

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

J-3672[S-1528]

[2037]

BCA (Semester - 1st)

INTRODUCTION TO INFORMATION TECHNOLOGY

(BCA - 101)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section-A is **compulsory**.
- 2) Attempt any **Nine** questions from Section-B.

Section - A

Q1)

(15 × 2 = 30)

- a) What is the difference between data and information?
- b) Explain with example procedure to convert binary number to digital number.
- c) List two devices which can be used as input as well as output device.
- d) How can one write-protect 5¼ inch floppy?
- e) List the types of computers.
- f) What do you understand by spooling?
- g) What is a time-sharing system?
- h) Define multiprocessing.
- i) Differentiate between SRAM and DRAM.
- j) Why is ROM necessary?
- k) What is a single user system??
- l) If on the DOS prompt, XYZ is typed and on the disk(say C:\>), there are three files XYZ.COM, XYZ.EXE and XYZ.BAT. Which of the three files will be executed? Why?
- m) What is booting?
- n) List four facilities provided by Internet through WWW?
- o) Define the term FAX.

P.T.O.

Section - B

(9 × 5 = 45)

- Q2)* Explain the working of computer with block diagram.
- Q3)* Explain the working of laser printer in detail.
- Q4)* Discuss the advantages and disadvantages of floppy disks.
- Q5)* Compare the working of mouse with keyboard. Discuss the different mouse operations.
- Q6)* Compare primary memories with secondary memories.
- Q7)* What is an operating system? Explain its functions.
- Q8)* Explain batch processing and multiprogramming.
- Q9)* Write short note on ROM.
- Q10)* What are the differences between internal commands and external commands in DOS? Give three examples of each type with syntax.
- Q11)* Explain various features of DOS.
- Q12)* Discuss applications of computers in Defense and Industry.
- Q13)* What are the disadvantages of networking? Explain briefly E-mail.



Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-4161[S-2161]

[2037]

BCA (Semester - 1st)

MATHEMATICS - I (DISCRETE MATHEMATICS)

(BC - 102)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) Show by Venn diagram difference of set A and B.
- b) Define inverse relation with example.
- c) How many arrangements can be made with the letters of word 'MATHEMATICS'?
- d) Prove by truth table that proposition $p \vee \sim p$ is tautology.
- e) Define Logical Equivalence.
- f) If $a, b, c \in B$, where B is non-empty set with binary operations + and \bullet , prove that $a + (a \bullet b) = a$.
- g) Define AND gate.
- h) Define Graph coloring with example.
- i) Define spanning trees with example.
- j) Define Recurrence Relation.

Section - B

(4 × 10 = 40)

Q2) If $f : A \rightarrow B$, $g : B \rightarrow C$ and $h : C \rightarrow D$. Then prove that $h \circ (g \circ f) = (h \circ g) \circ f$ of .

P.T.O.

Q3) Calculate the truth table for

(a) $p \vee \sim q \Rightarrow p$

(b) $((\sim(p \wedge q) \vee r) \Rightarrow \sim p)$

Q4) Let $R = \{(1, 2), (2, 3), (3, 1)\}$ and $A = \{1, 2, 3\}$. Find reflexive, symmetric and transitive closure of R , using.

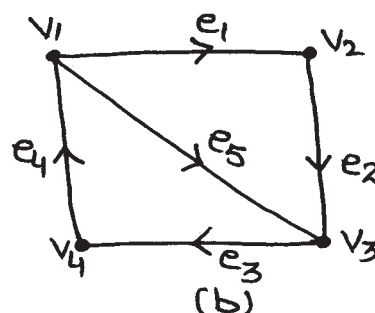
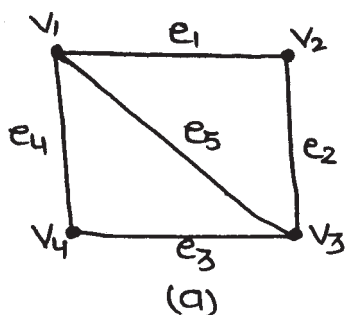
(a) Composition of relation R .

(b) Composition of matrix relation R .

Q5) If A , B and C represents three switches in on position and A' , B' and C' represents same switches in off position. Construct a switching.

Q6) Show that the sequence $\{2, 3, 4, 5, \dots, 2 + n, \dots\}$ for $n \geq 0$ satisfies the recurrence relation $a_k = 2a_{k-1} - a_{k-2}$, $k \geq 2$.

Q7) Define Incidence matrix representation of directed and undirected graphs. Find the incidence matrix to represent the graphs shown in fig.



□□□□

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

J-3747[UP-7001]

[2037]

BCA (Semester - 1st)

BASIC ACCOUNTING (BCA - 103)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

Q1)

(15 x 2 = 30)

- a) Describe the branches of accounting.
- b) Explain accounting period concept.
- c) What do you understand by double entry system?
- d) Explain debit note and credit note.
- e) Explain opening entry.
- f) Enlist the various functions of management accounting.
- g) What do you understand by term liabilities?
- h) Explain the objectives of management accounting.
- i) Define asset.
- j) Distinguish between balance sheet and profit and loss account.
- k) Explain equity share capital.
- l) When shares can be issued at discount?
- m) Define debentures.
- n) Enlist various sources of finance.
- o) What is bridge finance?

P.T.O.

Section - B

(9 x 5 = 45)

- Q2)** Define accounting. What are its functions?
- Q3)** Explain different types of cash book.
- Q4)** Journalise the following transactions :
- (a) Goods worth Rs. 500 given as charity.
 - (b) Received Rs. 975 from Hari Krishan in full settlement of his account for Rs. 1000.
 - (c) Rent due to landlord Rs. 800.
 - (d) Paid cartage on behalf of customer Rs. 50.
 - (e) Goods worth Rs. 500 withdrawn for personnel use.
- Q5)** Explain ledger and its role in accounts.
- Q6)** What are the tools which makes management accounting useful?
- Q7)** How does management accounting differ from financial accounting? What are limitations of management accounting?
- Q8)** Explain the importance of preparing financial statements.
- Q9)** What do you understand by balance sheet? Discuss ways of arrangement of assets and liabilities in balance sheet.
- Q10)** Discuss advantages of issuing preference shares as a source of raising capital.
- Q11)** Explain entries of issue of shares at premium by suitable examples.
- Q12)** BMSL forfeited 100 equity shares of Rs. 10 each issued at a discount of 10% held by Raj Kumar for a non payment of first call of Rs. 2 and final call of Rs. 3 purchase. Out of these 50 shares were reissued at Rs. 8 per share. Pass journal entries regarding forfeiture and reissuing.
- Q13)** Explain the role of computer in accounting.



Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-3142[S-142]

[2037]

BCA I (Semester - 1st)

COMMUNICATION SKILLS (BC - 105)(N2)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) What are seven Cs of communication?
- b) What is the significance of personal appearance of the speaker in his communication?
- c) Differentiate between hearing and listening.
- d) Point out two salient features of a good resume.
- e) What role do audio visual aids play in communication?
- f) What are organizational barriers to communication?
- g) How do facial expressions affect communication?
- h) What do you mean by effective written communication?
- i) Give two examples of how does choice of words affect effective writing?
- j) Draft an auction notice.

Section - B

(4 × 10 = 40)

Q2) What, according to you, is communication? Explain the role of communication in the development and functioning of a business organization.

P.T.O.

- Q3)** (a) What role do gestures, body shape and posture play in oral communication? Discuss.
- (b) Write a note on essential ingredients of communication.
- Q4)** Imagine you are Rohit Mathur, Managing Director, Aicher Chemicals Private Limited, Gurgaon. Your company has decided to set up a new unit to manufacture plastic goods. Draft a letter to Estate Officer, Gurgaon, requesting for allotment of an industrial plot. Invent relevant details.
- Q5)** Draft an application and a resume in response to the following advertisement in The Times of India dated 18th of October 2004: “A multinational company requires Office Manager to handle day to day correspondence. Must be well versed with official procedures and should have good communication skills. Excellent pay and perks.” Imagine relevant details.
- Q6)** (a) Draft a notice under the heading: LOST.
- (b) Discuss briefly different types of written communication.
- Q7)** (a) Compose a notice for a meeting of members of Hobby Club of your college.
- (b) Discuss briefly factors affecting listening.

* * *

Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-3143[S-143]

[2037]

BCA (Semester - 2nd)

PRINCIPLES OF MANAGEMENT (BC - 201(N2))

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

[10 × 2 = 20]

- a) Line and staff organization.
- b) Departmentation.
- c) X-theory.
- d) Nature of control.
- e) Performance appraisal.
- f) Recruitment.
- g) Definition of Management.
- h) 14 principles of Management.
- i) Man-power management.
- j) Sole proprietorship.

Section - B

[4 × 10 = 40]

Q2) Explain, “Management is the art of getting things done through people”.

Q3) Explain decision making process and discuss various techniques of decision making.

P.T.O.

- Q4)** What do you understand by span of management? Discuss the role of the organization structure in improving the efficiency in an organization.
- Q5)** Define and discuss Motivation. Explain the theory-X and theory Y.
- Q6)** Discuss the nature of control. Explain various steps involved in controlling process.
- Q7)** Explain the different styles and approaches of leadership, and explain which situations require these styles for effective management.

* * *

Roll No.

Total No. of Questions : 7]

[Total No. of Pages : 02

J-4101[S-2101]

[2037]

BCA (Semester - 2nd)

SYSTEM ANALYSIS AND DESIGN (BC - 202)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A.

(10 X 2 = 20)

Q1)

- a) What are the various design elements? Explain briefly.
- b) What is meant by feasibility?
- c) What is the purpose of decision tree?
- d) What is the need of design notation?
- e) Why we use data dictionary?
- f) Name the different types of system maintenance.
- g) What is file design?
- h) What is the goal of output design?
- i) What is system analysis?
- j) Differentiate between parallel change over and direct change over procedure?

Section - B

(4 X 10 = 40)

Q2) What are the various methods of information collection?

Q3) Explain various characteristics of a system. Differentiate between system approach and system analysis.

P.T.O.

Q4) What is system development life cycle? How and when the feasibility study is done?

Q5) What is the use of having testing? Which phase follows testing phase? Also discuss the relevance of it.

Q6) Why there is need of designing a system before its development. Discuss the various stages of system design.

Q7) Discuss the system implementation process. What are the various implementation methods?



Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

J-3767[UP-7021]

[2037]

BCA (Semester - 2nd)
DATA STRUCTURES (BCA - 204)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

Q1)

(15 × 2 = 30)

- a) What is a stack? What are the operations performed on stack?
- b) Write the various procedures of Tree traversal?
- c) What is the difference between local variables and global variables?
- d) What is garbage collection?
- e) What is the difference between data and information?
- f) Convert the following infix expressions into postfix expressions
 - i) $(A-B)*(D/E)$
 - ii) $(A+B \uparrow D)/(E-F)+G$
- g) What is the difference between a linklist and an array?
- h) The following eight numbers are inserted in order into an empty binary search tree T: 50, 33, 44, 22, 77, 35, 60, 40. Draw the tree T.
- i) What is the difference between searching and sorting?
- j) List the various operations performed on data structure?
- k) What are the complexities of
 - i) Insertions sort
 - ii) Merge sort
- l) Define Data Structure? What are the different types of data structure?

P.T.O.

- m) Define complete binary tree?
- n) Define the big O notation?
- o) What are the advantages of doubly linklist?

Section - B

(9 x 5 = 45)

- Q2)** Write the procedure to insert an item at the end of a linklist?
- Q3)** Write the procedure to push and pop element in stack?
- Q4)** Convert the following infix expression into postfix expression showing the stack contents
 $A+(B*C-(D/E \ F)*G)*H$
- Q5)** Explain the two way list? List the various operations performed on two way list?
- Q6)** Explain the difference between quick sort and heap sort?
- Q7)** Discuss the applications of Tree?
- Q8)** Write the procedure to insert an item[↑] in a queue?
- Q9)** What is the difference between binary search tree and heap? Build a heap H from the following data
44, 30, 50, 22, 60, 55, 77, 55
Show diagram of each insertion?
- Q10)** What do you mean by complexity of an algorithm? Explain the time space trade off with suitable example?
- Q11)** Write the procedure for binary search? What are the limitations of binary search?
- Q12)** What is bubble sort technique? Apply this on the following list of numbers
44, 33, 11, 55, 77, 90, 40
- Q13)** Discuss the various representations of tree in memory? Explain the merits and demerits of each?

Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-4203[S-2203]

[2037]

BCA (Semester - 2nd)

DIGITAL CIRCUITS AND LOGIC DESIGN (BC - 205)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) What is an Excess-3 code?
- b) Name the universal gates and define the functions performed by them.
- c) What are SOP and POS forms of Boolean Expressions?
- d) Differentiate between combinational and sequential circuits.
- e) What is meant by serial and parallel data?
- f) What is meant by positive logic?
- g) Draw and explain the truth table for a R-S flip-flop.
- h) List the various methods for A/D conversion?
- i) Explain the term fan-in and fan-out in context with the digital circuits.
- j) What is the largest number that can be represented by an 8-bit binary word?

Section - B

(4 × 10 = 40)

Q2) State and prove De- Morgan's theorem. Demorganise $(A+B)(C+D)$.

Q3) What is a ripple counter? How it works? Explain with logic diagram.

P.T.O.

Q4) Explain the use of a shift register for construction of a full adder.

Q5) What is a J-K master flip-flop? Explain its working.

Q6) What do you mean by a K-map? Reduce the expression $[AB+ABC+ABC+BC]$? Using K-map.

Q7) (a) Design a 4-bit counter with D-flip-flop.

(b) List the advantages of TTL logic.



Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-4103[S-2103]

[2037]

BCA (Semester - 3rd)

OBJECT ORIENTED PROGRAMMING USING C++

(BC - 304)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) What do you mean by OOP?
- b) What is structured programming?
- c) Define Polymorphism.
- d) What is a control statement? Discuss with an example.
- e) Differentiate between arrays and pointers.
- f) What do you mean by classes within the classes?
- g) Define local and global variables.
- h) Discuss operator overloading.
- i) What is a class in C++? List various types of classes.
- j) Explain in brief various parts of iostream system?

Section - B

(4 × 10 = 40)

- Q2)** (a) Write down a program in C++ to calculate the sum of even numbers up to 50.
- (b) What is the role of switch statement in C++?

P.T.O.

Q3) How will you develop a program to add two matrices in C++?

Q4) (a) Why is virtual function an option? Why do we even need to know about it?

(b) By using function write a program to find average of first 100 natural numbers.

Q5) (a) Give the structure of a C++ program and discuss the syntax in detail.

(b) What are the characteristics of a variable declared with static storage class?

Q6) Differentiate between the following:

(a) scanf and printf

(b) get () and put ()

(c) Public and Private inference

(d) .bad () and .good ()

(e) Call by value and call by reference

Q7) (a) Write a program in C++ to add first 15 numbers of Fibonacci sequence.

(b) Explain the concept of nested loop with the help of an example.



Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 03

D-6

[2037]

BCA (Semester - 3rd)

INTRODUCTION TO MICROPROCESSOR (BCA-305)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section A is compulsory.
- 2) Attempt any Nine questions from Section - B.

Section - A

Q1)

(15 x 2 = 30)

- a) Define bit, byte, word and instruction.
- b) Specify the direction of the information flow on the address bus.
- c) What is the significance of data bus and address bus in microprocessor?
- d) How will you execute a program without output port in 8085?
- e) List the four categories of 8085 instructions that manipulate data.
- f) Give two examples of arithmetic instructions in 8085.
- g) Give two examples of logical control instructions in 8086.
- h) Write different addressing modes in 8086.
- i) What is the necessity of using RISC processors?

P.T.O.

- j) Write the role of clock generator in microprocessor.
- k) Give the list of externally initiated operations in 8085.
- l) What is the necessity of using chips like 8087 along with 8086 microprocessor?
- m) Explain the terms SSI, MSI and LSI.
- n) What is the use of flags in 8085?
- o) Which flag is called conditional flag in 8086?

Section - B

(9 x 5 = 45)

- Q2)** Draw and explain the block diagram showing how a DMA Controller operates in a microcomputer system.
- Q3)** Discuss in brief the important interrupts in 8086.
- Q4)** Explain arithmetic and program control instructions of 8086.
- Q5)** Give pin configuration, draw and explain the expanded block diagram of 8257.
- Q6)** Discuss in detail addressing modes of 8085.
- Q7)** Discuss the role of co-processor along with microprocessor taking suitable example.
- Q8)** Differentiate between RICS and CICS processors.

- Q9)** (a) Write a machine code for the instruction MOV H, A if the opcode = 01, the register code for H = 100, and the register code for A = 111.
- (b) Define instruction cycle, machine cycle and T cycle.

- Q10)**(a) What are the advantages of segment register in 8086?
- (b) Write basic operations of 8086.

Q11) Write and explain the arithmetic instructions of 8086.

Q12) Write and explain the branch instructions used in 8086.

Q13) Write the pin configuration 8085 microprocessor with use of each pin.



Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-3144[S-144]

[2037]

BCA (Semester - 4th)

COMPUTER NETWORKS (BCA - 401(N2))

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) What is the difference between half-duplex and full-duplex transmission modes?
- b) A device is sending out data at the rate of 1000 bps. How long does it take to send a file of 100,000 characters?
- c) What is the property of infrared waves which is an advantage as well as disadvantage?
- d) What are two types of switches used in circuit switching?
- e) Differentiate between error control and flow control.
- f) What is piggybacking? How is it useful?
- g) Write down the name of device used at correspondent layer in OSI reference model.
- h) Explain the concept of logical Token ring, how does token pass from one node to another.
- i) Illustrate the difference between flooding and selective flooding.
- j) Define the term virtual circuit subnet.

P.T.O.

Section - B

(4 x 10 = 40)

- Q2)** (a) Compare the two methods of serial transmission. Discuss the advantages and disadvantages of each.
- (b) A signal has a bandwidth of 20 Hz. The highest frequency is 60 Hz. What is the lowest frequency?
- Q3)** Explain the process of transmission of light through fiber. How does fiber cable differ from coaxial cable?
- Q4)** Explain the function of all layers present in OSI Reference model.
- Q5)** What are the features provided by PPP (point to point protocol). And explain its frame format.
- Q6)** (a) How is TDM similar to FDM? How are they different?
- (b) Is bit padding a technique for FDM or TDM? Is the framing bit used in FDM or TDM?
- Q7)** (a) Compare static and dynamic routing.
- (b) Compare datagram and virtual circuits used in Network layer.

Roll No.

Total No. of Questions :7]

[Total No. of Pages : 02

J-4121[S-2121]

[2037]

**BCA (Semester - 4th)
OPERATING SYSTEM (BC-405)**

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section-A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B

Section-A

Q1)

(10 x 2 = 20)

- a) What is multitasking?
- b) How is a program different from a process?
- c) What is turnaround time?
- d) Differentiate between physical and logical memory addresses.
- e) Why do we use tag bits?
- f) What is a file system?
- g) What is a deadlock?
- h) What is critical section?
- i) What is authentication?
- j) What is the role of encryption in operating system?

P.T.O.

Section-B

(4 x 10 = 40)

- Q2)** What are the functions of an Operating System?
- Q3)** Compare *first fit*, *worst fit* and *SJF* with the help of an example.
- Q4)** Explain paged Memory Management Scheme.
- Q5)** Write and explain the *Banker's algorithm*.
- Q6)** Give and explain a solution to the *critical section problem*.
- Q7)** What are security threats? What measures will you take to counter them?



Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

J-3719[S-1575]

[2037]

BCA (Semester - 5th)

INTERNET APPLICATIONS AND JAVA (BCA - 501)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

Q1)

(15 x 2 = 30)

- a) List the important usage of internet.
- b) What do you mean by surfing?
- c) What is URL?
- d) Justify the statement "Internet is a decentralized network of million of computers".
- e) What is the importance of E-mail?
- f) What is a token? List the various types of tokens supported by Java.
- g) What is the usefulness of an empty statement?
- h) What is the major difference between an interface and a class?
- i) How does Java handle strings?
- j) What is a thread?
- k) What is an exception?
- l) How do we define a catch block?
- m) Is it essential to catch all types of exceptions?
- n) What is an applet?
- o) Describe the various sections of a web page.

P.T.O.

Section - B

(9 x 5 = 45)

- Q2)* Who governs internet? List various societies who are responsible for laying the guideline for internet users.
- Q3)* What is internet address? Explain the process of allocation of internet addresses.
- Q4)* Explain the various services that are available on the internet.
- Q5)* What is web browser? How do you locate information on the web?
- Q6)* What is a statement? How do the Java statements differ from those of C and C++?
- Q7)* Describe the various forms of implementing interfaces. Give examples of Java code for each case.
- Q8)* Write a program in Java, which will read a text and count all occurrences of a particular character.
- Q9)* Describe with a flow chart, how various Java tools are used in the application development.
- Q10)* Discuss the steps involved in developing and running a local applet.
- Q11)* Explain how exception handling mechanism can be used for debugging a program.
- Q12)* Discuss the concept of Java virtual machines.
- Q13)* Describe the complete life cycle of a thread.



Roll No.

Total No. of Questions : 07]

[Total No. of Pages : 02

J-4202[S-2202]

[2037]

BCA (Semester - 5th)

SYSTEM SOFTWARE (BC - 502)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Four** questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) What is the need of system softwares?
- b) What is a literal?
- c) How is a macro different from a function?
- d) What is macro expansion?
- e) What is code optimization?
- f) What is dynamic linking?
- g) What do we need to relocate a program?
- h) What resources are managed by operating system?
- i) What is the role of database administrator?
- j) What do we use text editors?

Section - B

(4 × 10 = 40)

Q2) Explain the first pass of an assembler with flow chart.

Q3) Write macro to find the smallest number of three numbers. How will you use them?

Q4) Explain the importance of memory allocation.

P.T.O.

Q5) Explain the process of linking and relocation.

Q6) Which global code optimizations are possible?

Q7) What is DBMS? Is it a system software? Justify your answer. Also write the salient features of an Operating system.

* * *

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

D-25

[2037]

BCA (Semester - 6th)

ARTIFICIAL INTELLIGENCE (BCA - 601)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

Q1)

(15 x 2 = 30)

- a) What is Artificial Intelligence?
- b) Write components of a production system.
- c) What is heuristic search?
- d) Write any two computable predicates.
- e) When do we use Semantic nets?
- f) What do you understand by casual chain in scripts?
- g) Why do we need AI assumptions?
- h) What is a production system?
- i) What do you understand by problem space in AI?
- j) Write any two computable predicates.
- k) When do we use frames?
- l) What is conceptual dependency?
- m) What do you understand by casual chain in scripts?
- n) What is pragmatic processing?
- o) What is meant by class membership?

P.T.O.

Section - B

(9 x 5 = 45)

- Q2)* Discuss the characteristics of Artificial Intelligence problems.
- Q3)* What is the role of conceptual dependency theory? Also discuss the operations performed by a parser.
- Q4)* Give an example of a problem for which breadth-first search would work better than depth-first search.
- Q5)* Construct a script for going to college from the viewpoint of a student of the college.
- Q6)* What are the steps in natural language processing?
- Q7)* Give an example of a problem for which depth-first search would work better than breadth-first search.
- Q8)* What is meant by class membership? Discuss the ways of representing it.
- Q9)* Discuss the steps in natural language processing.
- Q10)* Construct a script for going to office from the viewpoint of an employee of the office.
- Q11)* Use predicates to express the statement: Everyone loves their parents.
- Q12)* Discuss the role of conceptual dependency theory.
- Q13)* Explain techniques of Artificial Intelligence in detail.



Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

J-3779[UP-7033]

[2037]

BCA (Semester - 6th)
HANDLING OPERATING SYSTEM
(BCA - 602)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

Q1)

(15 x 2 = 30)

- a) What is Network Logbooks?
- b) How do you send any message to a particular client on the Netware?
- c) What is IP address?
- d) What is Kernel of an operating system?
- e) Is Netware use Virtual Memory?
- f) What is Router?
- g) What are the different levels of RAID?
- h) How do you create partition in hard disk?
- i) What is the minimum size of RAM required for Netware installation?
- j) When do we use SYSCON utility?
- k) Write any three Login Script Commands.
- l) What is private Messaging?
- m) What are the various thread display options?
- n) Is it possible to run window application on Novel Netware?
- o) Are external DVD drivers supported by Netware?

P.T.O.

Section - B

(9 x 5 = 45)

- Q2)* How can we create the user account in Window NT?
- Q3)* Explain the various features of Window NT?
- Q4)* What are the various restrictions apply on Netware user?
- Q5)* How you can share more than one printer of different types on your Network?
- Q6)* What is the function of Hyper terminal in Window NT?
- Q7)* What is the difference between Window NT client and Window workgroup?
- Q8)* What hardware do you need to install the Netware system?
- Q9)* How do you find your MAC address?
- Q10)* What is an Access Control Entry?
- Q11)* How does the Logon process work?
- Q12)* What is a NULL session?
- Q13)* Can you move the logs to another partition? Explain.

* * *