

Enrollment Number : _____

Dr. Babasaheb Ambedkar Open University

Term End Examination January - 2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA – 301	Numerical Code: 0530
Subject	: Introduction to Computer Network	Total Marks : 70
Date	: 31/01/2015	Time : 11.00 to 02.00

Section A (30)

Attempt any Three of the following:

1. What is Network? Explain the history of Networking.
2. Discuss about the different types of LAN topologies.
3. Write a detailed note on NETBIOS.
4. Discuss about the various functions of network management system.
5. Write a detailed note on Communication media.

Section B (20)

Write short notes on any four.

1. Write a note on Ethernet.
2. Write a short note on Frame-Relay.
3. Discuss about TCP protocol operation.
4. Write a short note on IP address.
5. What is DSL cable? Describe in short.
6. Discuss about network cards.

Section C

(A) Multiple Choice Questions. (10)

- 1 ARPA stands for _____.
(A) Advanced Research Projects agency (B) Access Research Projects analysis
(C) Advances Research projects analysis (D) Access Research projects agency
- 2 A _____ topology is a liner LAN architecture.
(A) Ring (B) Bus (C) Mesh (D) Star
- 3 NT was the first fully _____ bit version of windows.
(A) 16 (B) 64 (C) 32 (D) 128
- 4 _____ Protocol is used to run on NetBIOS to implement windows file sharing print services.
(A) Server message block (B) Net command
(C) Service mailing box (D) Server mailing box
- 5 _____ Provides a communication service at an intermediate level between an application program and the internet protocol.
(A) IP (B) TCP (C) TPC (D) CPT
- 6 Maun function of SMTP is _____.
(A) How email is passed between servers on a TCP/IP network
(B) Allows network administration to connect to and network devices
(C) Handles errors and send s error messages for TCP/IP
(D) All of these

- 7 _____ and _____ servers are crucial components of a troubleshooting infrastructure in network operations.
 (A) TFTP, syslog (B) HTTP, Implog (C) HTML, viplog (D) TFPT, logsystem
- 8 _____ is a major communication device which is frequently is used as a communication media.
 (A) Excel (B) Wire Pair (C) Miniwave (D) Cabling Parings
- 9 _____ Gigabit Ethernet uses the IEEE 802.3 Ethernet media access control protocol, the IEEE 802.3 Ethernet frame format and minimum and maximum IEEE 802.3 frame size.
 (A) 11 (B) 12 (C) 10 (D) 14
- 10 A _____ is a software endpoint that establishes bidirectional communication between a server program and one or more client programs.
 (A) Socket (B) Pairs (C) Wirred (D) cables

(B) True or False.

(10)

1. ARPA submitted the proposal for the project (Title “Resource Sharing Computer Networks”) in June 3, 1970.
2. IEEE stands for Institute of Electrical and Electronic Engineers.
3. A hub is a physical layer device that connects multiple user stations, each via a dedicated cable.
4. PVC stands for private virtual circuits.
5. The main characteristics of third generation operating systems is more flexibility, scalability and continuous operation.
6. How to handles software computer address is the function of TCP.
7. The TCP header contains 10 mandatory fields and an optional extension field.
8. A router is an electronic device that interconnects two or more computer networks, and selectively interchanges packets of data between them.
9. In network management, accounting management is the set of functions that detect, isolate and correct malfunctions in a telecommunications network.
10. NIC stands for network interface controller.

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Term End Examination January-2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA - 302	Numerical Code: 0531
Subject	: Operating Systems	Total Marks : 70
Date	: 01/02/2015	Time : 11.00 to 02.00

Section A (30)

Attempt any 3 of the following:

1. Explain producer-consumer problem in detail.
2. Explain various page replacement algorithms.
3. Write a short note on DMA.
4. Compare Linux and Unix operating systems.
5. Explain Novell IPX.

Section B (20)

Write short notes on any four.

1. Write a short note on process and thread.
2. Explain internal and external fragmentation.
3. Explain various types of schedulers in detail.
4. Explain file properties.
5. Explain MKDIR and COPY command in DOS.
6. Explain cat and grep command in UNIX.

Section C

(A) Attempt following multiple choice questions. (10)

1. A process is said to be in _____ state when it currently has the CPU.
(A) Running (B) Ready (C) Blocked (D) None of the above
2. _____ is the concept in which a process is copied into main memory from the secondary memory accounting to the requirement.
(A) Paging (B) Demanded paging (C) Segmentation (D) Swapping
3. Which module gives control of the CPU to the process selected by the short term scheduler?
(A) Dispatcher (B) Interrupt (C) Scheduler (D) None of above
4. In contiguous allocation,
(A) Each file must occupy a set of contiguous blocks on the disk
(B) Each file is a linked list of disk blocks
(C) All the pointers to scattered blocks are placed together in one location
(D) None of above
5. In wildcard specification '?' is used as replacement for
(A) One character (B) Two characters (C) Three characters (D) None of above
6. Which command is used to remove a directory?
(A) rd (B) rmdir (C) rdir (D) None of above
7. How many layers a novell network protocol stack uses.
(A) 3 (B) 4 (C) 5 (D) 6

- 8 The registration table includes:
(A) Device drivers (B) Network protocols (C) File systems (D) All of the above
- 9 Which memory allocation policy allocate the largest hole to the process?
(A) Best-fit (B) Worst-fit (C) First-fit (D) None of these
- 10 _____ Scheduler temporarily removes processes from main memory and places them on secondary memory.
(A) Long-term scheduler (B) Short-term scheduler
(C) Medium-term scheduler (D) None of these

(B) Answer the following question.

(10)

1. PCB stands for _____.
 2. What is deadlock?
 3. What is thrashing?
 4. What is stalemate?
 5. What is DRO?
 6. FAT stands for _____.
 7. What does COMMAND.COM contain?
 8. What is kernel?
 9. List out the components of Linux system.
 10. What is sequence number in the novell SPX packet?
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Term End Examination January-2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA - 303	Numerical Code: 0532
Subject	: Object Oriented Programming Using C++	Total Marks : 70
Date	: 02/02/2015	Time : 11.00 to 02.00

Section A (30)

Attempt any Three of the following:

1. With suitable program example, explain 'function'.
2. Explain C++ stream classes with its hierarchy in detail.
3. Write a program which will create a file 'Student' to store name and marks of 3 students and then display them.
4. What are visibility modes? Write about public and private visibility mode with example.
5. Explain constructor and destructor with example.

Section B (20)

Write short notes on any four.

1. Explain structure of C++ program with example.
2. Write a C++ program to calculate area and diameter of the circle.
3. Define 'inline function'. Compare it with macros.
4. Explain over loading operator with one example.
5. Explain 'this' pointer with example.
6. Write a short note on hstream. h header file.

Section C

(A) Attempt Following. (10)

- 1 Which of the following function that must contain in all C++ statement?
(A) Start() (B) System() (C) Main() (D) Program()
- 2 Which one of the following is not a correct variable type in C++ programs?
(A) Float (B) Real (C) Int (D) Double
- 3 The header file iostream includes.
(A) The declarations of the basic standard i/o library
(B) The streams of includes and outputs of program effect
(C) Both of these
(D) None of these
- 4 How would you read the expression x.y as?
(A) Member y of object pointed by x (B) Member y of object x
(C) Member x of object y (D) All of above
- 5 By default, all members of a class have _____ access for all its members.
(A) Public (B) Protected (C) No access (D) Private

- 6 Which of the following cannot be inherited from the base class?
(A) Constructor (B) Friend (C) Both (A) & (B) (D) None of above
- 7 Which type of class has only one unique value for all the objects of that same class?
(A) This (B) Friend (C) Static (D) A & B both
- 8 If a class 'X' needs to be derived from a class 'Y', which of the following ways is correct?
(A) Class x: public y (B) Class y : public x
(C) Class x derives public y (D) Class y derives public x
- 9 _____ has at least 8 bits.
(A) int (B) bool (C) short (D) char
- 10 Which operator is having the highest precedence?
(A) Postfix (B) Unary (C) Shift (D) equality

(B) Attempt Following.

(10)

1. How a reference variable is declared?
 2. List the escape codes of C++.
 3. What do you mean by static data member?
 4. Define destructor. How it is declared?
 5. State need of inheritance and list its type.
 6. What is class?
 7. Give very short description about <fstream> header file.
 8. State use of file buf.
 9. List type of iterators.
 10. Define static data.
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Term End Examination January-2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA – 304	Numerical Code: 0533
Subject	: System Programming and Introduction to Microprocessor	
		Total Marks : 70
Date	: 03/02/2015	Time : 11.00 to 02.00

Section A (30)

Answer the following (any three):

1. What is assembler? Explain its types in detail.
2. Explain pin connection diagram of 8085 microprocessor.
3. What is DMA? Explain the features of 8237 programmable DMA controller.
4. Explain types of ROM in detail.
5. Explain arithmetic logical instructions of 8085 instruction set.

Section B (20)

Answer the following (any four)

- a. Write a short note on services of operating system.
- b. Explain bus system architecture of 8085 microprocessor.
- c. Explain SSI and MSI in detail.
- d. What is HDD? Explain in detail.
- e. Give the differences between 386 and 486.
- f. Explain macros in detail.

Section C

(A) Attempt following Multiple choice questions. (10)

1. _____ accepts object program and prepare them for execution.
(A) Assembler (B) Loader (C) Compiler (D) None of the above
2. _____ is used for arithmetic and logic operations.
(A) Accumulator (B) Program counter (C) Stack register (D) None of the above
3. Which of the following is an interrupt request signal?
(A) INTA (B) HOLD (C) INTR (D) None of the above
4. Which of the following changes the program sequence conditionally or unconditionally?
(A) Arithmetic instruction (B) Branch instructions
(C) Logical Instruction (D) None of the above
5. System bus comprises of _____.
(A) Address bus (B) Data bus (C) Control bus (D) All of the above
6. _____ is considered as a general reloadable loader.
(A) Direct linking loader (B) Absolute loader
(C) Compile and Go loader (D) None of the above

- 7 Which of the following stores the masking bits of the interrupt lines to be masked?
(A) In-service register (B) Interrupt mask register
(C) Priority resolver (D) None of the above
- 8 Which of the following is reusable?
(A) CD-ROM (B) CD-R (C) CD-RW (D) None of the above
- 9 Which of the following is a non-maskable interrupt?
(A) RST5.5 (B) Trap (C) RST6.5 (D) RST7.5
- 10 Which of the following register pair can be used to store 16 bit data in 8085 microprocessor?
(A) B-D (B) D-E (C) E-L (D) None of the above

(B) Give Answer in One/Two Sentence.

(10)

1. What is compiler? (1)
 2. Write the functions of loader. (2)
 3. Give the full form of LED. (1)
 4. What is an instruction cycle? (1)
 5. What is interrupt? (1)
 6. Give the full form of USB. (1)
 7. List all addressing schemes. (2)
 8. What is stack pointer? (1)
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Term End Examination January-2015

Course	: BCA	Numerical Code: 0065
Subject Code	: BCA - 305	Numerical Code: 0534
Subject	: Relation Database Management System (RDBMS)	Total Marks : 70
Date	: 04/02/2015	Time : 11.00 to 02.00

Section A (45)

Attempt any 3 of the following:

1. Various types of keys used in RDBMS.
2. Explain various data types with example.
3. What are INSERT, UPDATE and DELETE statement. Explain with example.
4. Control statements.
5. Implementing triggers.

Section B (25)

Write short notes on any four.

1. Explain SQL
2. Use of SQL function
3. Package creation
4. Date functions
5. Creation of cursor packages
6. Database triggers

Section C

(A) Choose correct answer. (10)

1. An attribute group of attributes that identifies a row in a table is called.
(A) Primary key (B) Unique key (C) Foreign key (D) Normal key
2. Full form of SQL
(A) Selection Query Language (B) Structure Query Language
(C) Sequential Query Language (D) Software Query Language
3. In numeric data type number range between
(A) 1.0×10^{-124} and 1.0×10^{128} (B) 1.0×10^{-128} and 1.0×10^{148}
(C) 1.0×10^{-138} and 1.0×10^{126} (D) 1.0×10^{130} and 1.0×10^{-126}
4. Sub queries also known as
(A) Select queries (B) Join queries (C) Outer join queries (D) Nested queries
5. To put new rows into the database is called
(A) Delete (B) Insert (C) Update (D) Change
6. To initialize variables without using the assignment operator is called
(A) Default keyboard (B) Global variables (C) Attributes (D) Secalar datatypes
7. In atomic unit of work comprising one or more SQL statement is called
(A) Commit (B) Rollback (C) Transaction (D) Primary key

- 8 Full form of DDL
(A) Data definition language (B) Data document language
(C) Data define language (D) Data base define language
- 9 Which command controls the organization of rose written by the query
(A) BTITLE (B) CLEAR (C) COLUMN (D) BREAKON
- 10 Which command is simply keeps a line and prints the contents of text
(A) PROMT text (B) PAUSE text (C) DESC (D) RAM

(B) Give Answer in One/Two Sentence.

(10)

1. What is database files?
 2. What is data dictionary?
 3. Explain RUN command
 4. Explain line code
 5. What is INDEXES?
 6. Meaning of overloading
 7. Define database triggers
 8. What is exception handling?
 9. Explain foreign keys
 10. What is relational algebra?
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