End Semester Examination, May 2015
BCA - First Semester
COMPUTER FUNDAMENTALS AND PROGRAMMING IN ‘C’ (BCA-101)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 a) MICR stands for:
   i) Magnetic ink character reader   ii) Magnetic ink code reader
   iii) Magnetic ink cases reader     iv) None of the above.

b) Which operation is not performed by a computer?
   i) Inputting   ii) Processing
   iii) Controlling   iv) Understanding

c) The binary equivalent of 74 is:
   i) 1001011   ii) 1001010
   iii) 1010101   iv) 1001101

d) Which of the following is not a logical operator?
   i) &            ii) &&
   iii) !!          iv) !

e) Which of the following can’t be checked in switch case?
   i) Character    ii) Integer
   iii) Float      iv) enum

f) Nested structures are allowed in ‘C’:
   i) Yes   ii) No

g) Which of the following are unary operators in ‘C’?
   i) !            ii) sizeof
   iii) ~          iv) &&

h) Name any two first generation computers:
   i) ________ is the father of computer.
   j) CD-ROM stands for ________.

1½x10

UNIT-I

Q.2 a) Explain any five input devices. 10
b) What is the difference between computer and human being? 5

Q.3 a) Explain any three output devices. 6
b) Compute the following: \[(11011.1101)_2 = (?), (?)_{10} = (?), (?)_{16}\] 9

UNIT-II

Q.4 a) What are various problem solving approaches? Explain them with their advantages and disadvantages. 10
b) Draw a flowchart to find out sum of \( n \) natural numbers. 5

Q.5 a) Differentiate between:
   i) Primary and secondary memory
   ii) Algorithm and flowchart 7½x2
UNIT-III

Q.6  a) Write a program to find reverse of a number and check whether it is palindrome or not?  
     b) What are various tokens available in ‘C’?  

Q.7  a) What do you mean by preprocessor directive? 
     b) What are various operators available in ‘C’ language?  

UNIT-IV

Q.8  a) What do you mean by array? What are its advantages and disadvantages?  
     b) Explain any two library functions in detail.  

Q.9  What is the difference between call-by-value and call-by-reference? Write a program to swap two numbers using both call-by-value and call-by-reference.
Q.1 a) In a throw of dice, what is the probability of getting number greater than 5?
b) If a set \( A \) has \( n \) elements, then the total number power set of \( A \) is ________.
c) Find the 7th term of sequence 2, 4, 6, 8 ________.
d) What is the value of \( \sin \frac{3\pi}{2} + \cos \frac{2\pi}{3} \).
e) If \( \sin(x + 20) = \cos x \), find the value of \( x \).
f) The value of \( \log_5(1/125) \) is ________.
g) If \( \log_{32} x = 0.8 \), then \( x \) is equal to ________.
h) If we differentiate: \( y = \frac{x^4}{4} + 2x^2 \), we get ________.
i) Evaluate: \( \int (5x^2 - 4x + 6dx) \)
j) The general term of G.P. is ________.

UNIT-I

Q.2 a) In a group of 65 people, 40 like cricket, 10 like both cricket and tennis. Find:
i) How many like tennis ii) How many like tennis only and not cricket.
b) Sum the series 0.3 + 0.33 + 0.333 + ... to \( n \) terms.

Q.3 a) The 5th term of a G.P is \( \frac{1}{3} \) and 9th term is \( \frac{16}{243} \). Find the 4th term.
b) Find the domain and range of the following functions:
i) \( y = \frac{x^2-1}{x-1}, \ x \neq 1 \) ii) \( y = \sqrt{x} \)

UNIT-II

Q.4 a) Prove that \( \sin^4 \theta - \cos^4 \theta = \sin^2 \theta - \cos^2 \theta \)
b) Solve for \( x \log(4x - 3) = \log(x + 1) + \log 3 \)

Q.5 a) Prove that \( \frac{16}{15} + 5 \log \frac{25}{24} + 3 \log \frac{81}{80} = \log 2 \)
b) In a bag, there are 100 bulbs out of which 30 are bad ones. A bulb is taken out of bag at random. Find the probability of the selected bulb to be good.

UNIT-III

Q.6 a) Evaluate: \( \lim_{x \to a} \frac{(x+2)^{5/3} - (a+2)^{5/3}}{x-a} \)
b) If \( y = \sqrt{1 + x^5} \); Prove that \( \frac{dy}{dx} = \frac{5x^4}{2y} \)

Q.7  

a) For what value of \( k \) is the following function continuous at \( x = 4 \): 

\[
f(x) = \begin{cases} 
\frac{x^2 - 16}{x - 4} & \text{if } x \neq 4 \\
k & \text{if } x = 4 
\end{cases}
\]

b) If \( y = (x - \sqrt{1 + x^2}) \); Prove that: \( (1 + x^2) \left( \frac{dy}{dx} \right)^2 = y^2 \)

UNIT-IV

Q.8  

a) Evaluate \( \int \frac{\sin x}{(1 + \cos x)^2} \, dx \)

b) Solve the differential equation \( \frac{dy}{dx} = x \log x \)

Q.9  

a) Solve the differential equation \( \frac{dy}{dx} = \frac{y - x}{y + x} \)

b) What is Algebraic structure? Explain Groups and Rings with examples.
End Semester Examination, May 2015  
BCA -First Semester  
BUSINESS COMMUNICATION-I (BCA-103)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2  

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit.  
Q.1 is compulsory. All questions carry equal marks.

Q.1 Choose / fill the correct option:  

a) Communication starts with  
i) Message ii) Sender iii) Channel iv) Feedback

b) The two broad areas of communications are:  
i) Oral and written communication.  
ii) Verbal and written communication.  
iii) Verbal and non-verbal communication.  
iv) Oral and non-verbal communication.

c) Which of the following are examples of written communication?  
i) Letters and Voicemail ii) Reports and email  
iii) Circulars and voice mail iv) Presentations and email.

d) All the following are external stakeholders of an organization, except:  
i) Media ii) Government iii) Suppliers iv) Shareholders

e) Readability is determined mainly by:  
i) Punctuation ii) Length of words  
iii) Active and passive voice iv) Spelling

f) Writing style can be improved through use of:  
i) Jargon ii) Slang  
iii) Simple words iv) Metaphors

g) One advantage of telephone communication is:  
i) Good for problem solving  
ii) Permits use of some non-verbal cues  
iii) conveying large amount of information  
iv) Keeping a permanent record

h) All of the following types of information can be posted on the intranet except:  
i) Employee benefits ii) Declared holidays  
iii) Company policies iv) Performance appraisals

i) Which of the following is not a compulsory part of a business letter?  
i) Salutation ii) Close iii) Attention line iv) Body

j) A resume summarizes the following:  
i) Strengths and weaknesses ii) Personality  
iii) Education and experience iv) Hobbies

UNIT-I

Q.2 Choose correct option:  

a) She looks ________ than she is.  
i) much younger ii) very younger iii) more young iv) more younger

b) We were caught ________ a shower on our way home:  
i) in ii) with iii) at iv) by

c) Policy, is, the, Honesty, best. (Rearrange to form a meaningful sentence)

d) Godliness, to, cleanliness, is (Rearrange to form a meaningful sentence)

e) It may ________ in the afternoon. (raining/rained/rain)
f) Boy:Girl::man: __________
g) “_________do you live?” ________ in India. (Fill up)

h) “_________ do you come to school?” ________ by bus. (Fill up)
i) The antonym of spendthrift is ________.
j) The synonym of honest is ________.
k) Full form of ISDN is ________.
l) Full form of ERP is ________.
m) He ________ from London. (be/ is/ am/ are)
n) What is ________ dog called? (him/ her/ them/ you)
o) ________ English? (Do you be/ You are/ Are you/ Is you)

Q.3  
a) Fill in each of the blanks with the correct form of present tense:
   i) Janet ________ Karate class every Saturday. (attend)
   ii) The market ________ usually noisy in the morning. (to be)
   iii) Aanya ________ her room for the past hour. (Paint)
   iv) The delivery man ________ the parcel already. (delivery)
   v) You are late. The bus ________ already. (leave)

b) Convert to questions:
   i) They are working hard.
   ii) They will be working hard.
   iii) They had worked hard.
   iv) They have been working hard.

c) Rearrange the words and phrases to form meaningful sentence:
   i) Last / the / week / President / Obama / of / the / USA / India / visited.
   ii) He / the / went / Humayun’s / to / tomb / see / with / his.
   iii) He / time / spent / with / some / the / street / in / children / an / NGO.

UNIT-II

Q.4  
a) Write your first experience when you visited the collage for the 1st time and the conversation in the form of dialogues you had in Admission Cell.

b) You have to organize a business trip to Goa. Mention the conversation between the different managers for the same in the form of dialogue.

Q.5  
a) Mention basic etiquettes that need to be followed while conversing either at college or outside college.

b) “People who know how to talk can easily win over hearts”. Explain

UNIT-III

Q.6  
How do you define personality? What are its determinants and types?

Q.7  
a) “Goal set is goal half achieved”. Do you agree with this? Justify your opinion.

b) Who is a facilitator? What are the key roles performed by him?

UNIT-IV

Q.8  
a) Why do we have to design resumes with caution? What are the basic points under consideration while designing resumes?

b) Design your resume with the cover letter for the post of Software Engineer in ABC Company Ltd.
Q.9  
a) Why does an organization conduct interviews? What are the different types of interviews?  
b) Explain the role of communication technology in the workplace.
End Semester Examination, May 2015
BCA -First Semester
PC SOFTWARE (BCA-104)

Time: 3 hrs
Max Marks: 75
No. of pages: 1

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 a) The collection of readymade pictures is called ________.
b) We can change the styles of a shape using ________ tab.
c) The file extension of EXCEL workbook is ________.
d) Print review is used for ________.
e) Ctrl+s key is used for ________.
f) DOS means DISK OPERATING SYSTEM. (True/False)
g) All the files in a folder should have same name. (True/False)
h) WORD can check grammar while checking grammar. (True/False)
i) Define macro.
j) Define screen saver.

UNIT-I

Q.2 a) Explain file management through Windows. 7½
b) Explain Five external commands in DOS. 7½

Q.3 a) Write short not on Windows Accessories. 7
b) Define operating system. Discuss the types of operating system. 8

UNIT-II

Q.4 a) Create a list of 10 best friends. Create a thank you letter. Use mail merge feature of MS word to create thank you letter for each of your friend from above two files. 10
b) How text is formatted in MSWORD? 5

Q.5 Define the following terms:
   i) LINKS ii) Headnotes iii) Header and footer
   iv) WIZARDS v) Tables 5x3

UNIT-III

Q.6 a) Explain any five mathematical functions in MS-EXCEL. 10
b) Discuss the concept of Freeze Panes in MS-EXCEL. 5

Q.7 a) Explain the following:
   i) Creating a workbook ii) Opening a workbook
   iii) Saving a workbook iv) Creating and inserting a worksheet
   v) Deleting a worksheet 10
b) Discuss any two date and time functions. 5

UNIT-IV

Q.8 a) How MS-PowerPoint is a better option for a business presentation? Discuss. 6
b) Discuss the various types of views in MS-PowerPoint. 9
Q.9  a) Write the steps for the following:
   i) Checking spelling and correcting with objects.
   ii) Adding clipart and other pictures.
   iii) Printing presentation.

b) Write the benefits of PowerPoint presentation.
End Semester Examination, May 2015
BCA - Second Semester
DATA STRUCTURES (BCA-201)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Fill in the blanks:
   a) A stack is an ordered list in which all insertion and deletion are made at one end, called ________.
   b) Queue is a ________ list.
   c) The complexity of linear search algorithm is ________.
   d) The operation of processing each element in an array is ________.
   e) The complexity of bubble sort is ________.

   Multiple choice questions:
   f) When new data are to be insisted into a data structure, but there is no available space, this situation is called:
      i) Underflow
      ii) Overflow
      iii) Houseful
      iv) Saturated
   g) The largest element of an array index is called its:
      i) Lower bound
      ii) Upper bound
      iii) Range
      iv) None of the above.
   h) The depth of complete binary tree is given by:
      i) \( n \log_2 n \)
      ii) \( n \log_2 n + 1 \)
      iii) \( \log_2 n \)
      iv) \( \log_2 n + 1 \)
   i) The size of a problem is measured in terms of:
      i) Output
      ii) Input
      iii) Level of problem
      iv) Complexity
   j) Which of the following sorting procedure is the slowest?
      i) Quick sort
      ii) Heap sort
      iii) Shell sort
      iv) Bubble sort

UNIT-I

Q.2 a) What do you mean by an algorithm? How can we measure the efficiency of an algorithm? 8
   b) Write algorithm to find largest and second largest element from a list. 7

Q.3 a) What do you mean by a circular queue? What are the advantages of circular queue over linear queue? Justify your answer. 8
   b) Convert the following infix notation into postfix notation:
      \( A \ast (B + C \ast D) + E \)
      Also write an algorithm for the same. 7

UNIT-II

Q.4 a) Write recursive algorithm for a binary search. Why binary search is better than linear search? Justify your answer. 10
   b) Write a short note on doubly linked list. 5

Q.5 a) Write an algorithm for inorder traversal. 5
   b) Write a short note on binary tree. 5
   c) How can we represent a polynomial using a linked list? 5
UNIT-III

Q.6 Write algorithm for merge sort.  

Q.7 What are the various ways to represent a graph? Explain with the help of an example.

UNIT-IV

Q.8 a) What are the various file operations?  
b) What are the various collision resolution methods? Explain with example.

Q.9 a) What do you mean by Index Sequential Access Method (ISAM)?  
b) Differentiate between fixed and variable length record.  
c) Hash function
End Semester Examination, May 2015
BCA -Second Semester
MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE (BCA-202)

Time: 3 hrs
Max Marks: 75
No. of pages: 3

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1
a) Define cardinality of a set with an example.
b) If \( P = \{a,b,c\} \) and \( Q = \{k,l,m,n\} \), determine \( P \times Q \).
c) If \( A = \{\emptyset,a\} \), construct \( A \cup P \{A\} \).
d) Explain the working rule of mathematical induction.
e) If a set \( A \) has \( n \) elements, how many relations are there from \( A \) to \( A \).
f) If \( X = \{1,2,3\} \), \( Y = \{8,9\} \) and \( R = \{(1,8),(2,8),(1,9)\} \), find \( R \).
g) The sum of degree of all the vertices in a graph \( G \) is even. (True / False)
h) Define path and circuit in graph.
i) Define complete binary tree with an example.
j) Consider the set \( A = \{4,5,6,7\} \). Let \( R \) be the relation \( \subseteq \) of \( A \). Draw the Hasse diagram of \( R \).

UNIT-I

Q.2
a) Let \( X = \{a,b,c\} \). Define \( f : X \rightarrow X \) such that \( f = \{(a,b),(b,a),(c,c)\} \). Find:
   i) \( f^{-1} \) ii) \( f^2 \) iii) \( f^3 \)

b) Prove that \( 1.2 + 2.3 + 3.4 + \ldots + n(n+1)=\frac{n(n+1)(n+2)}{3} \) by mathematical induction.

Q.3
a) Describe equivalence relation briefly.
b) Let \( R \) be a binary relation on the set of all integer \( I \) such that:
   \[ R = \{(a,b)|(a-b) \text{ is even integer}\} \]. Is \( R \) reflexive? Symmetric? Transitive? Equivalence relation?
c) Prove that by mathematical induction \( n(n+1)(2n+1) \) is divisible by 6.

UNIT-II

Q.4
a) Consider the set \( D_{50} = \{1,2,5,10,25,50\} \) and relation divides (\( | \)) be a partial ordering relation on \( D_{50} \).
   i) Draw Hasse diagram of \( D_{50} \) with relation divides.
   ii) Determine all upper bounds of 5 and 10.
   iii) Determine all lower bounds of 5 and 10.
   iv) Determine g.l.b of 5 and 10
   v) Determine l.u.b of 5 and 10
b) Define sublattice. Consider the lattice of all positive integer \( I \), under the operation of divisibility. The lattice \( D_n \) of all divisor of \( n > 1 \) is a sublattice of \( I \). Determine all the sublattice of \( D_{30} \) that contain at least four elements \( D_{30} = \{1,2,3,4,5,6,10,15,30\} \)
Q.5  a) Given the Boolean expression: \( f = ABC + B\overline{C}D + \overline{D}BC \)
   i) Make the truth table.  
   ii) Simplify using K-map 8
b) Consider the Boolean algebra \( D_{30} \), determine the followings:
   i) All the Boolean subalgebra of \( D_{30} \)
   ii) All Boolean algebras which are not Boolean subalgebra of \( D_{30} \) having atleast four elements.

**UNIT-III**

Q.6  a) Find the equation of a line passing through the point \((2,3)\) and making an angle of \(45^\circ\) with the line \(3x + y - 5\). 7
b) Solve the differential equation \( a_r - 7a_{r-1} + 10a_{r-2} = 0 \), satisfying the conditions \( a_0 = 0 \) and \( a_1 = 6 \). 8

Q.7  a) Two points \( A(0,0) \) and \( B(3,\sqrt{3}) \) form an equilateral triangle with another point \( P(x,y) \). Find the coordinate of \( P \). 8
b) Solve the differential equation: \( 2a_r - 5a_{r-1} + 2a_{r-2} = 0 \) and find particular solution such that \( a_0 = 0 \) and \( a_1 = 1 \). 7

**UNIT-IV**

Q.8  a) Find the minimum spanning tree of the labeled connected graph.

b) Consider the binary tree as shown below. Draw the binary tree for each of the following operations if applied to the binary tree. Also draw the undirected graphs \( K_3 \) and \( K_5 \).
   i) Delete the node V  
   ii) Delete the node E  
   iii) Delete the root node R 6
Q.9 Find the shortest path between a to z in the graph.
End Semester Examination, May 2015
BCA - Second Semester
PROGRAMMING IN VISUAL BASIC (BCA-203)

Time: 3 hrs
Max Marks: 75
No. of pages: 1

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1
a) One of the major strength of Visual Basic language is ________.
b) ________ and ________ are procedural languages.
c) Integer data type takes ________ bytes.
d) Static variables are ________ only once.
e) ________ is an example of string function.
f) ________ is a conditional statement.
g) The reference library of Visual Basic is called ________.
h) Menus are created using ________ in Visual Basic.
i) ________ function converts string to numerical value.
j) In ________ only one option can be selected at a time. 1½x10

UNIT-I

Q.2 Explain the use of following terms:
a) Menu Bar  b) Tool Bar  c) Tool Box  5x3

Q.3 Explain all the components of Visual Basic IDE (Integrated Development Environment) in detail. 15

UNIT-II

Q.4 Explain the following data types in Visual Basic:
a) String  b) Integer  c) Variant  5x3

Q.5 a) Explain the two conditional statements available in Visual Basic with the help of examples. 10
b) Explain the difference between local and static variables using an example. 5

UNIT-III

Q.6 Explain the following controls in Visual Basic:
a) Text Box  b) List Box  c) Frame  5x3

Q.7 Differentiate between the followings:
a) List Box and Combo box  5x3
b) Check Box and Option Button  5x3
c) Label and Text Box

UNIT-IV

Q.8 Explain all the steps required to create a menu using menu editor in Visual Basic. 15

Q.9 Explain the following terms:
a) Data Control  b) Data Grid Control  c) Data Report. 5x3
End Semester Examination, May 2015  
BCA -Second Semester  
DIGITAL DESIGN AND COMPUTER ORGANIZATION (BCA-204)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2  

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Fill in the blanks:

a) ________ flip-flop is used to store data in registers.
b) The decode instruction in stored in ________.
c) The output of a gate is low when atleast one of its input is low. It is true for _________ gate.
d) Micro instructions are stored in ________ memory.
e) The DMA controller has ________ registers.

Multiple Choice questions:

f) A flip-flop has:
   i) One stable state
   ii) No stable state
   iii) Two stable state
   iv) None of the above

g) Which of the following expression is in SOP form?
   i) \((A + B)(C + D)\)
   ii) \((AB)(CD)\)
   iii) \(AB(CD)\)
   iv) \(AB + CD\)

h) Applying DeMorgan’s theorem to the expression \((x + y)z\), we get:
   i) \((x + y)z\)
   ii) \((\overline{x + y})z\)
   iii) \((x + y)\overline{z}\)
   iv) \((\overline{x + y})\overline{z}\)

i) Which of the following expresses the commutative law of multiplication?
   i) \(A + B = B + A\)
   ii) \(AB = B + A\)
   iii) \(AB = BA\)
   iv) \(AB = A \times B\)

j) What are the symbols used to represent digits in binary number system?
   i) 0, 1
   ii) 0, 1, 2
   iii) 0 through 8
   iv) 1, 2

UNIT-I

Q.2 a) What is the requirement of a number system? Explain in detail.  
b) Convert: \((12.456)_{8} = (?), (?), (?), (?), (?)_{16}\)

Q.3 a) Find the addition of following unsigned binary number:
   i) \(1110 + 111\)
   ii) \(11011 + 11011\)
   b) Perform AND, OR & XOR with two binary strings 1011100 and 10100001.
   c) Explain the concept of Hamming code with the help of an example.

UNIT-II

Q.4 Explain all the gates with their truth tables.

Q.5 Simplify the followings using K-map:
   a) \(F(A, B, C, D) = \sum 1, 5, 6, 8, 9, 12\)
b) \( F(X,Y,Z) = \sum 1,2,5,7 \)

**UNIT-III**

Q.6 a) What do you mean by an instruction cycle? Explain its different phases in detail. \( 10 \)
b) Explain different types of instructions in detail. \( 5 \)

Q.7 Write short notes on:

a) RISC  ii) CISC  iii) Subroutine calls \( 5x3 \)

**UNIT-IV**

Q.8 Differentiate between:

a) I/O and memory bus  
b) Asynchronous and Synchronous data transfer.  
c) Isolated and memory mapped I/O. \( 5x3 \)

Q.9 Explain the working of a DMA controller and transfer with the help of block diagram. \( 15 \)
Q.1 Choose the correct option:

a) If waste materials contaminate the source of drinking water which of the following diseases will spread:
   i) Scurvy  ii) Typhoid  iii) Malaria  iv) Anaemia

b) Which of the following wastes cannot be decomposed by bacteria to form compost?
   i) Kitchen waste  ii) Plastic and polythene bags  iii) Dead plants  iv) Bodies of insects living in the soil

c) When trees are cut, amount of oxygen?
   i) Decreases  ii) Increases  iii) Both a and b  iv) Remains same

d) 71% of earth surface is covered with:
   i) Land  ii) Air  iii) Water  iv) Coal

e) Acid rain is due to:
   i) Combustion of fossil fuels  ii) Oil slick  iii) Oxides of sulphur  iv) Nuclear wars

f) The gas associated with global warming is:
   i) CO₂  ii) H₂S  iii) CH₄  iv) SO₂

g) Which of these is biodegradable?
   i) Cow dung  ii) Pepsi can  iii) Plastic rubber  iv) CDs

h) Female sterilization inhibits ________ production.
   i) Egg  ii) Estrogen  iii) Progesterone  iv) All of the above

i) Bhopal gas tragedy occurred due to:
   i) Methane  ii) Phosgene  iii) Methyl isocyanate  iv) Methyl amine

j) Who started the Chipko movement?
   i) Kiran Bedi  ii) S.L. Bahuguna  iii) Medha Patkar  iv) None of the above

UNIT-I

Q.2 a) Why do people need to be aware about environmental issues?  
   b) Differentiate between renewable and non-renewable sources of energy.

Q.3 a) Explain why environmental studies is made as mandatory or essential subject in the syllabus.
   b) How can we help and save environment? Explain in detail.
UNIT-II

Q.4  a) Illustrate how energy flows in an ecosystem with an example.  
    b) What is a food chain? How does a food chain get effected when one of the trophic 
        level is disturbed?  

Q.5  a) Differentiate between producers, consumers and decomposers.  
    b) What is ecological pyramid? Mention atleast two types.  

UNIT-III

Q.6  a) What do you mean by pollution? Name its different types and the two major 
    causes for each type of pollution.  
    b) Mention the major reasons for global warming and climate change.  

Q.7  Write short notes on any two: 
    a) Unsustainable and sustainable development.  
    b) Wasteland reclamation.  
    c) Environmental Protection Act.  

UNIT-IV

Q.8  a) Illustrate the role of information technology in environment and human health.  
    b) What are the major causes of AIDS? Mention various symptoms and effects of 
        AIDS.  

Q.9  a) How can we control population explosion? Why do we need to control it?  
    b) Explain how increase in human population is causing increase in environment 
        pollution.
End Semester Examination, May 2015
BCA - Third Semester
MATHEMATICS-II (BCA-301)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 a) If order of A is MXP and order B is PXM then order of AB is ______.
   b) If \( A = \begin{bmatrix} 5 & 3 & 2 \\ 0 & 4 & 1 \\ 0 & 0 & 3 \end{bmatrix} \) find \( |A| \).
   c) In how many ways can the letters of the word PRAISE be arranged?
   d) Formula of general term in binomial expansion is ________.
   e) Define monotonic increasing function with an example.
   f) Define supremum and infinimum of set with an example.
   g) Find the convergence of sequence \( \sum_{n=1}^{\infty} \frac{1}{n^2} \).
   h) What is the limit of a sequence \( \{S_n\} = \left\{ \frac{1}{n} : n \in \mathbb{Z}^+ \right\} \).
   i) Define the criteria for consistency of a system of linear equations.
   j) Inverse of every square matrix, if it exists is unique (True/False).

UNIT-I

Q.2 a) Verify that \( A(B + C) = AB + BC \) where \( A = \begin{bmatrix} 1 & 2 \\ 0 & 4 \end{bmatrix} \), \( B = \begin{bmatrix} 2 & 3 \\ 0 & 5 \end{bmatrix} \), and \( C = \begin{bmatrix} 1 & 0 \\ 2 & 3 \end{bmatrix} \).
   b) Evaluate: \( 6C_1 + 6C_2 + 6C_3 + 6C_4 + 6C_5 + 6C_6 \).

UNIT-II

Q.3 a) Find the coefficient of \( x^4 \) in \( \left( x^4 + \frac{1}{x^4} \right)^{15} \).
   b) Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

UNIT-III

Q.6 a) State and prove Cauchy’s general principle of convergence.
b) Prove that a monotonically increasing sequence $< U_n >$ bounded above converges to its least upper bound.

Q.7  

a) Discuss the convergence of the sequence $< u_n >$ where $< u_n > = \frac{2n - 7}{3n + 2}$.

b) State and prove comparison test of 5th form of series of numbers.

UNIT-IV

Q.8  

a) Show that $\frac{x}{x + 1} < \log(1 + x) < x : x > 0$.

b) Expand $a^x$ and $e^x$ in power of $x$ by Maclaurin’s theorem.

Q.9  

a) Evaluate $\lim_{x \to 0} \frac{1 + \sin x - \cos x + \log(1 - x)}{x \tan^2 x}$.

b) Evaluate $\lim_{x \to a^+} \frac{\log(x - a)}{\log(e^x - e^a)}$ by L’ Hospital rule.
End Semester Examination, May 2015  
BCA -Third Semester  
MATHEMATICS-II (BCA-301)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  a) Construct a $3 \times 3$ matrix whose elements are $a_{ij} = i + j$
   b) Define upper triangular matrix with an example.
   c) Expand $(x + y)^2$ by binomial expansion.
   d) Define Lagrange’s mean value theorem.
   e) What are countable set? Explain with the help of an example.
   f) Define set bounded above.
   g) Find $x + 1_p$
   h) What is neighborhood of a point?

State whether TRUE or FALSE:
   i) A set of all positive real numbers is not bounded above.
   j) A finite set has no limit point.

UNIT-I

Q.2  a) Define the following terms with an example:
   i) Transpose of matrix  ii) Symmetric matrix  iii) Skew symmetric matrix  
   b) For the 2 matrices $A$ and $B$ verify that $(AB)^T = B^T . A^T$ where

$$A = \begin{bmatrix} 0 & -1 & 2 \\ 3 & 0 & -1 \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & -1 \\ 0 & 2 \\ 5 & 0 \end{bmatrix}$$

UNIT-II

Q.3  a) How many different words can be formed with the letters of the word BHARAT?
   i) In how many of these B and H are never together.
   ii) How many of these begin with B and end with T.
   
   b) For the matrix $A = \begin{bmatrix} 3 & 1 \\ 7 & 5 \end{bmatrix}$, find $x$ and $y$ so that $A^2 + xI = yA$. Hence find $A^{-1}$.

UNIT-III

Q.4  a) Show that union of two countable sets is countable.
   b) Show that union of an arbitrary family of open sets is an open set.

Q.5  a) Show that union of a denumerable collection of denumerable sets is denumerable.
   b) Find the supremum and infimum, if exist of the following:

   i) $\{x : -5 < x < 3\}$  ii) $\{x : x = 4^n, n \in -N\}$
   iii) $\left\{1, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \ldots..\right\}$  iv) Open interval $(0, 1)$
Q.6  a) Show that a sequence converges if and only if it is a Cauchy’s sequences

b) Show that the series \( \frac{1}{3} + \frac{1}{3^2} + \frac{1}{3^3} \ldots \) converges.

Q.7  State and prove Cauchy’s Root Test.

UNIT-IV

Q.8  a) Evaluate \( \lim_{x \to \infty} x \tan \frac{1}{x} \)

b) Show that \( \frac{x}{x+1} < \log(1+x) < x; \ x > 0 \)

Q.9  a) Expand \( e^{2x} \) by Maclaurin’s theorem.

b) Evaluate \( \lim_{x \to a} \frac{\log(x-a)}{\log(e^x - e^a)} \) by L’Hospital’s Rule.
End Semester Examination, May 2015
BCA - Third Semester
OBJECT ORIENTED DESIGN AND PROGRAMMING (BCA-302)

Time: 3 hrs  Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  a) The major goal of inheritance in C++ is:
   i) To facilitate the conversion of data types.
   ii) To help modular programming.
   iii) To facilitate the reusability of a code.
   iv) To extend the capabilities of a class.

   b) Which of the following is not an ODP feature in C++?
      i) Inheritance
      ii) Polymorphism
      iii) Objects
      iv) Exceptions

   c) A class can have many methods with the same name, as long as the number of parameters are different. This is known as:
      i) Method overloading
      ii) Method invocating
      iii) Method overriding
      iv) Method labeling

   d) When a function is defined inside a class, this function is called:
      i) Inside function
      ii) Class function
      iii) Inline function
      iv) Interior function

   e) The do while loop is ideal for loop structures that:
      i) Repeat some process a fixed number of times.
      ii) Must execute some process at least one time.
      iii) Must check the loop condition before the loop body is executed.
      iv) Do all of the above.

   f) What will happen when defining the enumerated type?
      i) It will not allocate memory.
      ii) It will allocate memory.
      iii) It will not allocate memory to its variables.
      iv) None of the above.

   g) The friend function are used in situations where:
      i) We want to exchange data between classes.
      ii) We want to have access to unrelated classes
      iii) Dynamic binding is required.
      iv) We want to create versatile overloaded operators.

   h) Which of the following operations could not he overloaded?
      i) i) Size of     ii) +      iii) +=       iv) ::

   i) Which is used to create a pure virtual function?
      i) $         ii) =0       iii) &       iv) !

   j) Which keyboard is used to handle an exception?
      i) Try       ii) Throw     iii) Catch     iv) None of the above

   

UNIT-I

Q.2   Explain the basic concepts of object oriented programming.  15
Q.3 Describe how data is shared by function in a procedure oriented programs.  

**UNIT-II**

Q.4 Describe data types in C++ with details.  

Q.5 Explain the function classification with the passing of arguments.  

**UNIT-III**

Q.6 What is a constructor? Explain types of constructor with examples.  

Q.7 Give a programming example that overloads == operator with its use.  

**UNIT-IV**

Q.8 What is a virtual function? Write rules for a virtual function. Explain with an example.  

Q.9 Explain in detail about exception handling in C++.  

15
End Semester Examination, May 2015  
BCA - Third Semester  
DATABASE SYSTEMS (BCA-303)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Multiple choice questions:
   a) The disadvantages of traditional file system is:
      i) Data redundancy ii) Data inconsistency
      iii) Poor data control iv) All of the above
   b) The responsibilities of DBA are:
      i) Deciding users ii) Backup
      iii) Both i) and ii) iv) None of the above
   c) An attribute which does not identify data uniquely is called:
      i) Secondary key ii) Primary key
      iii) Foreign key
   d) Which is a free formatted language?
      i) SQL ii) Relational algebra
      iii) Relational calculus
   e) A transaction must be in following states:
      i) Active state ii) Partially committed
      iii) Failed iv) All of the above

State whether TRUE or FALSE:
   f) A distributed database system is a collection of sites connected through network.
   g) Third normal form is also known as PJNF.
   h) SQL offers command interface to write queries.
   i) The SQL DML provides commands for defining the relations, deleting the relations and modifying the existing relation schemes.
   j) The relational model was discovered by Dr, E.F. Codd.

UNIT-I

Q.2 What is data model? Explain the data structure of relational data model. Also, differentiate between Network and an Hierarchical data model.  

Q.3 Define the following with an example.
   a) Entity b) Attribute c) Foreign key d) Candidate key
   e) Alternate key f) Domain

UNIT-II

Q.4 Explain the term ‘relational algebra’ and various operations performed in it. Give example of each.  

Q.5 Give the format and purpose of following with examples:
   a) Alter table b) Group by clause c) Length d) Distinct
   e) Having clause

UNIT-III
Q.6 Define normalization? Explain and define 1NF, 2NF, 3NF by giving suitable examples for each. 15

Q.7 Explain:  
   a) Functional dependency  
   b) BCNF  
   c) 4 NF

UNIT-IV

Q.8 What do you mean by security of database? Explain various ways of database security and recovery procedures in brief. 15

Q.9 What is meant by query processing? Discuss various general strategies for query processing? Also, discuss query optimization through a suitable example. 15
End Semester Examination, May 2015
BCA - Third Semester
BUSINESS ORGANIZATION AND Principles OF MANAGEMENT (BCA-304)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Fill in the blanks:
   a) One of the external environment factor that influence management is ____________.
   b) There are ________ types of degree of delegations.
   c) LPG stands for liberalization, __________ and globalization.
   d) All levels of management between the supervisory level and the top level of the organization are termed ____________.
   e) ________ is the ability to translate knowledge into action that results in desired performance.

Choose the correct option:
   f) Management is the combination of:
      i) Art
      ii) Science
      iii) Profession
      iv) Above three
   g) Which of the following is false about the characteristic of modern organizations?
      i) Have little global focus.
      ii) Face simultaneous pressure for stability and change.
      iii) Some employees will find such organizations stressful.
      iv) Use the internal to manage external interactions.
   h) Decision making is a primary part of the managerial process (True/False)

Q.2 What do you mean by a business? How is it different from a profession? Explain with an example.

Q.3 What factors affect the business system? Explain their role in context of the objectives and social responsibilities of a business.

UNIT-I

UNIT-II

Q.4 Write short notes on the following (any three):
   a) Organization as a system.
   b) Stress as a motivator.
   c) Decentralization.
   d) Objectives of organizational behavior.

Q.5 Explain the behavioural models of decision making in an organization.

UNIT-III
Q.6 What is the concept of universality of a management? Give arguments for and against this concept. 15

Q.7 “Management process is considered to consist of certain functions”. Explain various functions in a logical order. 15

UNIT-IV

Q.8 Why human resource management is essential for an organization? How is it different from human resource development? 15

Q.9 What are the sources available to a business firm for recruiting its employees? Describe the merits and demerits of various sources. 15
Q.1 Answer the following questions:
a) What does B2C stands for?
b) Give at least three examples of websites which provide facility for cyber cash.
c) Name two groups in which products of e-money can be categorized.
d) What does EFT stands for?
e) What is the stored value of a smart card?
f) Name three categories of the intellectual property over the internet.
g) What is an ISP?

Fill in the blanks:
h) ‘e-business’ is any business that is empowered by an ________.
i) The e-check system is an ________ of the paper-check system.
j) ________ is the number that identifies a machine on the internet.

UNIT-I

Q.2 What is an ‘e-Commerce’? What are the advantages and disadvantages of engaging in e-Commerce activity to identify new applications in business? 15

Q.3 Write short notes on the following:
a) Implications of IT on e-business strategy. 8
b) Porter’s value chain model. 7

UNIT-II

Q.4 What is business-to-business e-commerce? Also discuss three models of B2B e-commerce. 15

Q.5 Explain the following:
a) EDI. 8
b) Just-in-time delivery. 7

UNIT-III

Q.6 What are the main differences between a credit card and a debit card? Why is one type of card favored over the other? 15

Q.7 Explain the following:
a) e-money 7
b) Legal, ethical and other public policy issues. 8

UNIT-IV

Q.8 Identify the key steps to setup an infrastructure for the e-commerce. Which step is most critical and Why? 15
Q.9 Explain the following:

a) Virtual communities.

b) The future of e-commerce.
End Semester Examination, May 2015
BCA - Fourth Semester
OPERATING SYSTEM (BCA-402)

Time: 3 hrs  Max Marks: 75
No. of pages: 1

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Fill in the blank with appropriate word:
   a) An operating system is a __________ software.
   b) System calls are ___________ instructions.
   c) Long term scheduler is also called as ________.
   d) The measure used to control thrashing is __________.
   e) A __________ is a collection of related information that is stored on secondary storage.

State whether True or False:
   f) A file has a certain defined structure according to its type.
   g) External fragmentation is the cause of allocating more space than required by the process.
   h) The running processes in execution state may be suspended because of I/O or because of preemption.
   i) Banker’s algorithm is used to detect deadlock.
   j) MS-DOS supports multiprogramming.

UNIT-I

Q.2 a) Discuss advantages of multiprogramming systems.
    b) List the differences between timesharing and multiprogramming systems.
    c) What is spooling?

Q.3 a) What is a Kernal? Explain its main functions.
    b) What is the purpose of command interpreter? Why is it usually separated from the Kernal?

UNIT-II

Q.4 Compare and contrast FCFS and SJF scheduling algorithms with the help of suitable examples.

Q.5 a) Define a process with examples.
    b) Differentiate between long term, short term and medium schedulers with their appropriate examples.

UNIT-III

Q.6 Discuss the technique of paging in detail.

Q.7 Discuss:
   a) Swapping
   b) Virtual memory.

UNIT-IV

Q.8 a) Explain different types of file formats. Also give examples.
b) Explain various methods for free space management. Illustrate it with an example.

Q.9 Discuss FCFS, SCAN and CSCAN disk scheduling algorithm by taking a suitable example.
End Semester Examination, May 2015
BCA -Fourth Semester
WEB DESIGNING AND INTERNET APPLICATIONS (BCA-403)

Time: 3 hrs  Max Marks: 75
No. of pages: 2

Note:  Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  a) IP addresses are converted into:
   i) Binary string  ii) Alphanumeric string
   iii) Hierarchy of domain  iv) Hexadecimal string

b) The tag used in HTML to link other URL is:
   i) <A>  ii) <H>
   iii) <U>  iv) <L>

c) A web page is located using:
   i) Universal record linking.
   ii) Universal resource locator.
   iii) Universal record locator.

d) Which tag is used to arrange tags in paragraphs?
   i) <par>  ii) <paragraph>
   iii) <P>  iv) <a>

e) HTML stands for:
   i) Hypertext making links  ii) Hypertext markup language
   iii) Higher textual making of links  iv) Hyper text mixer of links

f) CSS stands for:
   i) Control stylesheets  ii) Creative stylesheets
   iii) Cascading stylesheets  iv) None of above

g) Which of following is not scripting language?
   i) HTML  ii) XML
   iii) Postscript  iv) Javascript

h) We use tag within:
   i) <head> only  ii) <title>
   iii) <head> and <1 body>  iv) <javascript>

i) Javascript is _________ side scripting language.
   i) Server  ii) Browser
   iii) ISP  iv) None of the above

j) Which of the following HTML code is valid?
   i) <font colour = “red”>  ii) <font color = “red”>
   iii) <red><font>  iv) All of the above

UNIT-I

Q.2  Write short notes on:
   a) SMTP  b) Usenet  c) URL  15

Q.3  Write short notes on:
   a) What is internet? What are its application areas?  10
   b) Write a short note on internet security.  5
**UNIT-II**

Q.4  
   a) Explain the structure of HTML.
   b) Differentiate external and internal linking.
   c) Explain image tag and its attributes.  

Q.5  
Create an admission form in HTML using buttons, textbox, radio button, checkbox and listbox with all attributes.  

**UNIT-III**

Q.6  
   a) What are frames? Insert the four web pages in the frames using appropriate examples.
   b) Differentiate between `&lt;Address&gt;` and `&lt;Blockquote&gt;` tags. 

Q.7  
   a) Explain various character formatting tags in HTML.
   b) Differentiate between `colspan`, `rowspan`, `cellspacing` and `cellpadding` in table.  

**UNIT-IV**

Q.8  
What are cascading stylesheets? Explain the types of stylesheets in detail. 

Q.9  
   a) Write a program in javascript for swapping of two images.
   b) Differentiate between `prompt()`, `alert()` and `confirm()` boxes.
Q.1 Choose the correct option:

a) Generally speaking in business we communicate:
   i) Only to inform 
   ii) To both persuade and inform 
   iii) Only to persuade 
   iv) Only to entertain

b) Effective communication is essentially a:
   i) Two-way process 
   ii) Three-way process 
   iii) Both a one-way and a two-way process 
   iv) One way process.

c) Speakers usually experience difficulty in ensuring that the message is:
   i) Conveyed precisely, understood correctly, and acted upon promptly and as desired. 
   ii) Conveyed precisely. 
   iii) Understood correctly. 
   iv) Acted upon promptly and as desired.

d) The purpose of public relations is:
   i) To sell the company’s products. 
   ii) To communicate with shareholders. 
   iii) To project a favorable image of the company among various publics. 
   iv) To communicate during a crisis.

e) Which of the following is not an indication of active listening?
   i) Egocentrism. 
   ii) Engaging in conversation with the speaker. 
   iii) Taking notes. 
   iv) Reconstructing the information.

f) An impromptu speech means:
   i) A prepared speech delivered without any supporting aids. 
   ii) A speech delivered without any preparation. 
   iii) A speech delivered while referring to notes. 
   iv) A speech delivered by reading from notes.

g) “A meeting without an agenda is like a ship without a destination”. This means that the meeting:
   i) Has no goal 
   ii) Lacks leadership 
   iii) Is inconclusive 
   iv) Is disorganized

h) A common method of measuring attitudes is by using:
   i) In-depth interviews. 
   ii) Observing people’s behavior. 
   iii) Semantic differential scales. 
   iv) A lie detector.

i) The centrality of an attitude reflects:
   i) A person’s degree of negative or positive feelings about an object. 
   ii) The extent to which an attitude is related to a person’s other attitudes.
iii) The extent to which an attitude is a part of a person’s concept of self.
iv) The attitude’s resistance to change.

j) Reena is twice as old as Sunita. Three years ago, she was three times as old as Sunita. How old is Reena now?
i) 6 years
ii) 12 years
iii) 14 years
iv) 16 years

UNIT-I

Q.2 a) Differentiate between verbal and non-verbal communication.

Q.3 a) What are the different levels of communication? Explain in detail.
b) “It is very important to be a team player”. Elaborate.

UNIT-II

Q.4 a) How being an optimist different from being a pessimist? Elaborate.
b) Explain an incident where being optimist has helped you in real life.

Q.5 Solve the followings:
a) If a 36 inch long strip cloth shrinks to 33 inches after being washed, how many inches long will the same strip remain after washing if it were 48 inches long?
b) The price of Maruti car rises by 30% while the sales of the car come down by 20%. What is the percentage change in total revenue?
c) The total of the ages of Amar, Akbar and Anthony is 80 years. What was the total of their ages five years ago?
d) A pineapple costs Rs.7 each. A watermelon costs Rs. 5 each. X spends Rs. 38 on these fruits. The no. of pineapple purchased are ________?

e) What is the product of all the numbers in the dial of a telephone?

UNIT-III

Q.6 a) What are the key considerations while designing a professional presentation?
b) “A presentation is prepared based on understanding of audience and the speaking occasion”. Elaborate.

Q.7 a) Why do we need brainstorming before designing a presentation? How does it improve the standard of presentation?
b) How developing a logical sequence for your message leaves a better impact on the audience? Explain.

UNIT-IV

Q.8 a) “Interviews play a crucial role for the employee and the employer”. Explain.
b) List the various documents that you need to carry while going for an interview.

Q.9 a) What are the different types of interviews conducted in an organization? Which type of interview is best suited when the company is situated abroad?
b) How performance appraisal plays a very important role in the growth of an individual in an organization?
End Semester Examination, May 2015
BCA -Fifth Semester
INFORMATION AND COMMUNICATION TECHNOLOGY (BCA-501)

Time: 3 hrs  Max Marks: 75
No. of pages: 1

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  a) Fill in the blanks:
   i) Tele-working mean __________.
   ii) The digital divide is a ________.
   iii) EFTPOS is ________.
   iv) A cyber crime is ________.
   v) Full form of EDI is __________. 1½x5
b) State four methods of protecting the security of a computer network. 2
 c) Name three categories of cyber criminals. 1½
 d) What is the network service which may be improved through the use of network audit software? 2
e) Define digital signature. 2

UNIT-I

Q.2  Explain Bluetooth technology. Compare Bluetooth with Wi-Fi. Are the two terms similar to each other? If they are different then list the points of difference. 15

Q.3  How can we maintain address book on the internet? List the various advantages of maintaining address book in a correct order. 15

UNIT-II

Q.4  Is there any difference between Wiki and Wikipedia? Write down the steps to upload an article in Wikipedia. Who maintain Wikipedia? 15

Q.5  Explain the concept of E-mail. State the requirement of having an email. State the advantages and disadvantages of email. List some email supporting websites and softwares. 15

UNIT-III

Q.6  Discuss the followings:
   a) Phishing
   b) Software privacy
   c) Copywriting 5x3

Q.7  "A network service may be improved through the use of network audit software".
   a) Explain why network audit software is used? 8
   b) Give four items of data that may be recorded by the network audit software. 7

UNIT-IV

Q.8  Give a detailed note on control applications like turtle graphics, control of flights, buzzers, motors, burglar alarms, automatic washing machines and microwaves. 15
Q.9 Discuss the ICT application in booking system and manufacturing industry.
End Semester Examination, May 2015
BCA – Fifth Semester
SOFTWARE ENGINEERING (BCA-502)

Time: 3 hrs  Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  Multiple choice questions:

a) Software mistakes during coding are known as:

b) Spiral model was developed by:

c) If requirements are frequently changing which model is to be selected?
   i) Waterfall. ii) Prototyping model. iii) Spiral model. iv) Iterative enhancement model.

d) Software engineering approach is used to achieve:
   i) Better performance of hardware ii) Error free software. iii) Reusable software. iv) Quality software product.

e) Cost estimation for a project may include:
   i) Software cost. ii) Hardware cost. iii) Personnel costs iv) All of the above.

f) Temporal cohesion means:
   i) Cohesion between temporary variables. ii) Cohesion between local variables. iii) Cohesion with respect to time. iv) Coincidental cohesion.

g) The relationship of data elements in a module is called:
   i) Coupling. ii) Cohesion. iii) Modularity iv) None of the above.

h) During validation:
   i) Process is checked ii) Product is checked iii) Developers performance is evaluated iv) The customer checks the product.

i) Alpha testing is done by:
   i) Customer. ii) Tester. iii) Developer. iv) All of the above.

j) Cyclomatic complexity is denoted by:
   i) V(G)=e-n+2P. ii) V(G)=t+1. iii) V(G)=number of regions of the graph iv) All of the above.

1½x10
UNIT-I

Q.2 Discuss prototype model. What is the effect of designing a prototype on the overall cost of a software project? What are the advantages of developing prototype of a system? 15

Q.3 a) Define the term software engineering. Discuss the techniques of software engineering. 8
   b) What is more important: Product or process? Justify the answer. 7

UNIT-II

Q.4 a) Consider a project with the following functional units:
   No. of user inputs: 50
   No. of user outputs: 40
   No. of user enquiries: 35
   No. of user files: 06
   No. of external interfaces: 04
   Assume all complexity adjustment factors and weighting factors are average.
   Compute function points for the project. 8
   b) Write a short note on PERT. 7

Q.5 Write short notes on the following:
   a) LOC.
   b) Token count.
   c) SRS. 5x3

UNIT-III

Q.6 Discuss COCOMO model with their types in detail. 15

Q.7 a) Differentiate between coupling and cohesion. 8
   b) How many types of coupling are available? What is the effect of coupling on effective modular design? 7

UNIT-IV

Q.8 a) Define error, bug, fault, defect and failure. 8
   b) What is importance of testing? 7

Q.9 a) Describe equivalence class partitioning method. Compare this with boundary value analysis technique. 8
   b) Why does software testing need extensive planning? 7
End Semester Examination, May 2015
BCA - Fifth Semester
COMPUTER GRAPHICS (BCA-503)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 a) _______ parameter is used in circle function.
   i) 3. ii) 2. iii) 4. iv) None of the above.

b) _______ function is used to set the color of an image.
   i) Setbk color. ii) Set color. iii) Floodfill. iv) None of the above.

c) There is ______ type of projection.
   i) 3. ii) 1. iii) 7. iv) 4.

d) The transformation in which an object can be rotated about origin as well as an arbitrary point is called as:
   i) Translation. ii) Scaling. iii) Rotation. iv) All of the above.

e) Two consecutive scaling transformation t1 and t2 are:
   i) Additive. ii) Subtractive. iii) Multiplicative. iv) None of the above.

f) Some common form of clipping includes:
   i) Curve clipping. ii) Polygon clipping. iii) Point clipping. iv) All of the above.

g) The transformation that produces a parallel mirror image of an object is called:
   i) Reflection. ii) Shear. iii) Rotation. iv) Scaling.

h) The flat panel displays are ______ in appearance.
   i) flat. ii) Curve. iii) Both i) and ii). iv) None.

i) The speed of printing in inkjet printer is:
   i) Fast. ii) Slow. iii) Neither fast nor slow. iv) None of these.

j) CRT stands for:
   i) Cathode Ray Tube. ii) Cannon Ray Tube. iii) Check Ray Tube. iv) None of the above.

UNIT-I

Q.2 What do you mean by computer graphics? Explain different types of computer graphics along with its architecture.

Q.3 a) Explain input-output devices in details.
   b) Explain the different methods of color generation in details.

UNIT-II

Q.4 Explain the DDA algorithm for a line drawing. What would be the intermediate point to draw a line between (2, 6) and (8, 12)?
Q.5  What do you mean by transformation? Explain different types of transformation with examples.  

UNIT-III

Q.6  Derive the transformation matrix to scale a unit cube twice uniformly w.r.t. origin. Find the coordinate of transformed cube.  

Q.7  a) Differentiate between cavalier and cabinet projection. Why cabinet projection is more realistic than cavalier projection?  
     b) What do you mean by 3D? How is it different from 2D? Explain through an example. 

UNIT-IV

Q.8  Explain the use of the following graphic functions with their syntax and examples:  
     a) arc()  
     b) getbkcolor() 
     c) initgraph()  
     d) detectgraph()  
     e) cleardevice()  
     f) closegraph()  
     g) setfillstyle()  
     h) outtext()  
     i) rectangle()  
     j) Fillpoly()  

Q.9  Write a program to generate/design a solar system.
Q.1  a) Write down formula of Regula-Falsi method for solving non-linear equations.
b) Using Newton Raphson method construct a formula to find square root of a number N.
c) What do you mean by initial value problem?
d) Write down the relation between the operators E and \( \nabla \).
e) Write down Bessel’s interpolation formula.
f) Define divided differences.
g) State centered formula of order \( O(h^2) \) for numerical differentiation.
h) Write down expression for Simpsons three-eighth rule for numerical integration.
i) What is binomial distribution for a variate X?
j) Calculate \( P(-1 \leq z \leq 1) \) for standard normal variate z.

UNIT-I

Q.2  a) Derive an iteration formula to solve \( x^3 + x^2 - 1 = 0 \) and hence solve the equation. 8
b) Derive Newton-Raphson Formula to solve non-linear equations. 7

Q.3  a) Solve the initial value problem:
\[
\frac{dy}{dx} = \frac{y - x}{y + x}, \quad y(0) = 1
\]
For \( x = 0.1 \) by Euler’s method. 7

b) Apply Runge-Kutta method to solve \( \frac{dy}{dx} = x^2 + y^2, \quad y(0) = 1 \).
For \( x = 0.1 \). 8

UNIT-II

Q.4  a) The area \( A \) of a circle of radius \( d \) is given for the following values:

<table>
<thead>
<tr>
<th>( d )</th>
<th>80</th>
<th>85</th>
<th>90</th>
<th>95</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>( A )</td>
<td>5026</td>
<td>5674</td>
<td>6362</td>
<td>7088</td>
<td>7854</td>
</tr>
</tbody>
</table>

Calculate the area of a circle of radius 105. 7

b) Using the table given below and Newton’s Divided difference formula, find \( f(x) \) as a polynomial in \( x \):

<table>
<thead>
<tr>
<th>( x )</th>
<th>-1</th>
<th>0</th>
<th>3</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>( f(x) )</td>
<td>3</td>
<td>-6</td>
<td>39</td>
<td>822</td>
<td>1611</td>
</tr>
</tbody>
</table>

Q.5  a) Using Lagrange’s formula, find the interpolating polynomial for \( (0,2), (1,3), (2,12) \) and \( (5,147) \). 9
b) Construct Newton's divided difference table for the data:

<table>
<thead>
<tr>
<th>x</th>
<th>-4</th>
<th>-1</th>
<th>0</th>
<th>2</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>1245</td>
<td>33</td>
<td>5</td>
<td>9</td>
<td>1335</td>
</tr>
</tbody>
</table>

UNIT-III

Q.6  

a) Find the least square fit $y = a + bx + cx^2$ for the data:

<table>
<thead>
<tr>
<th>x</th>
<th>-3</th>
<th>-1</th>
<th>1</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>15</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

b) Using centered formula of order $(h^4)$, Find $f'(1.4)$ from the following table:

<table>
<thead>
<tr>
<th>x</th>
<th>1.2</th>
<th>1.3</th>
<th>1.4</th>
<th>1.5</th>
<th>1.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>f(x)</td>
<td>1.5095</td>
<td>1.6984</td>
<td>1.9043</td>
<td>2.1293</td>
<td>2.3756</td>
</tr>
</tbody>
</table>

UNIT-IV

Q.7  

a) Using Simpson's one-third rule, Compute $\int_0^1 \frac{1}{1+x} dx$. taking $h = 0.125$.

b) A river is 80 feet wide. The depth $y$ in feet of the river at a distance $x$ from one bank is given by the following table:

<table>
<thead>
<tr>
<th>x</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>0</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>14</td>
<td>8</td>
<td>3</td>
</tr>
</tbody>
</table>

Find approximately the area $A = \int_0^{7.5} y dx$ of the cross section of the river.

Q.8  

a) A coin is tossed five times. What is the probability of getting at least three heads?

b) Fit a Poisson distribution to the following data:

<table>
<thead>
<tr>
<th>x</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>122</td>
<td>60</td>
<td>15</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Q.9  

Fit a normal distribution to the following data and test the goodness of fit:

<table>
<thead>
<tr>
<th>x</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
<th>18</th>
<th>20</th>
<th>22</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>1</td>
<td>7</td>
<td>15</td>
<td>22</td>
<td>35</td>
<td>43</td>
<td>38</td>
<td>20</td>
<td>13</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>
End Semester Examination, May 2015
BCA – Sixth Semester
JAVA PROGRAMMING (BCA-601A)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Multiple choice questions:
   a) The overloaded constructors in a class will have:
      i) different names
      ii) different parameter lists
      iii) different return types
      iv) None of the above
   b) To create our own exception class, we have to:
      i) create an own try and catch block
      ii) extend exception class
      iii) use throws keyword
      iv) use finally keyword
   c) Which keyword is used to monitor statement for execution?
      i) try
      ii) catch
      iii) throw
      iv) throws
   d) Which method is called first by an applet?
      i) start
      ii) run()
      iii) init()
      iv) paint()
   e) To display text on applet, _______ method is used.
   f) Java always provides a default constructor to a _______.
   g) What is Garbage collection in Java?
   h) Why do we use array as a parameter in main method?
   i) What is package?
   j) What is method overriding?  

UNIT-I

Q.2  a) What is the difference between Java, C and C++?
    b) Explain the importance of JVM in Java programming.
    c) What is stand alone application?  

Q.3  a) Discuss the structure of Java program.
    b) Discuss the various tools available in JDK? How do they help in application development?  

UNIT-II

Q.4  a) Write a program in Java to find the addition and subtraction of two matrices.
    b) Compare: a) break and continue       b) while and do-while.  

Q.5  a) What is an array? Give the format and purpose of arrays in Java.
    b) Write a program in Java to find sum and reverse of n digit numbers.  

UNIT-III

Q.6  a) What are constructors used for? Can constructors be overloaded? Write a program in support of your answer.
b) What are classes and objects? How does classes accomplish data hiding? Explain

Q.7  a) What is the difference between final, finalize and finally() in Java?  
b) Discuss Java error handling mechanism with an example. What is the difference between checked and unchecked exception handling in Java.

UNIT-IV

Q.8  a) What is an interface? How is it different from an abstract class? Can an abstract class have constructors? Explain.  
b) Define the following for packages:  
i) -Public    - private    - protected  
   -import

Q.9  a) What is the difference between shadowing and overriding in C#.net?  
b) Write a short note on Delegation Event Model.  
c) What are applets? Differentiate them from application.
**End Semester Examination, May 2015**

**BCA – Sixth Semester**

**DATA COMMUNICATION AND NETWORKING (BCA-602)**

Time: 3 hrs

Max Marks: **75**

No. of pages: **2**

Note: Attempt **FIVE** questions in all; **taking at least ONE question** from each Unit. **Q.1 is compulsory.** All questions carry equal marks.

Q.1  

a) A tree topology is a variation of a ________ topology.  
   i) Mesh    
   ii) Star     
   iii) Bus     
   iv) Ring

b) A television broadcast is an example of ________ transmission.  
   i) Simplex   
   ii) Half duplex   
   iii) Full duplex  
   iv) Automatic

c) ARQ stands for ________.  
   i) Automatic repeat quantization    
   ii) Automatic repeat request  
   iii) Automatic retransmission request  
   iv) Acknowledge repeat request

d) DNS is the abbreviation of:  
   i) Dynamic name system   
   ii) Domain name system  
   iii) Dynamic network system  
   iv) Domain network service

e) ________ control refers to methods of error detection and correction.  
   i) Flow   
   ii) Error   
   iii) Transmission  
   iv) None of the above

f) Frame relay provides ________ connections.  
   i) PVC   
   ii) SVC   
   iii) DLCI  
   iv) Both i) and ii)

g) Routers functions is the ________ layer.  
   i) Physical   
   ii) Data link   
   iii) Network  
   iv) Transport

h) In FTP, when we ________, it is copied from the client to the server.  
   i) Retrieve a file   
   ii) Store a file  
   iii) Retrieve a list  
   iv) None of the above

i) ________ is the protocol suite for the current Internet.  
   i) TCP/IP   
   ii) NCP  
   iii) UNIX   
   iv) ACM

j) Which of the following is not in OSI model?  
   i) Physical layer  
   ii) Internet layer  
   iii) Network layer  
   iv) Transport layer

**UNIT-I**

Q.2 What do you mean by sampling? Explain PAM and PCM in sampling with a proper diagram.  

**15**

Q.3 Differentiate the following:  

a) Analog and digital signal.  

b) Bus and ring topology.  

c) Bitrate and band rate.  

**5x3**
UNIT-II

Q.4 Differentiate between OSI model and TCP/IP model. Explain network layer and presentation layer of OSI model.

Q.5 Write short notes on:
   a) UDP
   b) SMTP
   c) FTP

UNIT-III

Q.6 What do you mean by routing? How is distance vector routing different from link state routing?

Q.7 What are virtual LANs? How are they different from LANs? State advantages and disadvantages of virtual LANs.

UNIT-IV

Q.8 Explain token ring concept in relation to priority, reservations, monitor stations and backup stations etc.

Q.9 What is packet switching? How a datagram approach is different from a virtual circuit approach? Justify your answer.
End Semester Examination, May 2015
BCA – Sixth Semester
MULTIMEDIA AND ANIMATION (BCA-603)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Multiple choice questions:

a) Graphics that contain movement are often referred to as _________.
   i) Animation
   ii) Motion
   iii) Premier adobe
   iv) Flash

b) JPEG stands for:
   i) Joint photographic experts grade.
   ii) Joint photo experiment group.
   iii) Joint photographic enlarge group.
   iv) Joint photographic experts group.

c) What is the primary logical unit for data storage in a CD?
   i) Groove
   ii) Pit
   iii) Sector
   iv) Track

d) One of the disadvantages of multimedia is:
   i) Cost
   ii) Adaptability
   iii) Relativity
   iv) Usability

e) Which of the following is not a video file extension?
   i) MP4
   ii) AVI
   iii) QT
   iv) JPG

f) Video is represented as a series of images formally known as:
   i) Pics
   ii) Shots
   iii) Frames
   iv) Snaps

g) ________ is a technique in which one image transforms into another:
   i) Kinematics
   ii) Morphing
   iii) Animation
   iv) Layering

h) ________ is a decision making process about when user should admitted or not.
   i) Admission control
   ii) Delay
   iii) Stand alone
   iv) Synchronization

i) In cryptography, cipher text refers to ________.
   i) Plain text
   ii) Formatted text
   iii) Clean text
   iv) Rich text

j) Which one is a 3D animation software?
   i) Adobe Photoshop
   ii) Microsoft silver light
   iii) Animation
   iv) Toon Boom

UNIT-I

Q.2 a) Explain about the multimedia system architecture in detail. 10
    b) What are the objects of multimedia? 5

Q.3 a) What are the advantages and disadvantages of multimedia? 8
    b) List out the basic software of multimedia and categorise them. 7
UNIT-II

Q.4  a) List out the differences between a plain text and a formatted text.  
     b) What is OLE? Explain in detail.  

Q.5  a) Write a short note on conversion in various text formats.  
     b) Explain RTE syntax in detail.  
     c) List all the tools used in HTML.  

UNIT-III

Q.6  a) Differentiate between Lossless and Lossy compression techniques.  
     b) How data compression is possible?  
     c) Write a short note on bitmap image.  

Q.7  a) Explain one of entropy encoding technique with an example.  
     b) List some file formats used in multimedia.  

UNIT-IV

Q.8  a) Discuss the principle of animation.  
     b) List some 2D and 3D software. Also explain the 2D and 3D animation techniques.  

Q.9  Write short notes on:  
     a) Morphing.  
     b) Use of animation in multimedia.  
     c) Image size on quality and storage.
End Semester Examination, May 2015
BCA -First Semester
FUNDAMENTALS OF INFORMATION TECHNOLOGY AND
PROGRAMMING TECHNIQUES (BCA-1001)

Time: 3 hrs  Max Marks:  75
No. of pages:  2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Multiple choice questions:
a) A computer program that converts assembly language to machine language is:
   i) Compiler
   ii) Interpreter
   iii) Assembler
   iv) Comparator
b) ALU is:
   i) Arithmetic logic unit
   ii) Array logic unit
   iii) Application logic unit
   iv) None of the above
c) The term gigabytes refers to:
   i) 1024 mega bytes
   ii) 1024 kilobytes
   iii) Application logic unit
   iv) None of the above
d) The secondary storage devices can only store data but they cannot perform:
   i) Arithmetic operation
   ii) Logic operation
   iii) Fetch operation
   iv) Either of the above

State whether the following statements are True or False:
e) Debugging means detecting, locating and removing all errors in a computer program.
f) Structured programming do not follow modular approach.
g) WORM stands for write once read many.
h) ROM and RAM are secondary storage units.
i) VOICE system are output devices.
j) Condition stub and action stub form a decision table.

Q.2 Draw the block diagram of computer. Which component of a computer is generally called brain of a computer and why? Describe the functions of the distinct part of this component.

Q.3 Write down the applications of computers in the following fields:
a) Banking  b) Medicine  c) Sports  d) Airline  e) Weather

Q.4 What do you understand by semi-conductor memory and magnetic memory? What are the similarities between the two? Also specify the major differences between the two.

Q.5 Perform the following conversions:
a) \((172)_{10} = (?)_2\)
b) \((10110110101)_2 = (?)_{10}\)
c) \((FCA2)_{16} = (?)_2\)
d) \( (7952)_8 = (?)_{10} \)
e) \( (4459)_{10} = (?)_8 \)

**UNIT-III**

Q.6 What do you understand by an algorithm? What are the various measures that need to be taken care when designing an algorithm? Illustrate with the help of an example. 

Q.7 Write down the algorithm and also draw the flowchart for printing a Fibonacci series.

**UNIT-IV**

Q.8 Explain the approach which uses reverse engineering technique to solve the problem. Mention its relative advantages and disadvantages. Compare it with black box technique.

Q.9 Which technique is popularly known as modular approach of programming? Explain its concept with a suitable example. Also mention its advantages and disadvantages.
End Semester Examination, May 2015  
BCA -First Semester  
PROGRAMMING IN ‘C’ (BCA-1002)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  
a) C language was developed by:  
i) Ken Thompson  
ii) Dennis Ritchie  
iii) Peter Norton  
iv) None of the above  
b) The two operators && and || are:  
i) Arithmetic  
ii) Logical  
iii) Relational  
c) When we use the case control structure?  
i) To choose one from multiple alternatives.  
ii) To switch from one instruction to another.  
iii) To make execution fast.  
iv) None of the above.  
d) The expression $X = 4 + 2 \% 8$ evaluates:  
i) -6  
ii) 6  
iii) 4  
iv) None of the above  
e) The single character input/output functions are:  
i) scanf and printf  
ii) getchar and putchar  
iii) None of the above  
f) #define should not end with a semicolon. (True / False)  
g) A variable which is visible only in the function, in which it is defined is called local variable. (True / False)  
h) A C variable cannot start with a number. (True / False)  
i) Which escape character can be used to begin a new line in C?  
j) Which of the language is predecessor to C programming language?  

UNIT-I

Q.2  
a) Write a program in C language to find area of a triangle.  
b) What are the reasons of popularity of C over other programming languages?  
c) Write short note on constant.  

Q.3  
What is operator? Discuss various types of operators available in C language. Give an example of each.  

UNIT-II

Q.4  
Write the format, purpose and example of following:  
a) for loop  
b) while loop  
c) else-if ladder  

Q.5  
a) Give the syntax of declaring Arrays in C language with examples.  
b) Write a program in C to generate the Fibonacci series upto $n$ terms.  

UNIT-III

Q.6  
a) Highlight the differences between Structure and Union.  
b) Explain with the help of an example how a structure is declared and initialized?
Q.7  
   a) Explain general syntax of C function with an example.  
   b) What is recursion? While writing any recursive function what things must be taken care of?

   **UNIT-IV**

Q.8  
   a) Distinguish between:
      i) printf() and fprintf()  
      ii) scanf() and fscanf()  
   b) Discuss: fopen() and fclose() functions.  
   c) What is the purpose of rewind()?

Q.9  
   a) Discuss the various modes of opening a data file in C.  
   b) Write a note on storage classes.
End Semester Examination, May 2015
BCA -First Semester
ENVIRONMENTAL STUDIES (BCA-1003)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Choose/fill the correct option:

a) Which of these is not a natural ecosystem?
   i) Desert  ii) Aquarium  iii) Forest  iv) Mountain

b) Which of these is a threat to environment?
   i) Growing plants  ii) Growing population
   iii) Growing crops  iv) Growing flowers

c) The interactive zone between land, air and water is called:
   i) Aquarium  ii) Lithosphere
   iii) Biosphere  iv) Atmosphere

d) The word ‘Environment’ is derived from a French word ‘Environ’ which means ____________.

e) The thinnest layer of the earth is:
   i) The core  ii) The mantle
   iii) The lithosphere  iv) The crust

f) What is the composition of oxygen in the atmosphere?
   i) 20%  ii) 21%
   iii) 22%  iv) 23%

g) The group of organisms which convert light into food are called:
   i) Autotrophs  ii) Heterotrophs
   iii) Decomposers  iv) Omnivores

h) BOD stands for:
   i) Biotic oxidation demand  ii) Biological oxidation demand
   iii) Biological oxygen demand  iv) Biochemical oxygen demand

i) 5th June is observed as:
   i) World forest day  ii) World environment day
   iii) World Wildlife day  iv) World Population day

j) The hormone responsible for maintaining the pregnancy is:
   i) LH  ii) FSH
   iii) Progesterone  iv) Oestrogen

UNIT-I

Q.2 a) Why do we need to study environmental studies?  
    b) Explain the role of an individual in conservation of natural resources.

Q.3 a) What do you mean by equitable use of resources for sustainable lifestyle?
    b) What do you mean by Natural resources? What are the associated problems with natural resources?

UNIT-II

Q.4 a) Explain the energy flow in an ecosystem with an example.
    b) Explain the structure and function of an ecosystem.
Q.5  a) Write a note on “India as a mega-diversity nation”.
    b) Explain conservation of biodiversity.

**UNIT-III**

Q.6  Give causes, effects and control measures of any three:
    a) Nuclear hazards  
    b) Air pollution  
    c) Water Pollution  
    d) Soil pollution

Q.7  a) What do you mean by a disaster management? Explain with relation to earthquakes and landslides.
    b) How solid waste can be managed in urban areas and in industries?

**UNIT-IV**

Q.8  a) Why environment needs to be protected? Explain different Environment Protection Acts.
    b) Write a note on Urban problems related to energy.

Q.9  a) Explain how economy of India has got affected by population explosion.
    b) Explain different methods to prevent pregnancy.
End Semester Examination, May 2015
BCA - First Semester
BASIC MATHEMATICAL SKILLS (BCA-1004)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  a) Define Rank of matrix.
   b) If $k + 1$, $3k$, $4k + 2$ be any 3 consecutive terms of an A.P., then value of $k$ is ________.
   c) Solve $\log \sqrt{8}/\log 8$.
   d) Find $\frac{dy}{dt}$ for $y = x^9$.
   e) The 9th term of AP sequence $9, 12, 15, 18......$ is ________.
   f) If $\left(\frac{a}{b}\right)^{x-1} = \left(\frac{b}{a}\right)^{x-3}$, then the value of $x$ is ________.
   g) If $A = \begin{bmatrix} 3 & 2 \\ 1 & 1 \end{bmatrix}$ and $AB = \begin{bmatrix} 1 & 3 & 2 \\ 1 & 1 & 1 \end{bmatrix}$, then:
      i) $B$ is not determined
      ii) $B = \begin{bmatrix} -1 & 1 & 0 \\ 2 & 0 & 1 \end{bmatrix}$
      iii) $B = \begin{bmatrix} -1 & 0 \\ 1 & 0 \\ 0 & 1 \end{bmatrix}$
      iv) $B = \begin{bmatrix} -1 & 1 \\ 2 & 0 \end{bmatrix}$
   h) Find the value of $a$ if the following matrix is singular $\begin{bmatrix} -4 & 2 \\ 6 & a \end{bmatrix}$.
   i) Find cofactor of $A_{13}$ of the matrix $A = \begin{bmatrix} 5 & -2 & 7 \\ 6 & 1 & -9 \\ 4 & -3 & 8 \end{bmatrix}$.
   j) If $A = \begin{bmatrix} 5 & 3 & 2 \\ 0 & 4 & 1 \\ 0 & 0 & 3 \end{bmatrix}$ the $|A|$ is ______.  1½×10

UNIT-I

Q.2  a) If $A = \begin{bmatrix} 0 & 3 \\ -7 & 5 \end{bmatrix}$ and $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, then find $K$ so that $KA^2 = 5A - 21I$.
   b) Find the value of $x$ such that $\begin{bmatrix} 1 & 2 & 0 \\ 2 & 0 & 1 \\ 1 & 0 & 2 \end{bmatrix} \begin{bmatrix} 1 \\ 1 \\ x \end{bmatrix} = 0$.  7  8
Q.3  
\[ a) \text{ Verify Cayley-Hamilton theorem for matrix } A = \begin{bmatrix} 1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 3 & 4 \end{bmatrix} \text{ and hence find } A^{-1}. \]
\[ b) \text{ Find the rank of matrix } A = \begin{bmatrix} 3 & 2 & 7 \\ 4 & -3 & -2 \\ 5 & 9 & 23 \end{bmatrix}. \]

UNIT-II

Q.4  
\[ a) \text{ The sum of 3 numbers in A.P. is 15. If 1, 4 and 19 are added to the numbers, the resulting numbers are in G.P. Find the numbers.} \]
\[ b) \text{ How many words can be formed from the letters of the word DAUGHTER?} \]
\[ i) \text{ Taking all letters together} \]
\[ ii) \text{ Beginning with D and ending with R} \]

Q.5  
\[ a) \text{ Find the 8th term in } \left[ \frac{2x}{3} - y^2 \right]^{11} \]
\[ b) \text{ Sum the series 5+55+555+…… to n terms.} \]

UNIT-III

Q.6  
\[ a) \text{ Show that } 2 \log x + 2 \log x^2 + 2 \log x^3 + \ldots + 2 \log x^n = n(n + 1) \log x \]
\[ b) \text{ Simplify: } \frac{\tan(90 + \theta) \sin(180 + \theta) \sec(270 + \theta)}{\cos(270 - \theta) \csc(180 - \theta) \cot(360 - \theta)} \]

Q.7  
\[ a) \text{ If ABCD is a cyclic quadrilateral, Prove that } \cos A + \cos B + \cos C + \cos D = 0 \]
\[ b) \text{ If } \log \frac{x + y}{7} = \frac{1}{2} (\log x + \log y) ; \text{ Show that: } \frac{x}{y} + \frac{y}{x} = 47 \]

UNIT-IV

Q.8  
\[ a) \text{ For value of } k \text{ is the following function } f(x) \text{ continuous at } x = 2 \]
\[ f(x) = \begin{cases} \frac{x^2 - 4}{x - 2} &; x \neq 2 \\ k &; x = 2 \end{cases} \]
\[ b) \text{ If } y = \sqrt{x} - \frac{1}{\sqrt{x}} , \text{ Show that } 2x \frac{dy}{dx} + y = 2\sqrt{x} \]

Q.9  
\[ a) \text{ If } y = \frac{x}{x + y} , \text{ show that } x \frac{dy}{dx} = y(1 - y) \]
\[ b) \text{ If } \lim_{x \to 0} \frac{x^4 - 1}{x - 1} = \lim_{x \to k} \frac{x^2 - k^2}{x - k} \text{ find the value of } k \]
End Semester Examination, May 2015  
BCA -Second Semester  
DATA STRUCTURES (BCA-2001)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Answer the following by choosing the correct option:

a) The smallest element of an array’s index is called its:
   i) Lower bound  
   ii) Upper bound  
   iii) Range  
   iv) Extraction

b) Which of the following sorting algorithm is of divide and conquer type?
   i) Bubble  
   ii) Quick  
   iii) Insertion 
   iv) All of the above

c) Which data structure allows deleting data elements from font and inserting at rear?
   i) Stack  
   ii) Queries  
   iii) Dequeue 
   iv) All of the above

d) Linklist are not suitable for:
   i) Insertion sort  
   ii) Binary search  
   iii) Queue  
   iv) None of the above

Fill in the blanks:

e) Two dimensional arrays are called __________.

f) Stack is based on the principle __________.

g) The front of the queries calculated by __________.

State whether True or False:

h) A binary tree can be converted into two tree by replacing each empty subtree by a new external node.
   i) A connected graph T without any cycle is called neighbor.
   j) A graph is a non linear data structure.

UNIT-I

Q.2 a) Suppose A is 2-dimmensional array with 20 rows and 4 columns. Each element of array is stored in 4 memory locations if base address is 200. Calculate:
   i) A[12, 3] using row major  
   ii) A[14, 2] using column major

b) Define the followings:
   i) Data  
   ii) Information  
   iii) Time complexity  
   iv) Space complexity

Q.3 a) Explain sparse array. How can you store the sparse array in memory? Explain with an example.

b) Write an algorithm for inserting a new element into a linear array.

UNIT-II

Q.4 What do you understand by stack? Discuss the various operations of stack. Convert the infix notation into postfix notation \((X - Y)/Z)^* (U + V) - W\).
Q.5  
  a) Mention and explain various types of queue with examples.  
  b) What are advantages and disadvantages of linked lists? How linked lists can be used for polynomial manipulation?  

UNIT-III  

Q.6  
  a) From the given binary tree, answer the followings:  

```
          4
         /|
        / |\  
      11 9 53
     /     |
    8      19
   /      /|
  13     7
```

i) Which is root node?  
ii) Which are leaf nodes?  
iii) What is the result of pre-order traversal?  
iv) What is the result of post-order traversal?  
v) What is the result of in-order traversal?  

b) Write a short note on threaded tree.  

Q.7  
What is minimum spanning tree? Write Kruskal algorithm for minimum spanning tree. Also, find the minimum spanning tree for the following:  

```
A
/|
1 B
/ |\  
C
```

UNIT-IV  

Q.8  
  a) Sort the following data using quick sort:  
  b) Write an algorithm to search a particular element using binary search method.  

Q.9  
What is hashing? Discuss various hashing techniques. Also, discuss the concept of collision resolution technique in detail.
End Semester Examination, May 2015
BCA - Second Semester
DATABASE SYSTEMS (BCA-2002)

Time: 3 hrs
Max Marks: 75
No. of pages: 2

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Answer the following by choosing the correct option:
   a) A database schema refers to:
      i) Information at particular level
      ii) Overall design of database
      iii) Query language
      iv) Validation issues
   b) Row is synonymous with the term:
      i) Record
      ii) Relation
      iii) Column
      iv) Field
   c) Which of the following is a group of one or more attributes that uniquely identifies a row?
      i) Key
      ii) Determinants
      iii) Tuple
      iv) Relation
   d) Traditional set operators include:
      i) Union
      ii) Selection
      iii) Projection
      iv) Division
   e) Which structure is network model based on?
      i) Graph
      ii) Linked list
      iii) Domain
      iv) None of the above
   f) Which of the following not a type of SQL constraint?
      i) Primary key
      ii) Foreign key
      iii) Alternate key
      iv) Unique key
   g) A functional dependency is a relationship between or among:
      i) Tables
      ii) Rows
      iii) Relations
      iv) Attributes
   h) Read only databases are ______ updated.
      i) Always
      ii) Commonly
      iii) Increases
      iv) None of the above
   i) A transaction completes its execution is said to be:
      i) Committed
      ii) aborted
      iii) Rolled back
      iv) Failed
   j) In ER diagram, ER stands for:
      i) Entity-Record
      ii) Entity-Relationship
      iii) Entity-Row
      iv) All of the above.

UNIT-I

Q.2 What is file based approach of database? Explain its limitations. How DBMS management system is better solution along with advantages and disadvantages of DBMS?

Q.3 What are the different notations used for designing an ER diagram and explain their usage?

UNIT-II

Q.4 Explain all types of keys used in relational model with a suitable database example.

Q.5 Discuss any 10 Oracle functions with proper syntax and suitable examples.
UNIT-III

Q.6 What is meant by normalization? Why do we normalize the database? Explain different techniques of normalization.

Q.7 Explain two-phase locking protocol with a suitable example in concurrency control.

UNIT-IV

Q.8 What is the importance of recovery procedure? What is meant by log-based recovery technique? Discuss different types of log based recovery techniques.

Q.9 What is meant by DDBMS? Compare DDBMS with DBMS and discuss advantages and disadvantages of DDBMS.
End Semester Examination, May 2015
BCA -Second Semester
LOGICAL ORGANISATION OF COMPUTER (BCA-2003)

Time: 3 hrs                      Max Marks: 75
Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1 Multiple choice questions:

a) A flip flop has:
   i) One stable state
   ii) No stable state
   iii) Two stable states
   iv) None of the above

b) Which is typically the longest: bit, byte, nibble word?
   i) Bit
   ii) Byte
   iii) Nibble
   iv) Word

c) A JK flip flop is in a “no change” condition when:
   i) J=1 K=1
   ii) J=1, K=0
   iii) J=0, K=1
   iv) J=0, K=0

d) The clock signals are used in sequential logic circuits:
   i) to tell the time of the delay.
   ii) to tell how much time has elapsed since the system was turned on.
   iii) to carry serial digital signals.
   iv) to synchronize events in various parts of a system.

e) The two parts of a microprocessor instruction are called operation and the:
   i) Operand
   ii) Operator
   iii) Observable
   iv) None of the above

f) A combinational circuit which is used to change a decimal number into an equivalent BCD number is:
   i) Decoder
   ii) Encoder
   iii) Multiplexer
   iv) Demultiplexer

g) A 20-bit address bus allows access to a memory of capacity:
   i) 1 MB
   ii) 2 MB
   iii) 32 MB
   iv) 64 MB

h) When is a cache block written into the main memory?
   i) Valid bit is not set
   ii) Every cycle
   iii) Dirty bit is set
   iv) None of the above

i) A microprocessor retries instructions from:
   i) Control memory
   ii) Cache memory
   iii) Main memory
   iv) Virtual memory

j) A 32 bit microprocessor has the word length equal to:
   i) 2 bytes
   ii) 32 bytes
   iii) 4 bytes
   iv) 8 bytes

1½ x 10

UNIT-I

Q.2 a) Why a binary number system is preferred for computers? Explain with reason.

b) Perform the following:
Q.3 a) Generate the Hamming code for data bits 1101. 
b) Write short notes on:
   i) Non weighted code
   ii) Floating point numbers

UNIT-II

Q.4 What are universal gates? Simulate NAND and NOR gates to all gates.

Q.5 Simplify the following using K-map.
   a) \( F(A, B, C, D) = \sum(0, 3, 5, 6, 9, 11, 13, 14, 15) \)
   b) \( D(A, B, C, D) = \sum(1, 2, 8) \)
   c) \( F(w, x, y, z) = \pi(1, 5, 7, 9, 10, 12, 14) \)

UNIT-III

Q.6 What is the limitation of JK flip-flop? How can we overcome from them? Obtain the logic diagram of master slave flip-flop using NAND gates.

Q.7 Explain the followings:
   a) Multiplexers
   b) Full adder
   c) Decoder

UNIT-IV

Q.8 What is a cache memory? Explain various types of mapping techniques in detail.

Q.9 What is parallel processing? Explain in detail.
End Semester Examination, May 2015  
BCA -Second Semester  
CONCEPTUAL FOUNDATIONS OF MANAGEMENT (BCA-2004)

Time: 3 hrs  
Max Marks: 75  
No. of pages: 1

Note: Attempt FIVE questions in all; taking at least ONE question from each Unit. Q.1 is compulsory. All questions carry equal marks.

Q.1  Multiple choice questions:
   a) Which are of the following approaches has merged from the findings of Hawthorne experiments?
      i) Human behavior approach
      ii) Systems approach
      iii) Classical theory
      iv) Decision theory
   b) Which one of the following is departmentation based on functions?
      i) Marketing
      ii) North territory
      iii) Department named(A)
      iv) Department named one.

Fill in the blanks:
   c) A principle means a fundamental statement of ________.
   d) ________ is the process of checking.
   e) Organising is the ________ of work.
   f) Informal leaders are not appointed but ________ in informal groups.
   g) Communication is necessary to every ________.
   h) A ________ must have qualities of a good leader.
   i) ________ is the barrier in the sound decision making process.

Answer the question:
   j) What are management information systems?  

UNIT-I

Q.2  Define the term ‘management’. Explain different functions of management.  
Q.3  Explain Frederick Winslow Taylor’s contribution of management thought.  

UNIT-II

Q.4  What is the concept of planning as an element of management process? Discuss its role in business organizations.  
Q.5  Write short notes on the followings:
      a) Importance of management information systems in decision-making process.  
      b) Types of plans.  

UNIT-III

Q.6  Explain the various steps in the process of organizing and discuss the significance of organizing.  
Q.7  Explain the followings:
      a) The importance of co-ordination in organizing.  
      b) Span of management.  

UNIT-IV
Q.8 "A good leader is not necessarily a good manager." Discuss this statement and compare leadership with management. 15

Q.9 Write notes on:
   a) Qualities of a good leader.  
   b) Autocratic leader. 7½x2
End Semester Examination, May 2015
BJMC – First Semester
INDIAN GOVERNMENT AND POLITICS (BJ-101)

Time: 3 hrs
Max Marks: 80
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Answer any ten of the following:
   a) Name the chief minister of Maharashtra.
   b) Name any three regional parties of Uttar Pradesh.
   c) How many members are there in Rajya Sabha?
   d) Who is the head of a Municipal Corporation?
   e) Define Politics.
   f) Write down any two eligibility criteria for a Governor.
   g) ‘Indian constitution is flexible in nature’. True/False
   h) ‘The members of the panchayat are elected directly by the electorates of the respective territorial constituencies’. True/False
   i) The members of the Rajya Sabha are elected by______.
   j) ‘The present Lok Sabha is the 16th Lok Sabha’. Yes/No
   k) The minimum age to qualify for election to the Lok Sabha is____.
   l) The Parliament of India can make use of the residuary powers at all times or only during national emergency.
   m) The preamble says that the state in India will assure the dignity of the individual. The constitution seeks to achieve this object by guaranteeing equal fundamental rights to each citizen or the right to adequate means of livelihood to each individual.
   n) ‘The president can dissolve the Lok Sabha on the advice of the chief justice of India’ True/False

1½x10

PART-A

Q.2 Examine the role of Local Self Government in the Post-independence period. 6

Q.3 How is the Election Commission of India constituted? 6

Q.4 State the difference between Council of Ministers and the Cabinet. 6

Q.5 How is the Vice President of India elected? 6

Q.6 Write a short note on India’s National movement. 6

Q.7 Discuss the eligibility criteria of a Supreme Court judge. 6
Q.8  Describe the salient features of the Indian Constitution.
6

Q.9  What is meant by 'equal protection of law'?
6

PART-B

Q.10  Write a descriptive note on Naxal Movement in India and explain its Pros and cons.
17½

Q.11  Discuss in detail the role of Major political parties in India.
17½

Q.12  If u were the Prime Minister of India, What policies and changes you will formulate for the betterment of the country?
17½
PART-A

Q.1 Write an essay on any one of the following:
   a) Women Empowerment
   b) Gender Sensitization
   c) Bollywood mesmerizing the youth

Q.2 A friend of yours has been out of station for a month and there was a workshop on
enhancement of communication skills held in your college while he/she was away.
Write a letter to your friend describing the workshop and your experience with it.

Q.3 Youth today are very much fascinated with fashion and bollywood. Today youth feel
that the change in fashion and movies in bollywood have affected the life style and
the culture of the society. Write an article, in 150-200 words, expressing your views.

Q.4 Read the passage given below and then answers the following questions:

It is reported that the Government is close to finalizing a system of dual pricing for
the public procurement of food grains. There would be two basic elements to this
system: A fixed minimum support price (MSP) covering the cost of cultivation, as at
present, recommended by the Commission on Agricultural Costs and Prices (CACP),
and variable procurement prices, at the discretion of the department of food,
depending on market. For example, according to a working group of the Planning
Commission, over the five year period ending 2001-02, when there was a steep rise in
procurement price resulting in accumulation of embarrassing large stock of food
grains of over 60 million tones with Government, consumption of food grains in the
country was reduced, on this account, by at least five million tones per annum. The
new system by assigning a greater role for private trade can improve the efficiency in
the distribution of food grains and substantially cut down subsidies, which can help to
step up much needed public investment in agriculture. The proposed dual pricing
system is a better alternative than total marketization of food grains trade by
disbanding altogether public procurement at MSP.

Such a dismantling could lead to a crash in market prices of food grains in years of
food harvest. Even though this may take exports competitive and raise domestic
consumption of food grains in the short run, it may undermine food security by
sapping producer incentives. The experience of green revolution underlines the
importance of assured MSP including the farmers to step up their own investment and
effort and derive full benefit from available infrastructure.

For the dual pricing system to yield desired results, it needs to be backed by several
other policy measures. Since the impetus for crop diversification would be greater in
the infrastructural developed regions like the north-west, this can slow down the
growth of food grains output in the country and, in particular, the surpluses procured,
unless immediate measures are taken to strengthen public support for irrigation,
technology, extension and credit in the rest of the company, especially in the central
and eastern regions where there is a large potential as the growth of food grains
output has barely kept pace with population growth since the mid-90s. This also calls
for more effective public procurement of food grains at MSP in these regions, as
farmers have to often sell their produce immediately after the harvest at prices that
are lower than MSP. Therefore, dual pricing system can be sustained only through
non-price interventions such as infrastructural support for regional dispersal of growth
in food grain output.

The new system requires better market intelligence forecasts as well as concurrent
analyses on prices and sales in markets in India and abroad.

a) What are the two elements of dual pricing system for procuring food grains?
b) How will the above proposed system benefit the nation?
c) Mention at least four non-food grain items used by the consumers.
d) What is the result of ecological degradation in the north-western region of India?
e) In order to boost the dual system what urgent measures are needed to be taken?

Q.5 Read and correct the incorrect sentences:

a) Either Mohan or his friend go for the dance classes.
b) Neither the teachers nor the professors takes the workshop.
c) Everybody know the answer.
d) One of the student is making noise.
e) Half of the pies in gone from the plate.

Q.6 Use the following vowel in a word and then make a sentence.
/a:/, /u:/, /ae/, /^/, /l:/

Q.7 The following sentences have errors. Identify the errors in each line and write the
correct sentence:

a) I will like to discuss about the matter with the boss.
b) I have a cousin brother.
c) Please repeat that again for me.
d) What is your good name.
e) I met my friend today morning.

Q.8 a) Give the synonyms of the following:
   Ability, Cautious, Interrupt, Noble, Opportunity
b) Give the antonyms of the following:
   Ascent, Freedom, Saint, Usual, Zenith

Q.9 Choose the right prepositions and complete the sentence:

a) The rat ran_____(into/in) the hole.
b) My office is _________(at/on) the 4th floor.
c) I have been living in England ________(Since/For) 2 years.
d) I saw him driving the car_______(at/in) the night.
e) The building is _________(beside/besides) McDonlds. 1x5

Q.10 What do you mean by the word ‘Active Listening’ and how does it benefit an individual? 5

Q.11 Choose the right form of the tenses and rewrite the sentence:

a) He (drink/drank) the entire glass of water.

b) I have (seen/saw) him cheating in the examination hall.

c) He (choose/chose) him the president of the college.

d) Riya did not (go/went) to the market.

e) He had already (gone/went) to Manali. 1x5
End Semester Examination, May 2015
BJMC – First Semester
INDIAN GOVERNMENT AND POLITICS (BJ-101)

Time: 3 hrs  Max Marks: 80
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Answer any ten of the following:
   a) Name the chief minister of Maharashtra.
   b) Name any three regional parties of Uttar Pradesh.
   c) How many members are there in Rajya Sabha?
   d) Who is the head of a Municipal Corporation?
   e) Define Politics.
   f) Write down any two eligibility criteria for a Governor.
   g) ‘Indian constitution is flexible in nature’. True/False
   h) ‘The members of the panchayat are elected directly by the electorates of the respective territorial constituencies’. True/False
   i) The members of the Rajya Sabha are elected by______.
   j) ‘The present Lok Sabha is the 16th Lok Sabha’. Yes/No
   k) The minimum age to qualify for election to the Lok Sabha is____.
   l) The Parliament of India can make use of the residuary powers at all times or only during national emergency.
   m) The preamble says that the state in India will assure the dignity of the individual. The constitution seeks to achieve this object by guaranteeing equal fundamental rights to each citizen or the right to adequate means of livelihood to each individual.
   n) ‘The president can dissolve the Lok Sabha on the advice of the chief justice of India’ True/False

1½x10

PART - A

Q.2 Examine the role of Local Self Government in the Post-independence period. 6

Q.3 How is the Election Commission of India constituted? 6

Q.4 State the difference between Council of Ministers and the Cabinet. 6

Q.5 How is the Vice President of India elected? 6

Q.6 Write a short note on India’s National movement. 6

Q.7 Discuss the eligibility criteria of a Supreme Court judge. 6
Q.8 Describe the salient features of the Indian Constitution.
   6

Q.9 What is meant by ‘equal protection of law’?
   6

**PART-B**

Q.10 Write a descriptive note on Naxal Movement in India and explain its Pros and cons.
   17½

Q.11 Discuss in detail the role of Major political parties in India.
   17½

Q.12 If u were the Prime Minister of India, What policies and changes you will formulate for the betterment of the country?
   17½
End Semester Examination, May 2015
BJMC – First Semester
INDIAN GOVERNMENT AND POLITICS (BJ-101)

Time: 3 hrs
Max Marks: 80
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Answer any ten of the following:
   a) Name the chief minister of Maharashtra.
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   c) How many members are there in Rajya Sabha?
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   n) ‘The president can dissolve the Lok Sabha on the advice of the chief justice of India’ True/False

1½x10

PART-A

Q.2 Examine the role of Local Self Government in the Post-independence period.
6

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Q.8 Describe the salient features of the Indian Constitution. 6

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**PART-B**

Q.10 Write a descriptive note on Naxal Movement in India and explain its Pros and cons. 17½

Q.11 Discuss in detail the role of Major political parties in India. 17½

Q.12 If you were the Prime Minister of India, What policies and changes you will formulate for the betterment of the country? 17½
End Semester Examination, May 2015
BJMC – First Semester
INDIAN SOCIETY AND ECONOMY (BJ-102)

Time: 3 hrs  Max Marks: 80
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) What do you mean by Renaissance?
   b) Who was Dadabhai Naoroji?
   c) Who is the founder of Brahmo Samaj?
   d) Ashoka, the King became the follower of ..........?
   e) OBC stands for .................
   f) FDI stands for .................
   g) What do you mean by Liberalization?
   h) Who is the Finance Minister of India?
   i) MNREGA stands for .................
   j) Who were known as Lal Bal Pal in India?
   k) Who is the founder of Jainism?
   l) What do you mean by Macro Economics?
   m) What do you mean by Secularism?
   n) What is Kuchipudi?
   o) What is Mid-day meal?

1½x10

PART-A

Q.2 Discuss the features of Indian society in detail.
   6

Q.3 Write a short note on female feticide.
   6

Q.4 Throw light on the role of religion in the development of society.
   6

Q.5 Describe the impact of unemployment and poverty of India.
   6

Q.6 Write a short note on relevance of traditional values in modern society.
   6

Q.7 Discuss the role of Globalization in the growth of Indian Economy.
   6

Q.8 Write a detailed note on FDI.
   6
Q.9 Throw light on the impact of freedom movement on Indian Society.
6

PART-B

Q.10 Explain the history of major religions of India in detail.
17½

Q.11 Throw light on the features of Indian Economy.
17½

Q.12 Write a detailed note on the short industries of India.
17½
End Semester Examination, May 2015
BJMC – First Semester
INDIAN SOCIETY AND ECONOMY (BJ-102)

Time: 3 hrs  
Max Marks: 80  
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) What do you mean by Renaissance?
   b) Who was Dadabhai Naoroji?
   c) Who is the founder of Brahmo Samaj?
   d) Ashoka, the King became the follower of ..........?
   e) OBC stands for .................
   f) FDI stands for .................
   g) What do you mean by Liberalization?
   h) Who is the Finance Minister of India?
   i) MNREGA stands for .................
   j) Who were known as Lal Bal Pal in India?
   k) Who is the founder of Jainism?
   l) What do you mean by Macro Economics?
   m) What do you mean by Secularism?
   n) What is Kuchipudi?
   o) What is Mid-day meal?
   1½x10

PART-A

Q.2 Discuss the features of Indian society in detail.  
6

Q.3 Write a short note on female feticide.  
6

Q.4 Throw light on the role of religion in the development of society.  
6

Q.5 Describe the impact of unemployment and poverty of India.  
6

Q.6 Write a short note on relevance of traditional values in modern society.  
6

Q.7 Discuss the role of Globalization in the growth of Indian Economy.  
6

Q.8 Write a detailed note on FDI.  
6
Q.9  Throw light on the impact of freedom movement on Indian Society.

6

**PART-B**

Q.10  Explain the history of major religions of India in detail.

17½

Q.11  Throw light on the features of Indian Economy.

17½

Q.12  Write a detailed note on the short industries of India.

17½
End Semester Examination, May 2015
BJMC – First Semester
INTRODUCTION TO COMMUNICATION AND MEDIA (BJ-103)

Time: 3 hrs  Max Marks: 80
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) Define interpersonal communication.
   b) Name any two national news agencies.
   c) In which year television came to India?
   d) UNI stands for ___________.
   e) What is a blog?
   f) Television is an audio visual medium of communication. (True/False)
   g) Cinema is one of the most powerful medium of communication. (True/False)
   h) Give any two disadvantages of internet.
   i) Who poised the term 'Global Village'?
   j) Give two examples of intrapersonal communication.
   k) Name any two sports magazines.
   l) Define infotainment.
   m) In which year Yuva Vani started?
   n) In which year radio came to India?
   o) AP stands for ___________.

1½x10

PART-A

Q.2 Discuss the functions of communication in detail. 6

Q.3 Write a short note on culture. 6

Q.4 Write a short note on group communication. 6

Q.5 What do you understand by non verbal communication? Explain. 6

Q.6 Write a short note on history of radio. 6

Q.7 What do you mean by target audience? Explain. 6

Q.8 Trace the history of television in India. 6
Q.9 Discuss in detail the process and elements of communication.

6

PART-B

Q.10 ‘Mass communication plays an important role in the development of a society’. Discuss in detail.

17½

Q.11 Write a detailed note on Indian Cinema.

17½

Q.12 Write a detailed note on the future of print journalism in the era of new media.

17½
End Semester Examination, May 2015  
BJMC – First Semester  
BASIC LANGUAGE SKILLS (BJ-104)

Time: 3 hrs  
Max Marks: 80

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Answer any ten of the following questions and selecting at least three from each group.

A  Correct the following sentences:
   i) We plays cricket.
   ii) He did not went there.
   iii) He lives at Chennai.
   iv) We have been playing for 5 o’clock.
   v) Why doesn’t you understand this?
   vi) Have they see that movie?
   vii) He died from cholera.
   viii) He is best student of his class.
   ix) The students have been allowed to go on a educational trip.
   x) Have you see that move?
   xi) He is to weak to walk.
   xii) Students are teach by the teacher.
   xiii) They are planning to go in USA.

B  Write out the Verb Patterns in respect of the following sentences:
   i) Has he gone to school?
   ii) He played cricket.
   iii) He reached here.
   iv) The student is honest.
   v) He completed the work.

Q.2 Answer any five of the following:
   i) What are the different types of feature?
   ii) Coherency and correctness.
   iii) Why writing for media is different from other forms of writing?
   iv) Ideas and content.
   v) Economy of words.
   vi) Write a human interest story of your interest.
   vii) Sentence fluency.
   viii) What are the different types of letter?

Q.3 Answer any two of the following:
   i) Discuss the concept of news. Explain different types of news with suitable examples.
ii) Discuss the importance of grammar in writing.
iii) What is resume/CV? Prepare a resume for the job you are applying for.

17½x2
End Semester Examination, May 2015
BJMC – Second Semester
PRESS LAWS AND HISTORY OF JOURNALISM (BJ-201)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) Who was the Chairman of Second Press Commission?
   b) In which year was Right to Education Act passed?
   c) Name any two newspapers started by Raja Ram Mohan Roy.
   d) What is NANAP?
   e) Who was the first editor of The Hindustan Times?
   f) What is the full form of STAR?
   g) Who started quit India moment in India?
   h) What is Vernacular Press Act?
   i) What do you mean by Dateline?
   j) What is the size of a Tabloid?
   k) Who wrote the book “The Accidental Prime Minister”?
   l) What do you mean by Interest Groups?
   m) Who invented radio?
   n) What is the name of first patriotic film of India?
   o) Who is the producer of film “Mother India”?

PART A

Q.2 Write a short note on Contempt of Court.
5

Q.3 Throw light on role of press in social reform moment in India.
5

Q.4 Define Censorship. Discuss its relevance in media.
5

Q.5 Briefly explain Intellectual Property Act.
5

Q.6 Explain Right to Information in detail.
5

Q.7 Write in detail about Cable Act.
5

Q.8 Briefly explain working and recommendations of different press committees in India.
5
Q.9 Explain:
   a) PRSI
   b) DAVP
   c) TRAI

**PART-B**

Q.10 Write a descriptive note on history of News Agencies in India.
   17½

   17½

Q.12 Throw light on Fundamental Rights and Duties laid down by Indian Constitution.
   17½

Q.13 Explain code of conduct guidelines laid down by PCI for journalists in India?
   17½
Q.1 Answer any ten of the following:
   a) Who is the Secretary General of United Nations?
   b) Name any two theories of studying International Relations.
   c) In which year USSR disintegrate?
   d) How many members are there in the UN Security Council?
   e) What is the full form of ASEAN?
   f) Name the President of United States of America.
   g) What do you mean by Multi-Polar World?
   h) How many members are there in SAARC?
   i) Name any two International News Agencies.
   j) In which year did Indo-China war take place?
   k) Where is the Headquarter of United Nations situated?
   l) Who is the External Affairs Minister of India?
   m) The abbreviation OPEC and OIC stands for____.
   n) Name the capital of China?
   o) What do you mean by Cold War?

1x10

PART-A

Q.2 Define International Relations? Discuss its relevance in today’s world.
5

Q.3 Discuss India’s Foreign Policy with China.
5

Q.4 Write Short notes on:
   a) Non-Aligned Movement
   b) BRIC
5

Q.5 Write a short note on Climate change and explain the factors which promote it.
5

Q.6 Discuss India’s relationship with United States of America.
5

Q.7 What were the main causes and consequences of 1st World War?
5

Q.8 Write down the main factors for the end of Cold War.
5
**PART-B**

Q.9 Write a descriptive note India’s Foreign policy with special reference to Russia.  
17½

Q.10 Write short notes on:  
a) SAARC  
b) UN  
17½

Q.11 Write a note on International Terrorism and explain the role of social media in combating International Terrorism.  
17½
Q.1 Answer any ten of the following MCQ, each carry one mark:

a) The Collection of unprocessed items is __________.
   i) Information
   ii) Data
   iii) Memory
   iv) Reports

b) PARAM was developed by ____________.
   i) C-DAC
   ii) IIT Kanpur
   iii) BARC
   iv) None of these

c) Programs written in an assembly language are converted into machine language in a computer by __________.
   i) Assembler
   ii) Compiler
   iii) Processor
   iv) Interpreter

d) A/an __________ converts and executes one statement at a time
   i) Compiler
   ii) Interpreter
   iii) Converter
   iv) Instructions

e) IC chips used in computers usually made up of __________.
   i) Silicon
   ii) Lead
   iii) Chromium
   iv) Gold

f) MS-DOS is a ____________.
   i) System software
   ii) Application software
   iii) Anti virus
   iv) None of the above

g) A DNS translates a domain name into what?
   i) Binary
   ii) Hex
   iii) IP
   iv) URL

h) One who designs, writes tests and maintains computer programs is called a ______.
   i) Programmer
   ii) User
   iii) Designer
   iv) Operator

i) A collection of 8 bits is called
   i) Byte
   ii) Word
   iii) Record
   iv) None of the above

j) In __________ topology, network components are connected by only one cable
   i) Star
   ii) Ring
   iii) Bus
   iv) Mesh

k) Website is a collection of __________.
   i) HTML document
   ii) Formula translation
   iii) Graphic files
   iv) Hard drives
I) Computers on an Internet are identified by ___________.
   i) E-mail address  
   ii) Street address  
   iii) IP address  
   iv) None of the above
m) What is a cache memory?

n) Hybrid computer is a combination of _____________ computer.
o) EDSAC stands for ____________.

1x10

PART-A

Q.2 What is multimedia? Write down the main components of multimedia.  

4

Q.3 Write short notes on the followings:
a) E-mail  
b) High level language  
c) Repeater  
d) Router  

4

Q.4 Differentiate the followings:
a) CUI and GUI  
b) Hardware and Software  
c) Client and Server  
d) Impact and Non-impact printer  

4

Q.5 Write any five output devices and explain in detail about the CRT monitor.  

4

Q.6 Convert the followings:
a) Binary number $1000111_2$ into decimal equivalent.  
b) Decimal number $53_{10}$ into binary equivalent.  

4

Q.7 What are the equipments required for using Internet? What are the advantages of internet?  

4

Q.8 What is feedback on net?  

4

Q.9 Write down the name and function of the tools available in the tool palette of QuarkXPress.  

4

PART-B
Q.10 "Computers are used as a tool in media". Discuss with suitable example.

Q.11 Define the term ‘Topology’. Explain the various types of topology used in networking.

Q.12 What is “generation” in computer terminology? List the various computer generations along with key characteristics of computers of each generation.
End Semester Examination, May 2015
BJMC – Second Semester
REPORTING AND EDITING (BJ-204)

Time: 3 hrs  Max Marks: 50
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Answer any ten of the following:
   a) What is gutter?
   b) What do you mean by fourth estate?
   c) What is dateline?
   d) What is scoop?
   e) What is tabloid?
   f) PTI stands for __________.
   g) Who is the editor of the Hindi Daily Newspaper “Dainik Jagaran”?
   h) What is cropping?
   i) What do you mean by stringer?
   j) What do you mean by anchor story?
   k) What is follow up?
   l) What is AP?
   m) Who is the Chairperson of Prasar Bharati?
   n) What is PCI?
   o) Who is known as the father of journalism?

   1x10

PART-A

Q.2 Discuss the hierarchy of a desk office in a newspaper organization. 4

Q.3 What are the latest trends in print media industry? Discuss in detail. 4

Q.4 What are the qualities of a sub editor? 4

Q.5 What is editing? Discuss the elements of editing. Concept of news. 4

Q.6 Write an article on any relevant issue. 4

Q.7 Write a short note on news ideas and angels with examples. 4

Q.8 Write a short note on inverted pyramid. 4
Q.9 What are the challenges of a reporter? Discuss in detail.

4

PART-B

Q.10 Write a detailed note on investigative and development reporting.

10

Q.11 What is news value? Discuss the news values in examples.

10

Q.12 How do you see the future of print media industry in the era of new media?

10
End Semester Examination, May 2015
BJMC – Third Semester
COMMUNICATION THEORY (BJ-301)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: **Q.1 is compulsory.** Attempt any **FIVE** questions from Part A and any **TWO** questions from Part B.

Q.1 Attempt any ten of the following:
   a) Define intrapersonal communication.
   b) What do you mean by feedback?
   c) What do you mean by encoding?
   d) Name any two traditional forms of communication.
   e) Write any two functions of mass communication.
   f) What do you understand by mass media?
   g) Hypodermic needle theory is also known as __________.
   h) What do you understand by Kinesis?
   i) What do you mean by body language?
   j) What is noise?
   k) What do you mean by crowd?
   l) “Who says what in which channel to whom with what effect?” model of communication was given by ________________.
   m) Facial expression is a part of verbal communication. (_True/False_)
   n) What do you mean by culture?
   o) Give any examples of non verbal communication.

1x10

**PART-A**

Q.2 Write a short note on two step flow theory of communication.
   5

Q.3 Discuss in detail the barriers of communication.
   5

Q.4 Write a short no cultivation theory of communication.
   5

Q.5 Write a short note on the seven C’s of communication.
   5

Q.6 Explain briefly the Osgood model of communication.
   5

Q.7 Write a short note on non verbal communication.
   5

Q.8 With the help of a diagram discuss the process and elements of communication.
   5
Q.9  Write a short note on Agenda setting theory.  
5

**PART-B**

Q.10  Discuss in detail the Laswell model and the Shannon and Weaver’s model of communication.  
17½

Q.11  Differentiate between group communication and mass communication citing suitable examples.  
17½

Q.12  Write a detailed note on intrapersonal communication.  
17½
End Semester Examination, May 2015
BJMC – Third Semester
ADVERTISING AND PUBLIC RELATIONS (BJ-302)

Time: 3 hrs Max Marks: 70
No. of pages: 1
Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
  a) What are the four P’s of marketing mix?
  b) What do you mean by Press Release?
  c) Name any two Advertising Agencies of India.
  d) Name the person who started the first Newspaper of India?
  e) “Believe in the Best” is the Punch line of which company?
  f) Who is known as the Father of Public Relations?
  g) The word advertising comes from the Latin word ________.
  h) According to American Marketing Association "advertising is any ________of non-
     personal presentation and promotion of ideas, goods and services by an ________".
  i) Write down any two objectives of Advertising?
  j) Who is known as the father of Advertising?
  k) The abbreviation AIDA and POP stands for what?
  l) What do you mean by Direct Mail?
  m) “Public Relations is a two way communication process”. (True/False)
  n) Name the city which took the initiative to start the First Newspaper of India.
  o) There are three types of public involved in Public Relations. (True/False)

1x10

PART-A

Q.2 “Advertising has become an essential marketing activity in the modern era of globalization”. Explain.
  5

Q.3 Explain the Role of Advertising in the Society.
  5

Q.4 Who are the Active Participants in Advertising?
  5

Q.5 What are the advantage and disadvantages of Internet Advertising?
  5

Q.6 Discuss in detail the various types of Advertising.
  5

Q.7 Briefly discuss the role of Public Relations in private sector.
  5
Q.8 Write a short note on the code of Public Relations Society of India (PRSI).

5

Q.9 Write a short note on Internal and External public of public relations.

5

PART-B

Q.10 Discuss in detail the historical growth and development of Public Relations in India.

17½

Q.11 Define advertising appeals and write a descriptive note on the various departments of an advertising agency.

17½

Q.12 Write down the golden rules of copy writing and Prepare an advertising script for Television.

17½
End Semester Examination, May 2015
BJMC – Third Semester
PHOTOGRAPHY, DESIGN AND GRAPHICS (BJ-303)

Time: 3 hrs
Max Marks: 70
No. of pages: 2

Note: **Q.1 is compulsory.** Attempt any **FIVE** questions from **Part A** and any **TWO** questions from **Part B.**

Q.1 Attempt **any ten** of the following:

a) Magnesium fluoride is used in
   i) Film emulsion
   ii) Lens coating
   iii) Printing paper bases
   iv) For producing the no. of colors

b) A slave is
   i) A remote flash trigger
   ii) A small tripod
   iii) Someone to carry your gear
   iv) None of the above

c) The fastest color film available is
   i) 1000 ASA
   ii) 1600 ASA
   iii) 3200 ASA
   iv) 100 ASA

d) Metol is a
   i) Developing agent
   ii) Reducing agent
   iii) Both
   iv) None of the above

e) What temperature should color film be developed at?
   i) 95 Degrees Celsius
   ii) 100 Degrees Celsius
   iii) 105 Degrees Celsius
   iv) 200 Degrees Celsius

f) What is the simplest thing you can change on your camera to vary the depth of field?
   i) The aperture of the lens
   ii) The flash
   iii) Plane mirror at 45 degree
   iv) Film

g) Red color under green light would appear
   i) Green
   ii) Blue
   iii) Black
   iv) White

h) Panchromatic film is sensitive to
   i) All light
   ii) All light bar red
iii) All light bar green
iv) Only to orange
i) Who coined the term ‘photography’?
   i) Fox Talbot
   ii) Nicephore Niepce
   iii) Sir John Herschel
   iv) Robert Hook
j) Star and diffraction filters work due to
   i) Impurities put into the glass
   ii) Distortions in the glass
   iii) Scratches on the glass
   iv) Silver coating
k) What is aberration in a lens?
l) Name any two types of the printer.
m) DSLR stands for ________.
n) ASA stands for ________.
o) What is Pixel?

1x10

PART-A

Q.2 Explain the ‘rule of third’ in Photography.
   5

Q.3 Discuss in detail about Hot and Cold Type in Typography.
   5

Q.4 What is the function of shutter? Write the various types of shutter used in camera.
   5

Q.5 How aperture affects the exposure in photography?
   5

Q.6 Explain the importance of designing in mass media.
   5

Q.7 Explain the various types of film used in photography.
   5

Q.8 What are the qualities of a photo journalist?
   5

Q.9 What are the points to be remembered while proceeding for the wild life photography?
   5

PART-B

Q.10 What is filter factor? Explain the various types of filter used in photography.
   17½
Q.11 What is digital sensor in a camera? Discuss in detail its advantages and disadvantages over film.

17½

Q.12 Discuss the various printing methods used in publishing.

17½
End Semester Examination, May 2015
BJMC – Third Semester
COMMUNICATION RESEARCH AND CONSUMER BEHAVIOUR (BJ-304)

Time: 3 hrs  Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) “Media research will involve looking at issues such as media content and audience”. (True/False)
   b) Name any two organizations who conduct research.
   c) What do you mean by Research Problem?
   d) What is hypothesis?
   e) Name any three sources of information required for a Media researcher.
   f) Who is Harold Lasswell?
   g) Define Feedback studies.
   h) What do you mean by research method?
   i) The abbreviation ‘INTERVIEW’ stands for what?
   j) Define Participatory Observation.
   k) ‘Open-ended questions are Yes/No type of questions’ True/False
   l) What do you mean by inverted questioning?
   m) Name any two popular TV serials.
   n) ‘Sampling is the process of selecting units from a population’ Yes/No
   o) Define random sampling.

1x10

PART-A

Q.2 Define SWOT and discuss in detail the SWOT analysis.
5

Q.3 Discuss in detail the impact of media on consumer behavior.
5

Q.4 Define Market and why market segmentation is required for any research department?
5

Q.5 “Research is undertaken in order to enhance our existing knowledge” Justify the statement.
5

Q.6 Distinguish between Fundamental and Applied Research.
5

Q.7 Discuss in detail the various tools of Media Research.
5
Q.8 Differentiate between Communication Research and Social Science Research.  
5

Q.9 Distinguish between Survey and Observation Method of Research.  
5

**PART-B**

Q.10 What do you mean by Media Research and discuss the importance of studying it in the present day?  
17½

Q.11 “Advertising completely depends on Circulation or reach of Media” Explain.  
17½

Q.12 Define Content Analysis and discuss the various steps involved in it with its key objectives.  
17½
End Semester Examination, May 2015
BJMC – Third Semester
ENVIRONMENTAL STUDIES (BJ-305)

Time: 3 hrs
100
Max Marks: 100

No. of pages: 1

Note: Attempt any Eight from SECTION-A and Three questions from SECTION-B.

SECTION-A

Answer any eight of the following:

Q.1 Define Soil Erosion.
5

Q.2 Explain the causes of water pollution.
5

Q.3 What do you mean by Renewable and Non Renewable resources? Give examples.
5

Q.4 Write a short note on Soil pollution.
5

Q.5 Write a short note on Afforestation and Deforestation.
5

Q.6 What is a food web?
5

Q.7 Write a short note on endangered species.
5

Q.8 Write a short note on solid waste management.
5

Q.9 What do you understand by the term Marine pollution?
5

Q.10 Explain briefly the uses of forests.
5

SECTION-B

Answer any three of the following:

Q.11 Write a detailed note on Global warming.
20
Q.12 Discuss in detail the scope and importance of environmental studies.

Q.13 What is an ecosystem? Discuss the structure and functions of an ecosystem.

Q.14 Write a detailed note on disaster management.

Q.15 What is Biodiversity? Discuss the threats to biodiversity.
End Semester Examination, May 2015
BJMC – Fourth Semester
MEDIA ISSUES AND DEBATES (BJ-401)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) RTI was introduced in India in the year______ under______ government.
   b) Who is the Editor-in-Chief of the daily 'The Hindu'?
   c) 'Nautanki' is a form of New Media'. (True/False).
   d) What do you mean by 'Objectification of Women'?
   e) What do you mean by 'Cub Reporter'?
   f) Define 'Media Accountability'.
   g) What is the punch line of Aaj Tak News Channel?
   h) Name the Editor of the Magazine 'India Today'.
   i) Who started the social networking site 'Facebook'?
   j) Who is the Defence Minister of India?
   k) What is sensational Journalism?
   l) What do you mean by Grassroot Journalism?
   m) Name any two recently released Bollywood movies.
   n) Name any two traditional art forms of Haryana.
   o) Name any two media organizations that are owned by Reliance Group.

PART-A

Q.2 'RTI is a strong weapon in the hands of common man' Elaborate the statement with suitable examples.

Q.3 Define media accountability and explain in detail the social responsibility of media at the time of crisis.

Q.4 'Television affects Children' supply your answer in favor of the statement.

Q.5 Write a descriptive note on the historical background of RTI and discuss its various features.

Q.6 “Media can be used as a tool of development” Discuss the statement with reference to women empowerment.

Q.7 Discuss the role of social media in the last general election campaign of 2014.
Q.8 Briefly discuss the concept of paid news in India.
5

Q.9 Briefly explain the professional code of ethics for Journalists.
5

PART-B

Q.10 ‘Yellow Journalism and Paid News are threat to the Indian Democracy’ Justify the statement with suitable examples.
17½

Q.11 Write a descriptive note on the portrayal of women in Indian advertisements.
17½

Q.12 ‘Traditional Media can be instrumental for creating awareness among both the rural and urban people’ Justify the statement with valid examples.
17½
End Semester Examination, May 2015
BJMC – Fourth Semester
EVENT MANAGEMENT (BJ-402)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
a) Define event.
b) What do you mean by a fund raising event?
c) Give any two objective of an event.
d) What is a formal event?
e) Name any two informal events.
f) Write any two advantage of using an event management company.
g) What is Publicity?
h) Media plays an important role in promotion of an event. (True/False)
i) Name the 5 C’s of an event.
j) What is a feedback?
k) What do you mean by an event evaluation?
l) Event management is one of the fastest growing industries. (True/False)
m) Budget is the key element of any event. (True/False)
n) Hospitality is one of the publicity tools. (True/False)
o) What do you mean by a risk assessment?

1x10

PART-A

Q.2 Write a short note on key elements of an event. 5

Q.3 Discuss an event evaluation in detail. 5

Q.4 Discuss the role of publicity in a event management. 5

Q.5 Discuss the importance of planning in an event. 5

Q.6 Discuss the various qualities and role of an event manager. 5

Q.7 Writer a short note on press conference. 5
Q.8 Discuss in detail the role sponsors in an event.
5

Q.9 Write a short note on budget and account keeping.
5

**PART-B**

Q.10 What is a planning? Discuss in detail the various steps of planning process of an event.
17½

Q.11 Write a sponsor proposal for an event.
17½

Q.12 Write a detailed note on the importance and scope of event management in detail.
17½
End Semester Examination, May 2015
BJMC – Fourth Semester
COMMUNICATION AND DEVELOPMENT (BJ-403)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) Who is the author of the book “Mass Media and National Development”?
   b) “Global Village” concept was developed by whom?
   c) Who is the rural development minister of India?
   d) The abbreviation MGNREGA stands for ___________.
   e) What do you mean by convergent?
   f) A component in the communication process that we often send without being aware of it is ___________.
   g) The essential components of communication are _______.
   h) The term "Development Communication" was first coined in the year ________ by whom?
   i) "Development Communication is practiced in an unplanned & unsystematic manner" (True/False)
   j) Name any two characteristic features of Development.
   k) Name any three Characteristics of Cyber media.
   l) What do you mean by “Third World Countries”?
   m) Write down any three features of rural community?
   n) Write down any three people related problems of rural development?
   o) The abbreviation ICT4D stands for what?

   1x10

   PART-A

Q.2 Information and communication technology has a greater role to play in both rural and urban development. Explain.  5

Q.3 Write a short note on the components and characteristics of Development.  5

Q.4 Discuss in brief the role of communication for development.  5

Q.5 Explain in detail the importance of traditional media in development communication.  5

Q.6 Briefly discuss the development experiences in the developing world.  5

Q.7 Write a note on People’s participation.  5
Q.8 “Public awareness is the requirement of the day for development” Explain.
5

Q.9 Write a brief note on Urban Development.
5

**PART-B**

Q.10 Define Rural Development and Discuss in detail problems, objectives and strategies of it.
17½

Q.11 “Development of any nation depends on Women Empowerment”. Justify the statement with suitable examples.
17½

Q.12 Explain in detail the role of Cyber Media and ICT in National Development.
17½
End Semester Examination, May 2015
BJMC – Fourth Semester
NEWSPAPER AND MAGAZINE JOURNALISM (BJ-404)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: **Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.**

Q.1 Attempt any ten of the following:
   a) What is print line?
   b) What is dateline?
   c) What is AFP?
   d) Name the first Hindi newspaper of India.
   e) Who was associated with Samvad Kaumudi?
   f) Name three magazines that are published for children.
   g) Name three business magazine of India.
   h) What do you mean by layout?
   i) Name the first newspaper of India.
   j) What is PTI?
   k) What is byline?
   l) Who is the editor of the Hindi daily newspaper ‘Hindustan’?
   m) Who is known as the father of Indian Journalism?
   n) What is cropping?
   o) What is balloon?
   1x10

**PART-A**

Q.2 What are the features of magazine journalism? Discuss.
5

Q.3 Discuss the qualities of a sub editor.
5

Q.4 Discuss the importance of layout in print journalism.
5

Q.5 What are the challenges of print media industry?
5

Q.6 What are the elements for writing an editorial?
5

Q.7 Write a profile of a renown personality.
5

Q.8 Write a human interest story feature for a magazine.
5
5

PART-B

Q.10 Write a detail note on the latest trends in print media industry. 
17½

Q.11 Discuss the different types of magazines. 
17½

Q.12 Write a detailed feature of your interest for a magazine. 
17½
End Semester Examination, May 2015
BJMC – Fifth Semester
NEW MEDIA (BJ-501)

Time: 3 hrs
Max Marks: 70

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) ‘Puppetry’ is a form of New Media. (True/False)
   b) “Global Village” concept was poised by whom?
   c) What do you mean by E-Commerce?
   d) What do you mean by Citizen Journalism?
   e) What do you mean by Digital Divide?
   f) What do you mean by Multimedia?
   g) Name the I & B Minister of India.
   h) Define Information Super Highway.
   i) Name any two features of Online Journalism.
   j) Define editing?
   k) Who is the founder of “Facebook” (a social networking site)?
   l) Name any two cyber crimes.
   m) What is blogging?
   n) What is Audio Conferencing?
   o) Who took the initiative for IT revolution in India?

1x10

PART-A

Q.2 Examine the role of Internet in social movements of India.
5

Q.3 Write a brief note on E-Governance.
5

Q.4 Distinguish between Online Media and Print Media.
5

Q.5 Briefly explain the technological changes in Media field.
5

Q.6 Write a short note on Information Superhighway.
5

Q.7 Write a brief note on the services provided by mobile phones.
5

Q.8 Write a note the impact of Online Journalism on Print Media.
5
Q.9 Briefly discuss on the concept of SMS Reporter started by Indian Television Industry.

5

**PART-B**

Q.10 "Social Media: A Stimulating Force of Social Change" Justify the statement with suitable examples.

17½

Q.11 Discuss in detail the growth and development of New Media with its pros and cons.

17½

Q.12 Discuss in detail both the National Telecommunication Policy of 1984 and 1994.

17½
End Semester Examination, May 2015
BJMC – Fifth Semester
MEDIA MANAGEMENT (BJ-502)

Time: 3 hrs
Max Marks: 70
No. of pages: 1

Note: **Q.1 is compulsory.** Attempt any **FIVE** questions from **Part A** and any **TWO** questions from **Part B.**

Q.1 Attempt **any ten** of the following:
   a) What is traditional media?
   b) ANI stands for ____________.
   c) Akashwani is a channel of AIR. (True/False)
   d) Who is Arnab Goswami?
   e) TRP stands for ____________.
   f) What is twitter?
   g) What do you mean by news agency?
   h) Name the first English newspaper of India.
   i) Who is the Editor-in Chief of NDTV?
   j) What do you mean by Esprit De Corps?
   k) What do you mean by documentary?
   l) What is assignment desk?
   m) What do you mean by NSE?
   n) What is the full form of SEBI?
   o) Name any two business channels of India.

1x10

**PART-A**

Q.2 Write a short note on Corporation.

5

Q.3 Discuss the role and responsibilities of Media Manager.

5

Q.4 Differentiate between Partnership and Trust.

5

Q.5 Throw light on role of News agencies in media.

5

Q.6 What is the procedure of starting a newspaper?

5

Q.7 Write in detail about News Corporation.

5

Q.8 Briefly explain different stages of production in Television Programming.

5
Q.9 Explain FDI.
5

**PART-B**

Q.10 Differentiate between the working pattern and organizational structure of Government and private media.
17½

Q.11 Write a detail note on problem and prospects of small newspaper in India.
17½

Q.12 Describe the role of newspaper and television in the growth of Indian economy.
17½
End Semester Examination, May 2015
BJMC – Fifth Semester
RADIO JOURNALISM (BJ-503)

Time: 3 hrs Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) When did Radio Broadcasting start in India?
   b) What is Yuvvani?
   c) The abbreviation ESD and OBV stands for _________.
   d) What is Community Radio?
   e) When did FM broadcasting start in India?
   f) Who was the first Controller of Broadcasting in India?
   g) When did Vividh Bharti services start in India?
   h) ‘Mann Ki Baat’ programme on AIR is hosted by ____________.
   i) What is Radio Documentary?
   j) AIR/DD comes under ______________.
   k) Name any two FM channels of AIR.
   l) Commercial services on Vividh Bharti started in ____________.
   m) What is Voxpop?
   n) Who is the I and B Minister of India?
   o) Who is Ameen Sayani?

1½x10

PART A

Q.2 Write down the broadcasting guidelines for AIR.

4

Q.3 How is writing for Radio different from Television? Explain.

4

Q.4 What are the basic features and functions of Radio?

4

Q.5 Write in brief about Satellite Radio.

4

Q.6 What is Programme planning and conceptualization in Radio?

4

Q.7 Write in brief about History of Radio in India.

4

Q.8 Discuss the latest trends in Radio.

4

Q.9 How is Radio talk different from Radio Discussion?

4
PART-B

Q.10 Discuss in detail the various formats of Radio Programming.
   \[17\frac{1}{2}\]

Q.11 What is Prasar Bharti Board? What are its main functions and objectives?
   \[17\frac{1}{2}\]

Q.12 Write down the principles of writing for Radio news. How is writing for Radio different from Newspaper?
   \[17\frac{1}{2}\]
End Semester Examination, May 2015
BJMC – Fifth Semester
TELEVISION JOURNALISM (BJ-504)

Time: 3 hrs Max Marks: 70
No. of pages: 1

Note: Q.1 is compulsory. Attempt any FIVE questions from Part A and any TWO questions from Part B.

Q.1 Attempt any ten of the following:
   a) What is TAM?
   b) What is TRP?
   c) What do you mean by breaking news?
   d) What is Close-up?
   e) ENPS stands for ________.
   f) What do you mean by freelancing?
   g) What is dolly?
   h) FCP stands for ________.
   i) Who is the I and B minister of India?
   j) What do you mean by sting?
   k) Who is the anchor of “The Newshour”?
   l) FDI stands for ________.
   m) STAR stands for ________.
   n) Who is the director of the movie “PK”?
   o) What is shot?

1×10

PART-A

Q.2 Write a short note on investigative journalism.
   5

Q.3 Describe the structure of a television news channel.
   5

Q.4 What is development journalism? Discuss its role in society.
   5

Q.5 Discuss the role of editor in television programming.
   5

Q.6 Explain different types of P to C. Discuss the steps one should keep in mind while doing it.
   5

Q.7 Throw light on role and responsibilities of a television reporter.
   5

Q.8 What do you mean by FDI? Explain in brief.
   5
Q.9  Discuss about current trends of television industry.  
5

PART-B

Q.10  Write a detailed note on vocabulary used in television programme production.  
17½

Q.11  Differentiate between working pattern of Government and Privately owned television channels.  
17½

Q.12  Write a detailed news report on any relevant issue.  
17½
End Semester Examination, May 2015
B. Sc. (Hotel Management) - First Semester
FOUNDATION COURSE IN FOOD PRODUCTION (FMS-HM-101)

Time: 3 hrs
Max Marks: 50
No. of pages: 1

Note: Attempt any SIX questions in all. Part-A is compulsory. Attempt any FIVE questions from Part-B.

PART-A

Q.1 a) Write short notes on the following:
   i) Yeast.
   ii) Wheat.
   iii) Bran.
   iv) Germ.
   v) Endosperm.

b) Fill in the blanks:
   i) ____________ and ____________ are connective tissues.
   ii) ____________ is the national soup of France.
   iii) ____________ is the cold mother sauce.
   iv) Meat protein is called as ____________.
   v) ____________ and ____________ are Italian cheese.
   vi) ____________ and ____________ are cold soups.
   vii) Goujons, fillet, Darne, TronCon are cuts taken from ____________.
   viii) ____________ is French for chicken.
   ix) Weight of an egg ranges from _________ to _________.
   x) Cooking of protein is called as ____________.

PART-B

Q.2 Explain in detail the wheat grain. 6

Q.3 Write step by step procedure for making a brown chicken stock. 6

Q.4 Explain the methods of cooking with the help of a flow chart. 6

Q.5 Give a detailed recipe for Mayonnaise and explain the process of making Mayonnaise. 6

Q.6 Draw and explain the parts of a knife. 6

Q.7 Draw a neat labeled diagram showing all the primal cuts of a lamb. 6