	80-100
f :	7	8	9	4	6

19. Compute the Spearman's Rank Correlation for the following data :

X	: 70	80	90	65	100	45	75	45
Y	: 40	70	95	40	60	25	35	25

20. State and prove Baye's theorem.

21. Prove that (i) $E(x + y) = E(x) + E(y)$.

    (ii) $E(xy) = E(x)E(y)$.

22. Find m.g.f. of Binomial and Poisson distribution and its moments.

23. Calculate trend values by the method of least square from the data given below and estimate the sales for 2005 :

Year	:	1998	1999	2000	2001	2002
Sales of Company (Rs.Lakhs)	:	70	74	80	86	90

24. The following tables gives the normal weight of babies during the first twelve months of life :

Age (in months)	:	0	2	5	8	10	12
Weights (lb)	:	7.5	10.25	15	16	18	21

25. The continuous random variable x has the following p.d.f. :

$$f(x) = \begin{cases} Kx(2-x), & 0 \le x \le 2 \\ 0, & \text{otherwise} \end{cases}$$

   (i)   Find k.

   (ii)   Find mean, variance, median and mode.

——— *** ———

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B.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Second Semester

Common for Computer Science/Software

MICROPROCESSORS AND INTERFACING

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1.   What is address bus ?

2.   What is microprocessor ?

3.   What is stack ?

4.   What is decoder ?

5.   What is synchronous data transfer ?

6.   What is direct addressing ?

7.   What are the two main types of semiconductor memory ?

8.   What is static RAM ?

9.   List out the flags in 8086.

10.   The 8086 uses ———— address lines.

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

Answer any **five** questions.

11.   Explain the minimum mode of operation in 8086.

12.   Explain pipelining. What are its advantages ?

13.   Explain the operating principles of a Raster scan CRT display.

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14. Explain the working principle of a dot matrix printer.

15. Explain the different operating modes of 8255.

16. Explain the registers organization of 80386.

17. Explain different applications of 8253.

Part - C   (5 × 12 = 60)

Answer any **five** questions.

18. Explain about the architecture of 8088.

19. Write an assembly language program to add two 8 - bit numbers, the sum may be of 16 bits.

20. Explain the features of 8257 DMA controller with a neat diagram.

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21. Explain the important features of 80286.

22. Explain about the various types of printers.

23. Explain about the addressing modes of 8086 with examples.

24. Explain 8251 USART with a neat diagram.

25. Write short notes on :

(i) Stacks and subroutines,

(ii) Modems.

——— *** ———

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B.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Third Semester

Computer Science and Information Technology

RESOURCE MANAGEMENT TECHNIQUES

Common for Computer Science / Information Technology

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. Write the main characteristics of Operations Research.

2. State any two applications of Operations Research.

3. State the standard form of LPP.

4. Define Artificial variable.

5. What do you mean by primal and dual problem ?

6. Obtain the dual of the following L.P.P.

   Maximize $Z = 2x_1 + 3x_2$

   subject to

   $$x_1 + x_2 \leq 4$$
   $$2x_1 - 3x_2 \geq 3$$
   $$x_1, x_2 \geq 0$$

7. What is an un-balanced assignment problem ?

8. Write the difference between Transportation problem and Assignment problem.

9. What is meant by transportation problem ?

10. What is meant by basic feasible solution to the transportation problem ?

Answer any **five** questions.

11. Briefly describe the scope of Operations Research.

12. A company produces two types of Hats. Each hat of the first type require twice as much labour time as the second type. If all hats are of the second type only, the company can produce a total of 500 hats a day. The market limits daily sales of the first and second type to 150 and 250 hats. Assuming that the profits per hat are Rs. 8 for type A and Rs. 5 for type B, formulate the problem as a linear programming model in order to determine the number of hats to be produced of each type as so to maximize the profit.

13. Solve by graphical method.

   Maximize $Z = 3x_1 + 4x_2$
   subject to the constraints

   $$4x_1 + 2x_2 \leq 80$$
   $$2x_1 + 5x_2 \leq 180$$
   $$x_1, x_2 \geq 0.$$

14. Describe simplex method of solving Linear Programming Problem.

15. Write the computation procedure of Branch and Bound algorithm.

16. Solve the following Assignment problem :

Machine

$$\text{Jobs} \begin{array}{c} J_1 \\ J_2 \\ J_3 \end{array} \begin{array}{ccc} M_1 & M_2 & M_3 \\ \begin{bmatrix} 10 & 8 & 12 \\ 18 & 6 & 14 \\ 6 & 4 & 2 \end{bmatrix} \end{array}.$$

17. Obtain an initial Basic feasible solution to the Transportation problem using Vogel's Approximation method.

	Destination			Supply
	P	Q	R	
A	5	7	8	70
Origin B	4	4	6	30
C	6	7	7	50
Demand	65	42	43	

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Answer any **five** questions.

18. Solve the following LPP by simplex method.

    Minimize $Z = 5x_1 + 3x_2$

      subject to

$$x_1 + x_2 \leq 2$$
$$5x_1 + 2x_2 \geq 10$$
$$3x_1 + 8x_2 \leq 12$$
$$\text{and } x_1, x_2 \geq 0$$

19. Use Big - M method to solve the LPP

    Minimize $Z = 12x_1 + 20x_2$

      subject to the constraints

$$6x_1 + 8x_2 \geq 100$$
$$7x_1 + 12x_2 \geq 120$$
$$x_1, x_2 \geq 0$$

20. Use two - phase simplex method to :

Maximize $Z = 6x_1 - 4x_2$

    Subject to the constrains

$$2x_1 + 3x_2 \leq 30$$
$$3x_1 + 2x_2 \leq 24$$
$$x_1, x_2 \geq 3$$
$$\text{and } x_1, x_2 \geq 0$$

21. Use dual simplex method to solve the following L.P.P

Maximize $Z = 3x_1 - 2x_2$

    subject to the constraints

$$x_1 + x_2 \leq 5$$
$$x_1 \leq 4$$
$$x_2 \leq 6$$
$$\text{and } x_1, x_2 \geq 0$$

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22. Find the Optimum integer solution to the following all I.P.P.

Maximize $Z = x_1 + 2x_2$

   subject to the constraints

   $2x_2 \leq 7$
   $x_1 + x_2 \leq 7$
   $2x_2 \leq 11$
   $x_1, x_2 \geq 0$ and x_1, x_2 are integers

23. Use branch and bound method to solve the following I.P.P.

Minimize $Z = 4x_1 + 3x_2$

   subject to the constraints

   $5x_1 + 3x_2 \geq 30$
   $x_1 \leq 4$
   $x_2 \leq 6$
   $x_1, x_2 \geq 0$ and are integers

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24. Solve the Travelling - Saleman Problem in the matrix shown below.

To

	A	B	C	D	E
A	∞	4	7	3	4
B	4	∞	6	3	4
C	7	6	∞	7	5
D	3	3	7	∞	7
E	4	4	5	7	∞

From

25. Solve the following Transportation Problem.

	D_1	D_2	D_3	D_4	Supply
S_1	14	56	48	27	70
S_2	82	35	21	81	47
S_3	99	31	71	63	93
Demand	70	35	45	60	

——— *** ———

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B.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Fifth Semester

Computer Science

PROGRAMMING IN JAVA

(Non-CBCS—2004 onwards)

Time : 3 Hours　　　　　　　　　　Maximum : 100 Marks

Part - A　　　　　　　$(10 \times 1 = 10)$

Answer **all** questions.

1.　————— is a Threaded program, automatically executed for removing No longer needed objects from the memory.

2.　The way of wrapping the data and its associated function into a single unit is known as —————.

3.　————— type of expression is used in the *switch* header.

4.　————— Operator has lower most precedence in Java.

5. The super class members are invoked in sub classes by using ———— keyword.

6. The ———— class cannot be instantiated.

7. An user defined thread class can also defined by implementing ————.

8. The ———— members can be accessed from anywhere is the program statement.

9. The Applet programs are invoked by ———— tag in HTML.

10. Font class is available in ———— package.

Part - B   (5 × 6 = 30)

Answer any **five** questions.

11. Explain the role of' Java Virtual Machine."

12. Differentiate between C++ and Java Programming.

13. Develop a Java program to display the given number in reverse manner.

14. Explain the Mathematical functions in Java.

15. Differentiate between Overloading and Overiding of methods.

16. Explain the various access controls in Java.

17. Write a brief note on Graphic class.

Answer any **five** questions.

18. Describe the various Java Tokens with an example.

19. What is control statement ? Explain the various control and looping statements with suitable example.

20. Explain the following

    (a) Arrays

    (b) Hierarchical Inheritance.

    (c) String class

21. What is package ? Explain with a suitable example of access protection in packages.

22. What is Thread ? Describe the ways of creating threads with suitable examples.

23. What is Synchronisation ? Explain with a programming example.

24. Explain the following :

   (a) Applet life cycle

   (b) Web browsers

   (c) Exception class

25. Develop the following Applet program :

   (a) Display a circle and a rectangle on the applet viewer window.

   (b) Find the sum of the digits of the given number by passing parameter

———— *** ————

B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Fifth Semester

Computer Science

CONCEPTS OF TCP/IP

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. ISDN stands for ————.

2. ARPA stands for ————.

3. ————— allows conferences to occur without the participants being in the same place.

4. Router uses ———— address.

   (a) Physical address.

   (b) IP address.

   (c) B address.

   (d) All the above.

5. The TCP/IP protocol that supports electronic mail on the internet is called ————.

6. SMTP stands for ————

7. Which IP address class has few hosts per network ?

   (a) A

   (b) B

   (c) C

   (d) D

8. The data unit in the TCP/IP data link layer is called a

   (a) Message.

   (b) Segment.

   (c) datagram.

   (d) frame.

9. The internet protocols include a second file transfer server is known as ————.

    (a) TFTP.

    (b) FTP.

    (c) FTP/IP.

    (d) UDP.

10. MIME stands for ————.

Part - B   (5 × 6 = 30)

Answer any **five** questions.

11. What is a connection option? Explain.

12. What is mixed intranet access solution? Explain.

13. Write a brief note on TFIP.

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14. Write the application of TCP/IP.

15. What is NFS? Explain.

16. Explain the salient features of PING.

17. Write about IP routing algorithm.

Part - C   (5 × 12 = 60)

Answer any **five** questions.

18. Write a detailed note on internet access solution.

19. Explain how a TCP/IP connection is established and terminated.

20. Describe about problems in data flow.

21. Explain Telnet and Login in detailed.

22. Give the overview of Internet.

23. Describe about web programming.

24. Write short notes on:

   (a) BNMP.

   (b) rlogin.

25. Explain the details of FTP.

———— *** ————

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AFN-1144	**BCE 632**

B.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Sixth Semester

Computer Science

COMPUTER GRAPHICS AND MULTIMEDIA SYSTEMS

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Section - A   (10 × 1 = 10)

Answer **all** questions.

1. DDA stands for ———— .

    (a) Digital Differential Analyzer

    (b) Digital Data Analyzer

    (c) Digital Difficult Analyzer

    (d) None.

2. Screen Memory is called —————.

(a) Buffer

(b) Frame Buffer

(c) Register

(d) None.

3. ————— are used to obtain 2D views of 3D objects.

(a) Projections

(b) Rejections

(c) Tablets

(d) None.

4. ————— is a Graphical Input device.

(a) CRT

(b) Printer

(c) Track ball

(d) None.

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5. Each frame of a scene is separately generated and stored in ———— Animation.

   (a) Frame by Frame

   (b) Quick

   (c) Short

   (d) None.

6. GCA stands for.

   (a) Graphics Command Assembler

   (b) Graphics Common Assembler

   (c) Graphics Community Assembler

   (d) None.

7. MIDI stands for ————.

   (a) Multi Instrument Digital Interface

   (b) Musical Instrument Digital Interface

   (c) Multimedia Interface Digital Instrument

   (d) None.

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8. ——————— contain attack, steady–state and Decay states.

   (a) Sound

   (b) Video

   (c) Image

   (d) None

9. Multimedia projects are available in.

   (a) CD–Roms

   (b) Hard disks

   (c) Floppy disks

   (d) None.

10. VOX is a ———————.

   (a) Virtual Memory

   (b) Conferencing Architecture

   (c) Network card

   (d) None.

Answer any **five** questions.

11. Explain how to draw Polygons and Rectangles using SRGP.

12. Explain 2D scaling with its matrix representation.

13. Write a note on Video RAM.

14. Explain how multimedia is used in Education.

15. Explain File system support for continuous media.

16. What do you mean by parallelism ? Explain.

17. Explain client control of continuous media.

Section - C   (5 × 12 = 60)

Answer any **five** questions.

18. Explain Midpoint circle generating Algorithm.

19. Describe 3–D composite transformation with their matrix representation.

20. Discuss Scan–converting primitives.

21. Explain the various Video compression techniques.

22. Explain the new operating system support for continuous media application.

23. Discuss the knowledge sources for multimedia interaction.

24. Explain Interaction–Technique Tool kits

25. Describe the various methods of controlling Animation.

———— *** ————

AFN-1144

AFN-1145

B.Sc. DEGREE EXAMINATION, NOVEMBER 2010
Computer Science/Software

IMAGE PROCESSING

(Common for Computer Science/Software)

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Section - A   (10 × 1 = 10)

Answer **all** questions.

1. ——— is the first process in digital image processing.

   (a) Image acquisition

   (b) Image enhancement

   (c) Compression

   (d) Image restoration.

2. Spatial resolution is determined by the ——— factor.

3. What does DFT stand for ?

4. A ———— process that provides a way to relate the spatial and frequency domain.

5. Name the two areas of color image processing.

6. Define restoration.

7. When will the compression ratio be $C_R = 1$?

8. How many basic types of detection of discontinuities ?

   (a) 4   (b) 3

   (c) 2   (d) 1

9. To represent the structural shape of a plane and to reduce it to a graph by

   (a) Signatures

   (b) Boundary segments

   (c) Skeletons

   (d) None.

10. A ———— is an arrangement of descriptories.

Answer any **five** questions.

11. Explain image formation in the Eye briefly.

12. Give the components of an image processing system

13. Explain the Fourier transformation property 'rotation'.

14. Explain a model of the image degradation and restoration process.

15. Write a note on binary image compression standards.

16. What is region growing ? Explain.

17. Write on texture.

Answer any **five** questions.

18. Discuss the fundamental steps in Digital Image Processing.

19. Write a detailed note on image sampling and quantization.

20. Explain Fourier transformation and its role.

21. Explain Histogram processing in detail.

22. What is the use of Geometric transformation ? Explain this technique.

23. Explain the concept of smoothing and sharpening.

24. Describe the image compression models

25. Explain the following representation techniques :

    (i) Chain codes

    (ii) Polygonal approximations.

—————— *** ——————

B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Sixth Semester

Computer Science/Information Technology

MOBILE COMMUNICATION

Common for Computer Science/ Information Technology

(Non-CBCS—2004 onwards)

Time : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. ———— are the physical representation of data.

2. ———— subdivide the frequency dimension into several non-overlapping frequency bands.

3. GSM stands for ————.

4. A ———— service is produced by combining two simplex bearers.

5. Several nodes, called stations, are connected to ————.

6. A beacon contains a time stamp and other management information used for power management and roaming.

True / False

7. The greatest problem for routing arises from ————.

   (a) highly dynamic lopology.

   (b) asymmetric links

   (c) redundant links.

   (d) interference.

8. Infrared transmission is suitable for ————.

9. The ———— service primitive indicates the reception of data.

10. The ———— primitive is used to request an operation to be executed by the server.

Answer any **five** questions.
Each question carries 6 marks.

11. Explain about cellular systems.

12. Explain the following :

(i) SDMA.

(ii) FDMA.

13. Explain the applications of satellite systems.

14. Distinguish between Infrared and Radio transmission waves.

15. Writte short note on Indirect TCP.

16. Explain in detail about wireless markup language.

17. Describe about wireless session protocol.

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

Answer any **five** questions.
Each question carries 12 marks.

18. Explain the concept of Multiplexing.

19. Write a detailed note on GSM.

20. Briefly explain about the Basics of Satillite Systems.

21. Explain about Hiperlan in detail.

22. Explain the functions of WATM.

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23. Describe about Adhoc networks.

24. Explain the following :

   (i) Mobile TCP.

   (ii) Snooping TCP.

25. Describe in detail about HTTP.

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B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Sixth Semester

Computer Science

SYSTEM ANALYSIS AND DESIGN

(Non-CBCS—2004 onwards)

Duration : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. What do you mean by interaction ?

2. What is meant by feasibility study ?

3. What is a data dictionary ?

4. Write any *two* varieties of closed questions.

5. Define Performance of a system.

6. What do you mean by feasibility report ?

7. Write any *two* developmental activities that are carried out during structured design.

8. What do you mean input design process ?

9. What is meant by portability in quality assurance ?

10. What is conversion ?

Part - B (5 × 6 = 30)

Answer any **five** questions.

11. Write a brief note on open or closed system.

12. Briefly explain about planning and control for system success.

AFN-1147

13. Briefly explain the feasibility consideration of feasibility study.

14. Explain about decision trees and decision tables with suitable examples.

15. Briefly explain about structured design.

16. Explain the activity network for system testing with a neat diagram.

17. Explain the various phases involved in reducing the maintainance costs.

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

Answer any **five** questions.

18. Describe the various phases in system development life cycle.

19. Explain, in detail, any two information gathering tools.

20. Explain the entity-relationship diagram with a suitable example and diagram.

21. Explain any three methods of determining cost and benefit determination.

22. Explain the audit considerations imposed on a well-designed system to ensure the proper operation of a system.

23. Explain the requirements of forms design.

24. Explain the quality assurance goals in the systems life cycle.

25. Describe the various factors and phases involved in hardware and software selection.

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B.Sc. DEGREE EXAMINATION, NOVEMBER 2010

Sixth Semester

Computer Science

LINUX PROGRAMMING

(Non-CBCS—2004 onwards)

Duration : 3 Hours   Maximum : 100 Marks

Part - A   (10 × 1 = 10)

Answer **all** questions.

1. What is Unix ?

2. Define Linux.

3. Linux applications are represented by two special type of files ———— and ————.

4. Vi works on ————, ————, and ———— modes.

5. What is shell ?

6. Every file in Linux system is assigned a unique number called an ————.

7. Name the three important device files found in UNIX and Linux.

8. What is Umask ?

9. What is signal ?

10. What is GTK + ?

Part - B   (5 × 6 = 30)

Answer any **five** questions.

11. Explain Linux history.

12. Explain Vi editors commands.

13. Explain File permission in Linux.

14. Write short note on environment variables in Linux shell programming.

15. Explain installation of Linux Kernel.

16. Explain pipes in linux programming.

17. Explain the data types available in MYSQL.

Part - C (5 × 12 = 60)

Answer any **five** questions.

18. Explain the following :

(i) Linux features.

(ii) Booting process of Linux.

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19.   Explain the following :

    (i)   Mounting File System.

    (ii) Precautionary steps for modifying Kernels.

20.   Describe the different types of files in Linux.

21.   Describe running on X-Window System.

22.   Describe control structures available in Linux Shell programming.

23.   Describe the standard I/O library functions in Linux.

24.   Describe message Queues in detail.

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25. Explain the following :

    (i)   X server.

    (ii)   GNOME Widgets.

    (iii)   Gimp Tool kit.

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