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**B.C.A. (Semester - III) (Old) (CGPA) Examination Mar/Apr-2018
DATA STRUCTURE USING 'C'**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
2) Attempt any two questions from Q.2 to Q.4.
3) Attempt any one question from Q.5 and Q.6.

Q.1 Choose the correct alternatives:**14**

- 1) The _____ is not a sorting algorithm.
 - a) Quick sort
 - b) Binary sort
 - c) Selection sort
 - d) Radix sort
- 2) Hashing is a _____ technique.
 - a) Searching
 - b) Merging
 - c) Sorting
 - d) Insertion
- 3) The root is processed after its sub trees in _____ traversal.
 - a) Inorder
 - b) Preorder
 - c) Postorder
 - d) None of these
- 4) _____ algorithm searches a given value or element in an already sorted array by repeatedly dividing the search interval into half.
 - a) Hashing
 - b) Binary search
 - c) Quick Sort
 - d) Linear Search
- 5) Which of the following sorting technique applied on two sorted lists?
 - a) Insertion Sort
 - b) Radix Sort
 - c) Quick Sort
 - d) Merge Sort
- 6) In AVL Tree, the Balance Factor of each node is either _____.
 - a) 1,2,3
 - b) -1,1,2
 - c) -1,0,1
 - d) 2,0,-2
- 7) The complexity of linear search algorithm is _____.
 - a) $O(n)$
 - b) $O(\log n)$
 - c) $O(n^2)$
 - d) $O(n \log n)$
- 8) The _____ data structure uses linear order.
 - a) Stack
 - b) Queue
 - c) Array
 - d) All of these
- 9) _____ is not valid real life example or application of Stack.
 - a) Passengers waiting for Bus stand
 - b) Recursion
 - c) String reversal
 - d) None of these
- 10) The best data structure to check whether an arithmetic expression has balanced parentheses is a _____.
 - a) Queue
 - b) Stack
 - c) Tree
 - d) List
- 11) The Binary tree is linear data structure.
 - a) True
 - b) False

- 12) Binary search algorithm cannot be applied to _____.
- a) Sorted Linked list
 - b) Sorted binary tree
 - c) Sorted linear array
 - d) None of these
- 13) Partition and exchange sort is _____.
- a) Quick sort
 - b) Tree sort
 - c) Bubble Sort
 - d) Heap sort
- 14) What is postfix form of given expression: $((A+B)*(C-D))$
- a) ABCD+-*
 - b) ABCD-+*
 - c) AB+CD-*
 - d) ABCD*-+

- Q.2** a) What is data structure? Explain different Types of data structure. **05**
- b) What is Circular Queue? Explain different operations performed on circular Queue. **05**
- c) Define Expression tree and Threaded Binary tree. **04**
- Q.3** a) Define the terms:- **05**
- 1) Height and Depth of tree
 - 2) Ancestor and Decedent
 - 3) Leaf node
- b) Write algorithm of Merge Sort. **05**
- c) What is ADT? Explain Queue as ADT. **04**
- Q.4** a) What is Dequeue? Explain different types of Dequeue. **05**
- b) Write a program to implement Bubble sort. **05**
- c) Write algorithm of evaluation of postfix expression. **04**
- Q.5** a) Write a program to implement Linked list with following operations. **07**
- 1) Insert Last
 - 2) Delete Last
 - 3) Display List
- b) What is Binary Tree? Explain different operation performed on tree. **07**
- Q.6** a) Write a program to implement Binary Search tree with following operations. **07**
- 1) Insert node
 - 2) Delete node
 - 3) Inorder tree traversing
- b) What is linear search? Explain with example. **07**
- Q.7** Write a short note on the following:- (Any 2) **14**
- a) AVL Tree
 - b) Explain Stack uses in recursion with example
 - c) Doubly linked list

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**B.C.A. (Semester - III) (Old) (CGPA) Examination Mar/Apr-2018
NETWORKING AND DATA COMMUNICATION**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
2) Attempt any two questions from Q.2, Q.3 and Q.4.
3) Attempt any one question from Q.5 and Q.6.

Q.1 a) Select correct alternatives: -**10**

- 1) The communication medium that supports data in both directions one at a time as _____.
 - a) simplex
 - b) multiplex
 - c) half duplex
 - d) full duplex
- 2) If a code has odd parity, the number of zero's in each valid code word is _____.
 - a) odd
 - b) even
 - c) both a and b
 - d) cannot be said
- 3) Framing is a job of _____ layer.
 - a) physical
 - b) network
 - c) data link
 - d) session
- 4) IP addresses are of _____.
 - a) 8 bits
 - b) 16 bits
 - c) 32 bits
 - d) 64 bits
- 5) Which of the following cable type supports the highest bandwidth?
 - a) Co-axial
 - b) fiber-optic
 - c) STP
 - d) UTP
- 6) _____ formula is used to calculate data rate for noiseless channel.
 - a) Shannon's
 - b) Nyquist
 - c) Newton
 - d) none
- 7) UDP is _____.
 - a) connectionless
 - b) message oriented
 - c) connection oriented
 - d) both a and b
- 8) Which of the following TCP/IP protocol is used for transferring electronic mails?
 - a) FTP
 - b) SMTP
 - c) SNMP
 - d) IP
- 9) In _____ carrier signal is modulated to follow the changing voltage level of modulating signal.
 - a) AM
 - b) FM
 - c) PM
 - d) GM
- 10) _____ detects any errors which may occur during transmission.
 - a) CRC
 - b) DLC
 - c) HDLC
 - d) DCE

- Q.1 b) State True or False:-** **04**
- 1) IP address is also called as network address.
 - 2) Communications between two computers are always serial.
 - 3) Multiple protocols are grouped together to form a protocol suite.
 - 4) The information that has discrete states is called analog data.
- Q.2 Write the Answer of the following question. (Any Two)** **14**
- a) What is data communication system? Give the components and characteristics of communication system.
 - b) Compare between virtual circuit subnet and datagram subnet.
 - c) Explain Cyclic Redundancy Check (CRC) with example.
- Q.3 Write the Answer of the following questions:- (Any Two)** **14**
- a) Differentiate between LAN and WAN.
 - b) Explain network topology? Explain in various types.
 - c) Explain the concept of amplitude modulation and frequency modulation in detail.
- Q.4 Write the Answer of the following questions:- (Any Two)** **14**
- a) Explain multiplexing with its various types.
 - b) Explain concept of OSI model in detail.
 - c) What do you mean by computer network? Explain different advantages of it.
- Q.5** **07**
- a) Explain guided media in detail.
 - b) Explain different multiple access protocols? **07**
- Q.6** **07**
- a) Explain distance vector routing algorithm.
 - b) Explain open loop congestion control policy? **07**
- Q.7 Write short notes on: (Any Two)** **14**
- a) Types of errors
 - b) Compression
 - c) UDP
 - d) Design issue of layers

- 12) Database locking concept is used to solve the problem of _____.
- a) Lost Update
 - b) Uncommitted Dependency
 - c) Inconsistent Data
 - d) All of these
- 13) The transaction wants to edit the data item is called as _____.
- a) Exclusive Mode
 - b) Shared Mode
 - c) Inclusive Mode
 - d) Unshared Mode
- 14) 2NF is based on the concept of _____.
- a) Semi functional dependency
 - b) Fully functional dependency
 - c) Transitive dependency
 - d) Multi valued dependency

- Q.2** a) What is database? Explain architecture of DBMS. **05**
b) What is concurrency control? Explain two phase locking protocol. **05**
c) Explain referential integrity with suitable example. **04**
- Q.3** a) Explain the storage manager of DBMS. **05**
b) What is deadlock? Explain the concept of deadlock. **05**
c) Write note on Database Language. **04**
- Q.4** a) What is indexing? Explain sparse index with suitable example. **05**
b) Explain different types of keys. **05**
c) Write note on DBA. **04**
- Q.5** a) Describe the following relational algebra operations with example. **07**
i) Project ii) Select iii) Cartesian product
b) Discuss the concept conflict serializability. **07**
- Q.6** a) What is data model? Explain network and hierarchical model with example. **07**
b) What is normalization? Explain 1st and 2nd normal form with example. **07**
- Q.7** **Write a short notes on:- (Any 2)** **14**
a) Generalization & Specialization
b) 3 tier architecture & it's advantages
c) Log based protocol

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**B.C.A. (Semester - III) (Old) (CGPA) Examination Mar/Apr-2018
CORE JAVA**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
2) Attempt any two questions from Q. 2, 3 and 4.
3) Attempt any one question from Q. 5 and 6.
4) Figures to the right place indicate full marks.

Q.1 A) Choose the single correct alternative. 14

- 1) _____ Package is imported by default in every java program by java compiler.
 - a) io
 - b) util
 - c) net
 - d) none of these
- 2) The minimum and maximum value for a byte data type in java is _____.
 - a) -128 to +127
 - b) -127 to +127
 - c) -127 to 128
 - d) -128 to +128
- 3) String is class in java which is included in _____ package of java library.
 - a) Awt
 - b) swing
 - c) lang
 - d) util
- 4) Which of the following statements can be used in java?
 - a) break
 - b) continue
 - c) return
 - d) All of these
- 5) What is the name of the method used to start thread execution?
 - a) init()
 - b) start()
 - c) run()
 - d) resume()
- 6) Which of the following is not a method in java.util.Scanner class?
 - a) next()
 - b) nextLine()
 - c) nextInt()
 - d) nextBoolean()
- 7) _____ class is synchronized.
 - a) String
 - b) StringBuffer
 - c) StringBuilder
 - d) All of these
- 8) The default value of a char datatype is _____.
 - a) null
 - b) a space
 - c) false
 - d) None of these
- 9) 'super' keyword is used to refer _____.
 - a) super class variable
 - b) super class methods
 - c) super class constructor
 - d) All of these
- 10) All the methods of interface are _____.
 - a) public
 - b) abstract
 - c) both a) and b)
 - d) None of these
- 11) The default value of Thread priorities constant Thread.NORM_PRIORITY is _____.
 - a) 5
 - b) 1
 - c) 3
 - d) 7

- 12) The default buffer size used by any Buffered class is _____.
- a) 1024 bytes
 - b) 256 bytes
 - c) 512 bytes
 - d) 128 bytes
- 13) The default layout manager for any Frame in awt is _____.
- a) Card Layout
 - b) Grid Layout
 - c) Flow Layout
 - d) Border Layout
- 14) All the Listener interfaces are included in _____ package.
- a) java.awt
 - b) java.awt.event
 - c) javax.swing
 - d) java.awt.geom

- Q.2 Answer any two of the following question. 14**
- a) Explain features of Java.
 - b) Write a note on JDK tools in java.
 - c) Explain looping structure in java.
- Q.3 Answer any two of the following question. 14**
- a) Explain final keyword with suitable example.
 - b) Explain finally block with suitable example.
 - c) What is event delegation model in java?
- Q.4 Answer any two of the following question. 14**
- a) Explain FileWriter and FileReader class with an example.
 - b) What is package? What are the advantages of packages? Explain different types of packages?
 - c) Write a program to implement single inheritance.
- Q.5 a) Explain user defined exception with an example. 14**
- b) Explain static method with an example.
- Q.6 a) Write a program to implement 2 interfaces. 14**
- b) Explain constructor overloading with example.
- Q.7 Write a short note (Any two) 14**
- a) AWT
 - b) Abstract class
 - c) Instance variable
 - d) Thread life cycle.

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B.C.A. (Semester - III) (Old) (CGPA) Examination Mar/Apr-2018
FINANCIAL MANAGEMENT

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2 to Q. 4.
 3) Solve any one questions from Q.5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternatives.**07**

- 1) As an objectives of financial management _____ maximization is better than profit maximization.
 - a) Money
 - b) Assets
 - c) Wealth
 - d) Profit after tax
- 2) _____ assets are defined as those assets which in normal course of business are convertible into cash usually within one year.
 - a) Fixed
 - b) Current
 - c) Fictitious
 - d) None of these
- 3) Financial decision involves _____.
 - a) Investment, Financial and Dividend decisions.
 - b) Sales decisions.
 - c) Profit Decisions
 - d) None of these
- 4) When a corporation is earning an extraordinarily large return on its outstanding stocks it is said to be _____.
 - a) Working capital management.
 - b) Over capitalization
 - c) Under capitalization
 - d) All of the above
- 5) Short term assets which in the normal course of business are convertible into cash within _____.
 - a) 2 year
 - b) 1 year
 - c) 4 year
 - d) 3 year
- 6) _____ Holder receives a fixed rate of interest irrespective of profits made by the company.
 - a) Debenture
 - b) Equity
 - c) Preference
 - d) None of these
- 7) The leverage of a firm is essentially related to _____ measures.
 - a) Assets
 - b) Profit
 - c) Expenses
 - d) Cost

Q.1 B) State True or False.**07**

- 1) The financial manager takes key decisions on the allocation and use of funds by various departments.
- 2) Working capital is considered to be the life blood of business.
- 3) Operating cycle starts with cash and end with profit.
- 4) The formula for computation of operating leverage = contribution/operating profit.
- 5) The combined leverage is a measure of total risks of the firm.
- 6) Financial planning is incomplete without cash budgets.
- 7) EBIT is also known as operating profits.

- Q.2 Write a short note:- (Any two)** **14**
 a) Define capitalization and Explain over capitalization.
 b) Explain steps of financial planning.
 c) Define business finance.
- Q.3 Write a short note:- (Any two)** **14**
 a) Define financial management and Explain objectives of financial management.
 b) Define working capital and Explain types of working capital.
 c) Explain operating cycle of working capital.
- Q.4 Write a short note:- (Any two)** **14**
 a) Define working capital and explain the Determinant/Factor affecting working capital.
 b) Explain the Degree of combined leverage.
 c) Discuss the role of financial manager.
- Q.5 Write a short note:- (Any two)** **14**
 a) Define finance. Explain function of financial manager.
 b) Banking committee computation of working capital.
 c) Merit and demerits of wealth maximization.
- Q.6** While preparing a project report on behalf of a client you have collected the following facts. Estimate the net working capital required for that project. Add 10 per cent to you computed figure to allow contingences. **14**

Particular	Amount per unit (Rs)
Raw Material	80
Direct labour	30
Overheads	60
Total cash cost	170

Additional Information:

- 1) Selling price Rs. 200 per unit.
 - 2) Level of activity 1,04,000 units of production per annum.
 - 3) Raw material in stock average 4 weeks.
 - 4) Work in progress (assume 50 per cent completion stage in respect of conversion costs and 100 per cent completion in respect of materials) average 2 weeks.
 - 5) Finished goods in stock, average 4 weeks.
 - 6) Credit allowed b supplier, average 4 weeks.
 - 7) Credit allowed to debtors, average 8 weeks.
 - 8) Lag in payment of wages, average 1.5 weeks.
 - 9) Cash at bank is expected to be Rs. 25,000.
- You may assume that production is carried on evenly through the year (52 weeks) and wages and overheads accrue similarly all sales are on credit basis only.

- Q.7 a) Explain Operating, Financial and Combined leverage with suitable example.** **07**
b) Define capitalization and Explain theories of capitalization. **07**

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**B.C.A. (Semester - IV) (Old) (CGPA) Examination Mar/Apr-2018
SOFTWARE ENGINEERING**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2 to Q. 4.
 3) Solve any one questions from Q.5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 A) Choose correct alternatives.**07**

- 1) _____ module gets parameters from super ordinate, process it and return back.

a) Afferent	b) Efferent
c) Co-ordinate	d) Transform
- 2) Which of the following is not content of data dictionary?

a) Physical Location	b) Data Composition
c) Data Aliases	d) None of these
- 3) The radius is spiral model of SDLC tells us _____ accumulated in system so far.

a) Time	b) Risk
c) Cost	d) None of these
- 4) Data structure diagram and structured chart are useful in _____ phase of SDLC.

a) Coding	b) Testing
c) Designing	d) Requirement analysis
- 5) _____ is a black box testing method?

a) Boundary value analysis	b) Basic path testing
c) Code path analysis	d) None of these
- 6) Enhancements, upgrades and bug fixes are done during the _____ step in the SDLC.

a) Maintenance and Evaluation
b) Problem / Opportunity Identification
c) Design
d) Development and Documentation
- 7) _____ can allow excellent parallel implementation in the beginning.

a) Top down implementation	b) Bottom up implementation
c) Sandwich implementation	d) None of these

Q.1 B) State whether True or False**04**

- 1) Data flow diagram is also known as Bubble chart.
- 2) A television is relatively open system.
- 3) HIPO chart is helpful in documenting a system.
- 4) A requirement specification is an agreement between the system developer and the end user.

- C) Fill in the blanks** **03**
- 1) _____ normal form is related to functional dependency.
 - 2) _____ is an association between entities.
 - 3) Diagnosis and removal of residual errors related with _____ maintenance.
- Q.2 Attempt any two of the following** **14**
- a) What is System? Explain its different elements.
 - b) Explain the steps of traditional approach to implementation.
 - c) What is system maintenance? Explain various categories of maintenance.
- Q.3 Attempt any two of the followings:** **14**
- a) Who is System Analyst? Explain various roles of system analyst.
 - b) Draw ER-Diagram for Railway reservation system.
 - c) Explain Normalization up to 3rd form.
- Q.4 Attempt any two of the followings:** **14**
- a) Explain different phases of System Development Life Cycle.
 - b) Draw an HIPO chart for Payroll system.
 - c) Explain any three fact finding techniques in details.
- Q.5 a) Construct decision tree by considering following case study.** **07**
- A Co-operative bank XYZ will grant loans under the following conditions –
- i) If a customer has an account with the bank and has no loan outstanding, loan will be granted.
 - ii) If a customer has an account with the bank but some amount is outstanding from the previous loan, then loan will be granted if special management approval is obtained.
 - iii) Reject loan applications in all other cases.
- b) Design input screens for the library system.** **07**
- Q.6 a) Prepare Data dictionary for college Admission system.** **07**
- b) Draw CLD and first level DFD for Mark sheet printing system.** **07**
- Q.7 Write short notes on the following (Any two)** **14**
- a) Structured English
 - b) Waterfall Model
 - c) Requirement Investigation & requirement specification

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**B.C.A. (Semester - IV) (Old) (CGPA) Examination Mar/Apr-2018
RDMS WITH ORACLE**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
2) Attempt any two questions from Q. 2 to Q.4.
3) Attempt any one question from Q. 5 and Q.6.

Q.1 Choose the correct alternatives:**14**

- 1) A _____ is a set of tables physically stored together as one table that shares a common column.
 - a) Index
 - b) Object
 - c) Cluster
 - d) Non-index
- 2) _____ is invalid data type.
 - a) Char
 - b) Varchar2
 - c) Varchar1
 - d) Number
- 3) Which of the following is not valid command in PL/SQL?
 - a) Update
 - b) Delete
 - c) Create
 - d) All of these
- 4) Oracle is a second generation relational database management system.
 - a) True
 - b) False
- 5) A stored procedure is a _____.
 - a) stored in a compiled form in the database
 - b) can be shared
 - c) sequence of SQL statements
 - d) all of these
- 6) Which of the following is correct about view?
 - a) It is a virtual table
 - b) It is derived from other table
 - c) Both a and b
 - d) None of these
- 7) The select statement is used to _____.
 - a) display the records from a table
 - b) modify structure of a table
 - c) update existing record
 - d) none of these
- 8) Which of the following is used to define code that is fired when certain action occur?
 - a) Cursor
 - b) Trigger
 - c) Both A and B
 - d) None of these
- 9) Which SQL keyword is used to sort the result set?
 - a) order
 - b) sort
 - c) order by
 - d) sort by
- 10) Which of the following is not a type of SQL statement?
 - a) Data Definition Language (DDL)
 - b) Data Manipulation Language (DML)
 - c) Data Standard Language (DSL)
 - d) Data Control Language (DCL)

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**B.C.A. (Semester - IV) (Old) (CGPA) Examination Mar/Apr-2018
OPERATING SYSTEM**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2 to Q. 4.
 3) Solve any one questions from Q.5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 a) Choose correct alternatives from the following:- 10

- 1) There is guarantee that the critical tasks are completed in given amount of time called as _____.
 - a) Soft Real time system
 - b) Hard Real Time System
 - c) Time Sharing System
 - d) Real time system
- 2) _____ is a logical extension of multiprogramming system.
 - a) Time sharing
 - b) Parallel
 - c) Distributed
 - d) Batch system
- 3) A program in execution is called _____.
 - a) Function
 - b) Instruction
 - c) Procedure
 - d) Process
- 4) Which process can be affected by other processes executing in the system?
 - a) Co-operating process
 - b) Child process
 - c) Parent process
 - d) init process
- 5) FIFO scheduling is _____.
 - a) Preemptive scheduling
 - b) Non-Preemptive scheduling
 - c) Deadlock scheduling
 - d) None of these
- 6) Virtual memory is implemented using _____.
 - a) Demand paging
 - b) Swapping
 - c) Fragmentation
 - d) None of the Above
- 7) _____ is a technique of temporarily removing inactive programs from the Memory of computer system.
 - a) Scheduler
 - b) Spooling
 - c) Semaphore
 - d) Swapping
- 8) The priority scheduling algorithm suffers by _____.
 - a) Deadlock
 - b) Aging
 - c) Starvation
 - d) All of these
- 9) File type can be represented by _____.
 - a) File name
 - b) File extension
 - c) File identifier
 - d) None of the above.
- 10) The banker's algorithm is used for deadlock _____.
 - a) Prevention
 - b) Avoidance
 - c) Detection
 - d) Recovery

- Q.1 b) State True or False:-** **04**
- 1) Main Frame operating system was used for many commercial and scientific applications.
 - 2) Time quantum is defined in priority scheduling algorithm.
 - 3) An operating system can be viewed as “resource allocator” to control various I/O devices and user programs.
 - 4) Run time mapping from virtual to physical address is done by MMU.

- Q.2 Write the Answer of the following question. (Any Two)** **14**
- a) Explain The Different Services provided by Operating System.
 - b) Explain process states with state transition diagram.
 - c) What is process Scheduling? Explain different types of schedulers.

- Q.3 Write the Answer of the following questions:- (Any Two)** **14**
- a) Define the term deadlock? Explain the necessary conditions of deadlock.
 - b) What is meant by synchronization? Explain the Dining Philosophers Problem.
 - c) Explain the Co-operating Process and threads in detail.

- Q.4 Write the Answer of the following questions:- (Any Two)** **14**
- a) Explain contiguous allocation method for allocating disk space.
 - b) Consider the following Example. Implement the Priority and Round Robin Scheduling.

Process	Burst Time	Priority
P1	21	2
P2	3	1
P3	6	4
P4	2	3

(Note:- Take Time Slice=5 Sec.)

- 1) Draw Gantt chart for above algorithm.
 - 2) Calculate the Average waiting time.
 - 3) Calculate the Average turnaround time.
- c) Explain Virtual Memory in detail.
- Q.5 Write Answer of the following question:-** **14**
- a) What is page replacement? Write the working LRU page replacement algorithm.
 - b) Define operating system? Explain different types of operating system.
- Q.6 Write Answer of the following question:-** **14**
- a) Discuss the Banker’s Algorithm for deadlock-avoidance in detail.
 - b) Define paging? Explain Demand Paging in details.
- Q.7 Write short notes on the following : (Any Two)** **14**
- a) System Component
 - b) Semaphore and Critical Region.
 - c) Segmentation.

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**B.C.A. (Semester - IV) (Old) (CGPA) Examination Mar/Apr-2018
WEB TECHNOLOGY – II**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2, 3 and 4.
 3) Attempt any one question from Q. 5 and 6.
 4) All questions carry equal marks.

Q.1 Choose the correct alternatives:**14**

- 1) PHP is a widely used open source general purpose scripting language that is especially suited for web development.
 - a) True
 - b) False
- 2) Which of the following php statement/statements will store 111 in variable num?
 - a) int \$num = 111;
 - b) int num = 111;
 - c) \$num = 111;
 - d) All of these
- 3) The _____ function checks if the “end-of-file” (EOF) has been reached.
 - a) f_eof()
 - b) f_of()
 - c) feofs()
 - d) feof()
- 4) Which of the following method is suitable when you need to send larger from submissions?
 - a) Get
 - b) Post
 - c) Both a and b
 - d) None of these
- 5) Which of the following PHP statement will display “PHP is an Open Source” on the screen?
 - a) echo (“PHP is an Open Source”);
 - b) print (“PHP is a Open Source”);
 - c) printf (“PHP is an Open Source”);
 - d) All of these
- 6) Which function is used to erase all session variables stored in the current session?
 - a) Session_destroy()
 - b) Session_change ()
 - c) Session_remove()
 - d) Session_unset()
- 7) Which of the following keyword is used to inherit subclass into a superclass?
 - a) Extends
 - b) Implements
 - c) Inherits
 - d) None of these
- 8) What is the correct way to connect to a MySQL database?
 - a) dbopen(“localhost”);
 - b) mysql_open(“localhost”);
 - c) mysql_connect(“localhost”);
 - d) connect _mysql(“localhost”);
- 9) Which of the following statement is correct about PHP?
 - a) It is a server side scripting language
 - b) A PHP file may contain text, html tags or scripts
 - c) Both a and b
 - d) None of these
- 10) _____ is a special variable, which can hold more than one value at a time.
 - a) Array
 - b) Class
 - c) Structure
 - d) Interface

Seat No.	
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**B.C.A. (Semester - IV) (Old) (CGPA) Examination Mar/Apr-2018
E-COMMERCE**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
2) Attempt any two questions from Q. 2 to Q.4.
3) Attempt any one question from Q. 5 and Q.6.

Q.1 A) Select the correct alternatives: 07

- 1) The concept of electronic cash is to execute payment by _____.
a) Credit Card
b) ATM Card
c) Using computers over network
d) Cheque
- 2) Which segment do eBay, Amazon.com belong?
a) B2B_s
b) B2C_s
c) C2B_s
d) C2C_s
- 3) The Methods of payment for online consumer are _____.
a) Electronic Cash
b) Credit/Debit
c) Electronic Checks
d) All of the above
- 4) Which is not a function of E-Commerce?
a) Marketing
b) Advertising
c) Warehousing
d) None of the above
- 5) Which of the following is not related to security mechanism?
a) Encryption
b) Decryption
c) E-cash
d) All of these
- 6) Digital signature is _____.
a) Scanned signature on computer
b) Code number of the sender
c) Public key Encryption
d) Software to recognize signature
- 7) Which is not a feature of e-commerce?
a) SCM
b) EDI
c) WWW
d) BPR

Q.1 B) Fill in the blanks:- 07

- 1) A digital signature is _____.
- 2) The term ISP refers to _____.
- 3) The study of encryption is called _____.
- 4) E-Cheques are _____.
- 5) The presence of _____ make the smart card smart.
- 6) _____ is the electronic transmission of business transaction documents directly between the computers of trading partner in a standard message format.
- 7) Consumer interaction, the essence of consumer focused (B2C) e-commerce, is the front end to _____.

- Q.2 Write a short note. (Any Two)** **14**
- a) Define EDI and Explain benefits of EDI.
 - b) Define E-Commerce perspectives.
 - c) Define e-commerce. Explain scope of electronic commerce.
- Q.3 Answer the following:** **14**
- a) Explain the web site evaluation model.
 - b) What is electronic Market?
- Q.4 Answer the following:-** **14**
- a) What is supply chain management?
 - b) Write the process of online share dealing.
- Q.5 Answer the following:-** **14**
- a) Explain the porter's model.
 - b) Explain the e-commerce security System.
- Q.6 Answer the following:-** **14**
- c) Explain the pen and thing.
 - d) Define E-Diversity.
- Q.7 Write a short note:- (Any two)** **14**
- a) Strategic implication of IT.
 - b) Virtual auction.
 - c) Electronic news paper.

Seat No.	
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**B.C.A. (Semester - V) (CGPA) Examination Mar/Apr-2018
ADVANCED JAVA – I**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2 to Q. 4.
 3) Solve any one questions from Q.5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives:**14**

- 1) Which method is used to perform DDL statements in JDBC?
 - a) execute()
 - b) executeQuery()
 - c) executeUpdate()
 - d) executeResult()
- 2) Which driver is called thin driver.
 - a) Type-1
 - b) Type-2
 - c) Type-3
 - d) Type-4
- 3) To display status on applet window _____ method is used.
 - a) showString()
 - b) drawString()
 - c) showStatus()
 - d) printString()
- 4) Which package contains Graphics class?
 - a) java.applet
 - b) java.graphics
 - c) java.lang
 - d) java.awt
- 5) What does XML stand for?
 - a) extra Modern Link
 - b) extensible Markup Language
 - c) example Markup Language
 - d) X-Markup Language
- 6) What is the correct syntax of the declaration which defines the XML version?
 - a) <xml version="1.0" />
 - b) <?xml version="1.0" />
 - c) <?xml version="1.0"?>
 - d) None of the above
- 7) Which packages represent interfaces and classes for JDBC API?
 - a) java.sql.*
 - b) javax.sql.*
 - c) Both A and B
 - d) None of the above
- 8) To run an applet _____ command is used.
 - a) java
 - b) javac
 - c) applet
 - d) appletviewer
- 9) Sessions is a part of the SessionTracking and it is for maintaining the client state at _____ side.
 - a) client
 - b) server
 - c) both a and b
 - d) none of the above
- 10) Which of the method does not define the Applet class?
 - a) init()
 - b) start()
 - c) update()
 - d) destroy()
- 11) Clean up process in servlet is handled by _____ method.
 - a) start()
 - b) stop()
 - c) init()
 - d) destroy()

- 12) To implement delegate necessary condition is _____.
- a) Class declaration
 - b) inheritance
 - c) run time polymorphism
 - d) Exceptions
- 13) Which of the following assemblies can be stored in Global Assembly Cache?
- a) Private Assemblies
 - b) Friend Assemblies
 - c) Shared Assemblies
 - d) Public Assemblies
- 14) JIT stands for Just-In Time Compiler.
- a) True
 - b) False

- Q.2** a) What are components of Microsoft Dot Net Framework? Explain in detail. **05**
b) What is Array? Explain its different types with example. **05**
c) What are different data types supported in C#? **04**
- Q.3** a) What is delegate? Explain delegate with its applications. **05**
b) What is Exception? Explain try and finally block with example. **05**
c) What is Interface? How to implement interface explain with example. **04**
- Q.4** a) What is Stream? Explain any two character base stream classes. **05**
b) What are Anonymous methods? Explain with suitable example. **05**
c) Write note on virtual keyword. **04**
- Q.5** a) Explain ArrayList collection class with its advantages. **07**
b) Explain architecture of ADO.Net. **07**
- Q.6** a) Create a window application to read record and display in gridview control. **07**
b) How to use DataReader and DataAdapter in windows form. **07**
- Q.7 Write short note on the following:- (Any 2) 14**
- a) Multithreading Fundamentals
 - b) ComboBox and ListBox
 - c) Types of Assemblies

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**B.C.A. (Semester - V) (CGPA) Examination Mar/Apr-2018
LINUX AND SHELL PROGRAMMING**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2 to Q. 4.
 3) Attempt any one questions from Q.5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives:**14**

- 1) _____ directory contains binary executable file.
 - a) bin
 - b) lib
 - c) dev
 - d) etc
- 2) In sort command _____ option used sort in numeric order.
 - a) -f
 - b) -c
 - c) -r
 - d) -n
- 3) In VI- editor _____ character moves the cursor one character to the right.
 - a) l
 - b) n
 - c) b
 - d) w
- 4) _____ symbol matches only a single character in file name.
 - a) ?
 - b) _
 - c) /
 - d) |
- 5) Octal representations of rw- - w- r- - permission are _____.
 - a) 644
 - b) 642
 - c) 624
 - d) 654
- 6) _____ command used for merges lines of files.
 - a) paste
 - b) more
 - c) merge
 - d) tee
- 7) _____ symbol matches all character in file name.
 - a) ?
 - b) _
 - c) *
 - d) \$
- 8) In ls _____ option used to list all the hidden files along with the other file.
 - a) -a
 - b) -l
 - c) -f
 - d) -x
- 9) Which types of security provide by Linux?
 - a) Login & password
 - b) File permission
 - c) File encryption
 - d) All of these
- 10) In a Linux file system root is the top level directory.
 - a) True
 - b) False
- 11) Kernel acts as agent between user and network.
 - c) True
 - d) False
- 12) cat command used to only create a file.
 - a) True
 - b) False

- 12) CRM Stands for _____.
- a) Customer Relationship Management
 - b) Cost Relationship Management
 - c) Currency Relationship Management
 - d) None of these

- 13) BIS stands for _____.
- a) Busy Information Management
 - b) Business Intelligence System
 - c) Bio-Information System
 - d) None of these

- 14) KMS Stands for _____.
- a) Knowledge Management System
 - b) Key Management System
 - c) King Information System
 - d) None of these

Q.2	a) Explain the features of organization.	05
	b) Explain Quality of information.	05
	c) Write a short note on types of decision.	04
Q.3	a) Write down enterprise application.	05
	b) Explain the advantages of CRM.	05
	c) Short note on ERP.	04
Q.4	a) Write down benefit of DSS.	05
	b) What is role and Importance of Information System?	05
	c) Write a short note on Accounting System.	04
Q.5	a) What is MIS? Explain the characteristics of MIS?	07
	b) Explain the application of MIS in Service Industry.	07
Q.6	a) Explain the advantages & Disadvantages of SCM.	07
	b) Explain the application of MIs in Manufacturing Sector.	07
Q.7	Write a short note on the following:-	14
	a) Features of ESS.	
	b) Characteristics of BIS.	
	c) System Vulnerability.	
	d) Computer Literacy.	
	e) Role of Manager in Organization.	

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**B.C.A. (Semester - VI) (CGPA) Examination Mar/Apr- 2018
ADVANCED JAVA – II**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Solve any two questions from Q. 2 to Q.4.
 3) Solve any one question from Q. 5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 Choose correct alternatives:**14**

- 1) Which JSTL tag catches any exception that occurs in a program body?
 - a) <c:catch>
 - b) <c:try>
 - c) <c:exception>
 - d) All of these
- 2) TLD stands for Tag Library Descriptor
 - a) True
 - b) False
- 3) Which is / are true about Hibernate?
 - a) An open source
 - b) A light weight
 - c) Is a framework interact with database
 - d) All of these
- 4) Which of the following tags are used for handling the exception in JSP?
 - a) errorPage
 - b) isErrorPage
 - c) both a and b
 - d) none of these
- 5) _____ is the default value of 'isErrorPage' attribute in jsp.
 - a) True
 - b) False
 - c) int
 - d) session
- 6) ORM Stands Object Relational Mapping.
 - a) True
 - b) False
- 7) JSP page is Translate into servlet and applet.
 - a) True
 - b) False
- 8) 'session' is an implicit object in JSP.
 - a) True
 - b) False
- 9) In Spring,fetch the records from the database using _____ method of JdbcTemplate class.
 - a) query()
 - b) feth()
 - c) submit
 - d) None of these
- 10) Which jsp tag element is used to display messages and variable values?
 - a) action
 - b) expression
 - c) scriptlet
 - d) page

Seat No.	
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**B.C.A. (Semester - VI) (CGPA) Examination Mar/Apr-2018
CYBER LAWS AND SECURITY CONTROL**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
2) Attempt any two questions from Q. 2, Q.3 and Q.4.
3) Attempt any one question from Q. 5 and Q.6.
4) Figures to the right indicate full marks.

Q.1 A) Choose the correct alternatives: - 10

- 1) It is stealing ideas or creations of others.
 - a) Plagiarism
 - b) Intellectual Property Rights
 - c) Piracy
 - d) All of above
- 2) As per IT act _____ cannot be in electronic form.
 - a) form
 - b) license
 - c) cheques
 - d) records
- 3) Firewalls are used to protect against _____.
 - a) Data driven attack
 - b) Fire attacks
 - c) Virus attacks
 - d) Unauthorized access
- 4) Super market uses _____ for transaction with their suppliers.
 - a) E-market
 - b) EDI
 - c) Internet
 - d) None of these
- 5) Authentication is _____.
 - a) Modification
 - b) Insertion
 - c) Identify user
 - d) None of these
- 6) _____ is a contract between the purchaser & publisher of the software?
 - a) License
 - b) Copy right
 - c) Cyber law
 - d) IT Act.
- 7) _____ backup all selected data.
 - a) Full
 - b) Incremental
 - c) Copy
 - d) None of these
- 8) Scope of e-commerce is _____.
 - a) Global
 - b) Local
 - c) Both a and b
 - d) None of these
- 9) _____ converted data from plain text to cipher text.
 - a) Decryption
 - b) Encryption
 - c) Both a and b
 - d) EDI
- 10) A _____ is a process of making copies of data so that these additional copies may be used to restore the original data.
 - a) Backup
 - b) Crime
 - c) Security
 - d) All of above

Q.1 B) Answer in one sentence:- 04

- 1) What is mean by theft?
- 2) What is mean by UNCITRAL?
- 3) What is mean by license?
- 4) What is mean by information?

Q.2	a) Explain digital signature in detail.	05
	b) Explain information society.	05
	c) Write a short on cyber crime.	04
Q.3	a) What are the duties of subscriber of digital signature certificate?	05
	b) Explain UNCITRAL law in detail.	05
	c) Write a short note on data protection.	04
Q.4	a) Explain hardware & software security.	05
	b) Explain benefits of EDI.	05
	c) Short note on data encryption.	04
Q.5	a) What is cyber law? Explain intellectual property aspects.	07
	b) Explain difference between Authentication and Authorization.	07
Q.6	a) Explain about encryption techniques and differentiate between secret key encryption & public key encryption.	07
	b) Explain information technology 2000.	07
Q.7	Write short notes on: -	
	a) Copyright	04
	b) Security audit	04
	c) Data backup	04
	d) Indian economy	02

Seat No.	
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**B.C.A. (Semester - VI) (CGPA) Examination Mar/Apr-2018
SOFTWARE PROJECT MANAGEMENT**

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) Q.1 and Q.7 are compulsory.
 2) Attempt any two questions from Q. 2, Q.3 and Q.4.
 3) Attempt any one question from Q. 5 and Q.6.
 4) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives:**14**

- 1) CPM is _____.
 - a) Critical Pan Method
 - b) Critical Path Mode
 - c) Critical path Method
 - d) None of the above
- 2) SRS includes the specification of _____.
 - a) User requirement
 - b) System requirement
 - c) Both a & b
 - d) None of the above
- 3) The likelihood and consequences of the risks are assessed in :
 - a) Planning
 - b) Risk analysis
 - c) Coding analysis
 - d) Content analysis
- 4) A procedural Code-oriented approach estimates each module in _____.
 - a) KLOC
 - b) SLOC
 - c) PBS
 - d) WBS
- 5) What is Risk?
 - a) Negative consequence that could occur
 - b) Negative consequence that will occur
 - c) Negative consequence that must occur
 - d) Negative consequence that shall occur
- 6) What Direct measure include in the Software product?
 - a) Line of Code (LOC)
 - b) Execution speed
 - c) Defect reported
 - d) All of these
- 7) In Waterfall Model, output of one phase is input to next phase.
 - a) False
 - b) True
- 8) Each activity in network diagram should have _____.
 - a) Actors and process
 - b) Resource and actors
 - c) Start date and end date
 - d) Duration and process
- 9) Backward pass means _____.
 - a) Calculating latest date to start and end activity
 - b) Calculating dates to start and end activity time.
 - c) Calculating time period to start and end activity
 - d) Calculating end date of an activity.
- 10) _____ is path finding, _____ is path following.
 - a) Manager, Management
 - b) Leader, Leadership
 - c) Management, Leadership
 - d) Leadership, Management

Seat No.	
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B.C.A. (Semester - VI) (CGPA) Examination Mar/Apr-2018
WEB TECHNOLOGY - III

Time: 2½ Hours

Max. Marks: 70

- Instructions:** 1) All questions are compulsory.
2) All questions carry equal marks.

Q.1 Choose the correct alternatives:**14**

- 1) In asp.net _____ directory occur in first line.
 - a) Script
 - b) Page
 - c) Single page.
 - d) Master
- 2) IIS Stands for _____.
 - a) Internet Information System
 - b) Internet Interchange System
 - c) Internet Information Service
 - d) None of these
- 3) Which object can help you maintain data across users?
 - a) Application Object
 - b) Session object
 - c) Response object
 - d) Server object
- 4) _____ Property to post data from one page to another.
 - a)PostBack
 - b) nevigat
 - c)PostBackURL.
 - d)PostBackresource
- 5) We can manage states in asp.net application using
 - a) Session Objects
 - b) Application Objects
 - c) Viewstate
 - d) All of the above
- 6) DLL stands for _____.
 - a) Data Link Library
 - b) Data Linkage Library
 - c) Data Load Library
 - d) None of these
- 7) Which set of symbols are used to signify the presence of ASP.Net code?
 - a) <@
 - b) <#
 - c) <\$
 - d) <%
- 8) Which interface you will use wrap an AJAX client control into a custom server control?
 - a) IScriptManager
 - b) IScriptControl
 - c) IScriptAJAX
 - d) None of the above.
- 9) _____ control is required for every page that has AJAX Extensions for ASP.NET?
 - a) UpdatePanel
 - b) ScriptManager
 - c) ContentPanel
 - d) None of the above
- 10)WCF services can communicate with _____.
 - a) All programming languages
 - b) XML
 - c) Only the languages included with Visual Studio.NET
 - d) Multiple platforms and multiple languages.

- 11) The standard method for storing data that can be transferred easily from one machine or platform to another is _____.
- a) XML
 - b) SOAP
 - c) WSDL
 - d) WCF
- 12) _____ is a popular standard that includes a set of rules for handling requests and responses including class names, method names and parameters.
- a) XML
 - b) WCF
 - c) WSDL
 - d) SOAP
- 13) Which property is used to name a web control?
- a) ControlName
 - b) Designation
 - c) ID
 - d) Name
- 14) Which is not a property of the Common control class?
- a) Show
 - b) BackColor
 - c) Font
 - d) ForeColor

- Q.2 Attempt the following. 14**
- a) What is the file upload control? Explain with example.
 - b) Explain compilation technique in Asp.Net?
- Q.3 Attempt the following:- 14**
- a) Explain about webservice protocol stack?
 - b) What is master page? Give example of nested master page?
- Q.4 Attempt the following. (Any One) 14**
- a) What is personalization? Explain in details with basic syntax.
 - b) What is Site Navigation? Explain site navigation in detail.
- Q.5 Attempt the following. (Any One) 14**
- a) Explain in brief Asp.Net Page life cycle.
 - b) Explain Silverlight Architecture in brief.