Seat
No.

B.C.A. – I (Semester – I) Examination, 2015
(New CGPA Pattern)
INTRODUCTION TO INFORMATION TECHNOLOGY

Day and Date: Wednesday, 15-4-2015   Total Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

N.B. :   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**.

1. a) Select the **correct** alternatives :   **7**

    1) Computer built before the first generation of computers were _____

        a) Mechanical   b) Electro-mechanical

        c) Electrical   d) None of these

    2) Which Technology is used in optical disk ?

        a) Mechanical   b) Electrical

        c) Electro-magnetic   d) Laser

    3) The sound card converts signals from microphone into computed codes
        using a _____

        a) Scanner   b) Plotter

        c) Digitizer   d) OMR

    4) The modifier keys on PC keyboard are _____

        a) Enter, space, insert   b) Shift, ctrl, Alt

        c) ESC backspace, Alt   d) None of these

    5) A _____ is a peripheral output device designed to get a hard
        copy of the output.

        a) Printer   b) Monitor

        c) CRT   d) LCD

6) The number of pixels on the screen is its _____
   a) Dot pitch   b) Viewing angle
   c) Resolution   d) None of these

7) The Resolution of inkjet printer is about _____
   a) 400 dpi   b) 360 dpi
   c) 460 dpi   d) 300 dpi

b) Fill in the blank :   **7**

   1) Communication takeplace between objects called _____

   2) The access method used for magnetic tape is _____

   3) In _____ communication can occur in one direction only.

   4) The fifth generation of computer was characterized by _____

   5) EBCDIC stands for _____

   6) 1 GB (Gigabytes) means _____

   7) EDVAC stands for _____

2. Write answer of the following questions (**any two**) :   **14**

   a) Define the term computer. Explain characteristics of computer and limitation of computer.

   b) What is printer ? Explain printing mechanism of inkjet printer.

   c) Define secondary memory. Explain magnetic disk in details.

3. Write answer of the following questions (**any two**) :   **14**

   a) What is internet ? Explain use and benefits of internet.

   b) Explain compiler and interpreter in details.

   c) Draw the block diagram of computer. Explain different units of computer.

4. Write the answer of the following question (**any two**) : **14**

   a) What is operating system ? List out the types of operating system. Explain time sharing system.

   b) What is input device ? List the different input devices. Explain keyboard.

   c) Solve the following :

      i) $(502 \cdot 327)_8 \; (\;)_{10}$

      ii) $(1A_2 \cdot 3D)_{16} \; (\;)_{10}$

      iii) $(1101110.011110)_2 \; (\;)_8$.

5. A) Define Network Topology. Explain different types of topology. **7**

   B) Discuss the factors which should consider while purchasing the computer. **7**

6. A) Define computer languages. Discuss machine language with their advantages disadvantages. **7**

   B) Define computer virus. Explain types of computer virus in details. **7**

7. Write short note on **(any two)** : **14**

   a) Real time system

   b) Evolution of computer

   c) Light pen and Joystick.

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SLR-K – 10

Seat No.	

B.C.A. (Part – I) (Semester – I) Examination, 2015
DISCRETE MATHEMATICS (Old)

Day and Date : Friday, 24-4-2015　　　　　　　　　　　Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Question No. **1** and **7** are **compulsory**.
　　　　　　　　2) Attempt **any two** questions from Q. No. **2** to Q. No. **4**.
　　　　　　　　3) Attempt **any one** question from Q. No. **5** and Q. No. **6**.
　　　　　　　　4) Figures to the **right** indicate **full** marks.
　　　　　　　　5) Use of calculator is **allowed**.

1. A) Choose correct alternative from the given alternatives :　　　　　　**8**

　　1) Let A = {1, 2, 3, 4, 6, 8, 9, 10} then cardinality of A is _____

　　　a) 8　　　　　　b) 10　　　　　　c) 9　　　　　　d) 0

　　2) Let A and B be any two finite sets then their intersection i.e. A $\cap$ B is _____

　　　a) never commutative　　　　　b) always commutative

　　　c) not commutative　　　　　　d) none of these

　　3) Conjunction ($\wedge$) of two statements p and q is true if and only if _____

　　　a) both p and q are true　　　　b) only p is true and q is false

　　　c) both p and q are false　　　　d) q is true and p is false

　　4) Which of the following is not a statement ?

　　　a) 2 + 3 = 5　　　　　　　　　b) Sun rises in the East

　　　c) Bring that table　　　　　　d) 4 + 9 < 25

P.T.O.

5) If f : A → B be a function and f(a) = b then an element 'a' is called as
_____

   a) image of 'b'
   b) pre-image of 'b'
   c) range of 'b'
   d) image of 'a'

6) Let * be a binary operation defined on a set A. If a * b = b * a, for all a, b ∈ A
then * is _____

   a) Associative
   b) Inverse
   c) Distributive
   d) Commutative

7) If aRb and bRa implies that a = b then the relation R is called as
_____ relation.

   a) symmetric
   b) asymmetric
   c) antisymmetric
   d) not symmetric

8) The non zero integers x and y are called as relatively prime integers if
_____

   a) their g.c.d. is 1
   b) their l.c.m. is 1
   c) their g.c.d is 0
   d) none of these

B) Fill in the blanks : **4**

   1) De Morgans Law in logic is ~(p ∧ q) ≡ _____

   2) If A = {p, q, r} and B = {x, y} then A × B = _____

   3) If A = {x, y} then power set of A = _____

   4) Converse of the statement p → q is _____

C) State whether the following statement is **true** or **false** : **4**

   1) p ∧ (q ∨ r) ≡ (p ∧ q) ∧ (p ∧ r)

   2) Cardinality of an empty set is always zero.

   3) Product of two non zero integers is always equal to product of their g.c.d.
   and l.c.m.

   4) Range of a function is subset of co-domain.

2. A) Determine whether the following statement is tautology or contradiction or neither. $(\sim p \wedge \sim q) \leftrightarrow (p \vee q)$. **6**

   B) Let A = {p, q, r, s, t} and B = {p, q, s, x, y, z}. Then find the cardinalities of following set.

     i) $A \cup B$ ii) $A \cap B$ iii) $A - B$. **5**

   C) Let A = {a, b, c, d}. Let R be the relation defined on the set A given by, R = {(a, a), (a, b), (a, d), (b, a), (b, c), (c, a), (c, c), (d, b), (d, a), (d, d)}. Draw digraph of relation R. Also write matrix of relation R. **5**

3. A) Let $f : R \rightarrow R$ be a function defined by $f(x) = \dfrac{7x - 4}{3}$, for $x \in R$. Show that 'f' is bijective. **6**

   B) By using truth table show that $\sim(p \vee q) \equiv \sim p \wedge \sim q$. **5**

   C) If a | b and c | d then prove that ac | bd. where a, b, c, d $\in$ z. **5**

4. A) Define the following terms : **6**

     i) Universal relation

     ii) One-one function

     iii) Equivalence relation.

   B) Construct the switching circuit for the following Boolean expression. **5**

   $[(x \wedge y') \vee z] \wedge [x' \vee y]$.

   C) If | A | = 25, | B | = 16 and |A $\cap$ B| = 7 then find |A $\cup$ B| by using principle of mutual inclusion exclusion. **5**

5. A) Let A = {1, 2, 3, 4}. Let R be the relation defined on the set A given by

   R = {(1, 1), (1, 3), (1, 4), (2, 1), (2, 3), (3, 2), (3, 4), (4, 1), (4, 4)}.

   Find transitive closure of relation R by using Warshall's algorithm. **8**

   B) Convert the following argument into symbolic form and test the validity by using truth table. If I work then I will not study. I will pass BCA if and only if I will study. I work and I study. Therefore I pass BCA. **8**

6. A) Find g.c.d. of integers 48 and 18 by using Euclidean algorithm. Also find the integers m and n such that (48, 18) = 48m + 18n. **8**

   B) How many integers between 1 to 789 which are divisible either by 3 or by 5 or by 7 ? **8**

7. Attempt **any four** of the following : **16**

   1) Let U = {1, 2, 3, 4, 5, 6, 7, 8}. Let A = {1, 2, 5, 7} and B = {1, 2, 3, 4, 8} be the subsets of Universal set U. Then find the following sets.

      a) A' b) B – A   c) A ∩ B   d) A – B

   2) Let $f(x) = x^2 + 4$ then find f(2x) and f(x + 2).

   3) Let A = {1, 2, 3, 4}. Let R be the relation defined on A by xRy if and only if x divides y, x, y ∈ A. Then write the elements of relation R. Also write matrix of relation R i.e. M(R).

   4) By using Fermat's theorem find the remainder when 8^{396} is divided by 13.

   5) Prepare truth table for the statement, (p → q) ∧ (~p ∨ q). Also write your comment.

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Seat No.

B.C.A. – I (Semester – II) Examination, 2015
(New) (C.G.P.A. Pattern)
OOP WITH C++

Day and Date : Thursday, 16-04-2015   Total Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

N.B. : 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.**

1. a) Select the **correct** alternatives :   **10**

   1) By default return type of main() in C++ is _____
      a) int   b) void   c) float   d) none

   2) The binding of data and functions into a single unit is called as _____
      a) class   b) dynamic binding
      c) encapsulation   d) inheritance

   3) The '<<' operator in output statements is called a _____
      a) insertion operator   b) extraction operator
      c) get-from operator   d) bit-wise operator

   4) From the following list which operator is not overloaded.
      a) conditional   b) extraction
      c) increment   d) addition

   5) A class that contains at least one pure virtual function is considered an _____
      a) static class   b) derived class
      c) base class   d) abstract class

P.T.O.

6) The developer of C++ language is _____

   a) Dennis Ritchie   b) Ken Thompson

   c) Bjarne Stroustrup   d) Richards

7) From the following which function is used to initialize the variable

   a) inline   b) destructor

   c) constructor   d) friend

8) A _____ function is one that does not really exist but it appears real in some parts of a program.

   a) static   b) friend

   c) virtual   d) inline

9) Destructor is prefix with a _____ character.

   a) colon   b) semicolon

   c) tilde   d) none

10) Choosing a function during compilation time is called as _____

   a) early binding   b) late binding

   c) dynamic binding   d) node

b) State **True** or **False** :   **4**

1) OOP language permit reusability of the existing code.

2) Every statement in C++ program is terminated by a semicolon.

3) Static function can use non-static members.

4) Constructors can not be overloaded.

2. Write the answer of the following questions (**any two**) :   **14**

   a) Define Operator. List at least four new operators added by C++.

   b) How is polymorphism achieved at compile time and run time ?

   c) List few areas of applications of OOP technology.

3. Write the answer of the following questions (**any two**) :   **14**

   a) Explain array of objects with example.

   b) Describe the syntax of multiple inheritance. When do we use such an inheritance ?

   c) What are input and output streams ?

4. Write the answer of the following questions (**any two**) :   **14**

   a) Define operator overloading. State the rules for operator overloading.

   b) What is Constructor ? List some of the special properties of the constructor function.

   c) What is reference variable ? What is its major use ?

5. a) When will you make the function inline ? Why ?   **7**

   b) Why is it necessary to include the file iostream in all our program ?   **7**

6. a) What is a class ? How does it accomplish data hiding ?   **7**

   b) When a friend function compulsory ? Give an example.   **7**

7. Write short note on (**any two**) :   **14**

   a) Pure virtual function.

   b) Nesting of classes.

   c) Control structures.

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SLR-K – 12

Seat No.	

B.C.A. (Part – I) (Sem. – II) Examination, 2015
WEB TECHNOLOGY (New CGPA Pattern)

Day and Date : Saturday, 18-4-2015   Max. Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Choose the correct alternative :   **10**

　　1) The Java script language is belongs to _____
　　　　a) Object Oriented　　　　　　　b) Document based
　　　　c) Object based　　　　　　　　　d) Method Oriented

　　2) The _____ value of type attribute in an input element is used to clears the contents in the form.
　　　　a) clear　　　　b) reset　　　　c) set　　　　d) delete

　　3) A/An _____ processes an XML document.
　　　　a) analyser　　　b) compiler　　　c) linker　　　d) parser

　　4) _____ linking helps to create named anchors for hyperlinks to a particular parts of an HTML document.
　　　　a) Internal　　　b) External　　　c) Central　　　d) Bottom

　　5) How to open a link in a new web browser ?
　　　　a) <a href="url" target="new">
　　　　b) <a href="address" open="new">
　　　　c) <a href="url" target="blank">
　　　　d) <a href="url" open="new window">

　　6) The purpose of an _____ attribute in the frame element gives an identity to specific frame.
　　　　a) img　　　　b) name　　　　c) map　　　　d) text

P.T.O.

7) _____ is the art of combining HTML, JavaScript, DOM and CSS.

   a) HTML   b) SGML   c) XML   d) DHTML

8) Which of the following statement is correct in case of external CSS ?

   a) body { background-color; #d0e4fe; }

   b) body { background-color: #d0e4fe; }

   c) body { background-color: #d0e4fe}

   d) body (background-color: #d0e4fe;)

9) Scripting languages such as _____ provide a greater level of control over audio playback.

   a) Lingo and Action Script   b) HTML and JavaScript

   c) VB Script and JavaScript   d) DHTML and XML

10) In VBScript, real value variables are declared using _____

   a) var   b) float   c) double   d) int

B) State **true** or **false** :   **4**

   1) Comments are given in Java scripts using / / character.

   2) <td leftalign> tag is used to left-align the content inside a table cell.

   3) In image map, circular hotspot is created by using many numbers of co-ordinates.

   4) HTML is subset of SGML.

2. Write short essay type question **(any 2)** :   **14**

   A) What is use of Image map ? Explain image map with example.

   B) What is use of Internet ? Explain evaluation of internet technology.

   C) Explain packet switching in detail.

3. Write short essay type question **(any 2)** :   **14**

   A) What is use of text formatting tags ? Explain any seven text formatting tags with examples.

   B) Explain client side and server side scripting with its advantages and disadvantages.

   C) What is cross browser testing ? Explain cross browser testing technique.

4. Write short essay type question **(any 2)** : **14**

   A) Explain control an looping structure used in Java Script.

   B) Write VB Script to check given number is prime number and Armstrong number.

   C) Explain frameset and frame tags with example.

5. A) What is CSS ? Explain use of CSS. Describe all types of CSS with example. **7**

   B) Explain Java Script document object model. Explain each object with example. **7**

6. A) Explain Input tag with its all attributes and give example of each. **7**

   B) What is Array ? Explain different properties of Array with example. **7**

7. Write short note **(any 2)** : **14**

   1) Explain FTP, Telnet, Finger and Ping protocols.

   2) Explain architecture of World Wide Web and explain steps in web development.

   3) What is Event ? Explain different events in Java Script with example.

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Seat No.

B.C.A. – I (Semester – II) (CGPA Pattern) Examination, 2015
FINANCIAL ACCOUNTING WITH TALLY (New)

Day and Date : Tuesday, 21-4-2015   Max. Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Question No. **1** and Q. No. **7** are **compulsory**.
                2) Attempt **any two** questions from Q. **2, 3** and **4**.
                3) Attempt **any one** from Q. **5** and Q. **6**.
                4) **Figures** to the **right** indicate **full** marks.

1. A) Choose the correct alternative :   **7**

    1) Which voucher type is used to transfer amount from one bank to another ?
       a) Contra   b) Payment   c) Receipt   d) Post_Dated

    2) Which option is used to exit Tally ?
       a) Exit   b) Close   c) Quit   d) Shut Company

    3) Which shortcut key is used to view configure in Tally ?
       a) F10   b) F11   c) F12   d) Alt + F9

    4) Which shortcut key is pressed to create a new company in tally ?
       a) F3   b) Alt + F3   c) F12   d) Alt + F2

    5) Which shortcut key is used to enable value Added Tax ?
       a) F1   b) F5   c) F2   d) F12

    6) To create, purchase order press
       a) Alt + F4   b) Ctrl + F4   c) F4   d) None of these

    7) BOM represents
       a) Billing of Machine   b) Bill of Materials
       c) Bill of Maintenance   d) None of these

  B) State **True** or **False** :   **7**

    1) Journal voucher is selected using F7 key.

    2) Voucher can be marked as post dated in tally.

    3) In payment voucher, cash account has debit type of balance.

    4) In Tally, Alt + P short key is used for printing reports.

5) In Tally, F2 key is used to change the date.

6) Trial balance is an arithmetic check of all the entries done up to date.

7) Ledger is very important for voucher entries.

2. Attempt **any two** from the following : **14**

a) Define Voucher and explain different types of vouchers.

b) Explain the term VAT and its Advantages.

c) Explain in short how to create a new company in Tally.

3. Attempt **any two** from the following : **14**

a) Explain the opening screen of Tally.

b) Explain the Bank Reconciliation Statements.

c) What is E-TDS how to create TDS ledger ?

4. Attempt **any two** from the following : **14**

a) Write a note on Reorder Level.

b) Draw journal specimen, Ledger, Trial Balance specimen and Balance Sheet specimen.

c) Explain how to create service tax Master in Tally.

5. State Voucher for following transactions : **14**

1) Mr. Ashok starts business with Rs. 1,00,000.

2) Purchase machinery for Rs. 50,000 and furniture for Rs. 10,000.

3) Paid amount for Rent Rs. 1,000.

4) Deposit Rs. 10,000 in bank.

5) Sold goods to Mr. Rakesh for Rs. 10,000.

6) Withdraw Rs. 1,000 for office use.

7) Purchase goods for Rs. 20,000 from Mr. Ram on credit.

6. Define Accounting and explain different accounting concept. **14**

7. Answer the following : **14**

1) Introduction to service tax.

2) Explain security control, security levels.

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Seat No.

B.C.A. – I (Semester – II) Examination, 2015
DEVELOPMENT OF HUMAN SKILLS (New) (CGPA Pattern)

Day and Date : Thursday, 23-4-2015   Total Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Fill in the blanks with correct alternatives :   **8**

    1) _____ is a continuous process.
      a) Behavior   b) Value   c) Learning   d) Attitude

    2) Oral communication is also known as _____ communication.
      a) Non-verbal   b) Verbal   c) Interactive   d) One-way

    3) _____ is an important aspect of managing organization.
      a) Dictatorship   b) Leadership
      c) Secularism   d) Group behavior

    4) Which of the following is not type of reader ?
      a) Motor reader   b) Auditory reader
      c) Visual reader   d) Sensory reader

    5) _____ is a kind of communication which helps to discover the self.
      a) Value   b) Attitude
      c) Behavior   d) Self-discovery

    6) _____ is an individual capacity to perform different task in job.
      a) Attitude   b) Ability   c) Behavior   d) Tendency

    7) _____ is the part improving of your personality.
      a) Strength   b) Weakness   c) Threat   d) Opportunity

    8) Child is an _____
      a) Intelligent   b) Imitative
      c) Intimate   d) None

B) Match the following : **6**

A	B
1) Body language	a) Oral communication
2) Group discussion	b) Posture
3) Value	c) Expected behavior
4) Reinforcement	d) Truth
5) Leader	e) Ability
6) Attitude	f) Human relationship skill
	g) Way of looking at things
	h) Holding the body

2. Answer **any two** of the following questions : **14**
   a) What is meant by human skills ? Explain writing and listening skill.
   b) What is meant by group discussion ? Explain the process of group discussion.
   c) Write a note on conducting seminar.

3. Answer **any two** of the following questions : **14**
   a) Explain the concept of SWOT analysis.
   b) What is meant by values ? Explain five universal values.
   c) Write in brief on importance of presentation skills.

4. Answer **any two** of the following questions : **14**
   a) What is meant by interview ? Explain the process of conducting interview.
   b) What is meant by leader ? Explain the qualities of leadership.
   c) Write a note on learning through experience.

5. Answer the following questions : **14**
   A) What is meant by attitudes and write the functions of attitudes ?
   B) Explain the concept of basic abilities in detail.

6. Answer the following questions : **14**
   A) What is meant by seminar ? Write about the preparation of seminar and conducting seminar.
   B) Write the guidelines to make interview successful.

7. Write a short note (**any four**) : **14**
   a) Organizing conference
   b) General etiquettes
   c) Body language
   d) Extempore speech
   e) Goal setting to overcome weakness.

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| Seat |
| No. |

B.C.A. (Part – I) (Semester – II) (CGPA Pattern) Examination, 2015
BUSINESS STATISTICS (New)

Day and Date : Saturday, 25-4-2015   Max. Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

Instructions : i) Que. **1** and Que. **7** are **compulsory**.
ii) Attempt **any two** questions from Que. **2** to Que. **4**.
iii) Attempt **any one** question from Que. **5** to Que. **6**.
iv) Figures to the **right** indicate **full** marks.
v) Graph paper will be **supplied** on request.
vi) **Use** of simple or scientific calculator is **allowed**.

1. A) Select most correct alternative.   **10**

i) Drinking habit of a person is
   a) an attribute   b) a discrete variable
   c) a continuous variable   d) a variable

ii) The measure of central tendency that needs to arrange the data in ascending order of its magnitude is _____
   a) A.M.   b) Mode   c) Median   d) None of these

iii) For two independent events A and B if $P(B) = 0.5$ and $P(A \cap B) = 0.05$ then $P(A) = ?$
   a) 0.7   b) 0.3   c) 0.1   d) none of these

iv) The measure of dispersion that is free from unit in which data is expressed is
   a) Range   b) Variance   c) S.D.   d) C.V.

v) The range of Karl Pearson's coefficient of correlation is
   a) 0 to 1   b) 0 to ∞ c) –1 to +1   d) $-\infty$ to ∞

vi) Index number is also known as economic
   a) parameter   b) barometer   c) speedometer   d) thermometer

vii) Laspeyre's price index formula uses _____ as the weights.
   a) current year's quantities   b) base year's prices
   c) current year's prices   d) base year's quantities

viii) If P(B) = 0.5 and P(A/B) = 0.6, then P(A∩B) =

    a) 0.7   b) 0.3   c) 0.1   d) none of these

ix) If $\Sigma P_0 = 230$, $\Sigma P_1 = 320$ for 4 commodities then price index number is

    a) 550   b) 139.13   c) 90.23   d) 71.87

x) If S.D. of X is 3, S.D. of Y is 9 and regression coefficient of Y on X is 1.8, then the coefficient of correlation between X and Y is _____

    a) 0.3   b) 0.9   c) 0.6   d) 1

B) State **True** or **False**.   **4**

  i) Median can be obtained from histogram.

  ii) Probability of any event always lies between 0 and 1, including 0 and 1.

  iii) S.D. is the positive square-root of the variance.

  iv) If the price index number is 185 then it indicates there is a decrease in prices of commodities by 85% in the current year.

2. Attempt **any two** :

A) Define Attributes and Variables with suitable examples.   **7**

B) Find Mean, Median and Mode for the following data :

    60, 58, 55, 60, 62, 65, 62, 55, 60, 62, 64, 62, 59, 57, 58   **7**

C) Find the correlation coefficient between X and Y.

X :	1	5	3	2	1	1	7	3
Y :	6	1	0	0	1	2	1	5

    7

3. Attempt **any two** :

A) What is a central tendency ? Define arithmetic mean and median.   **7**

B) The weekly mean salary paid to all employee in a certain factory was Rs. 600. The means of weekly salary paid to the male and female employee were Rs. 620 and Rs. 520 respectively. Obtain percentage of number of male and female employee in the factory.   **7**

C) A bag contains 15 tickets marked with numbers 1 to 15. One ticket is drawn at random. Find the probability that the number on selected ticket will be

   i) a multiple of 3

  ii) divisible by 5. **7**

4. Attempt **any two** :

A) Define Range and Standard Deviation. **7**

B) Information about the daily salaries of employees in two firms A and B are stated below :

Firm	No. of employees	Mean salary	Variance
A	586	Rs. 5200	16
B	647	Rs. 7500	25

Which firm has smaller variation in salary ? **7**

C) An unbiased coin is tossed three times. Find the probability of getting

   i) three heads

  ii) at least two heads

 iii) more than one tail. **7**

5. A) Define correlation. Explain types of correlation. **7**

B) From the following data construct Laspeyre's, Paasche's and Fisher's Price index for the year 2014 from the following data. **7**

Commodity	2014		2013	
	Price	Quantity	Price	Quantity
A	40	6	20	8
B	60	5	50	10
C	20	25	20	20
D	50	15	40	15

6. A) Define regression. Explain lines of regression of X on Y and Y on X. **7**

   B) Construct histogram for the following frequency distribution and hence find modal value. **7**
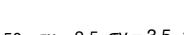
Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	4	6	10	14	12	8	5

7. Attempt **any two**.

   A) Define Probability. State addition and multiplication laws of probability. **7**

   B) Calculate Coefficient of Variation for the following data :

Class :	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
Frequency :	2	4	10	6	5	2	1

   7

   C) You are given $\overline{X} = 40$, $\overline{Y} = 50$, $\sigma x = 2.5$, $\sigma y = 3.5$, and $r = 0.8$ obtain line of regression of Y on X. Estimate Y when X = 43. **7**

   _____

Seat No.

B.C.A. (Part – I) (Semester – II) Examination, 2015
OBJECT ORIENTED PROGRAMMING WITH C++ (Old)

Day and Date : Thursday, 16-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Choose correct alternative :   **8**

   1) A group of valid C++ expressions placed within a {and} is called
      _____ statement.

      a) Control   b) Compound

      c) Simple   d) This

   2) Which of the following operator cannot be overloaded ?

      a) >>   b) ? :

      c) [ ]   d) None of these

   3) Which of the following access specifier is used in a class definition by
      default ?

      a) Protected   b) Public

      c) Private   d) None of these

   4) What is a reference ?

      a) An alias for an object   b) Used to rename an object

      c) An operator   d) None of these

   5) When a class inherit the attributes from more than two classes. This is
      known as _____

      a) Multiple inheritance   b) Hybrid inheritance

      c) Multilevel inheritance   d) Single inheritance

6) _____ is logical operator.

   a) !=   b) !

   c) >=   d) None of these

7) A C++ program execution begins from function _____

   a) main()   b) malloc()

   c) long()   d) none of these

8) What is this operator called ? : ?

   a) Conditional   b) Relational

   c) Casting operator   d) None of the mentioned

B) Fill in the blanks :   **4**

   1) If access specifier of base class is public then, all public members in base class remain _____ in derived class.

   2) _____ default constructors per class are possible.

   3) _____ are known as "do-nothing" function.

   4) A constructor is executed when _____

C) State **true** or **false** :   **4**

   1) A function can be overloaded any number of times.

   2) When a C++ program is executed the function that appears first in the program is executed first ?

   3) Using the operator overloading concept, we can change the meaning of an operator.

   4) A destructor takes an argument.

2. a) Explain control structures in C++.   **6**

    b) What is an operator ? List out the various types of operators in C++.   **6**

    c) Explain the program structure of C++ program.   **4**

3. a) What is a virtual function ? **6**

 b) What is function overloading ? Explain it with example. **6**

 c) Write a note on "in-line functions". **4**

4. a) What is inheritance ? Explain different types of inheritance. **6**

 b) What is object oriented programming ? Explain basic concepts of object oriented programming. **6**

 c) Write a note on "Nesting of Classes". **4**

5. a) Write a program to overload any binary operator. **8**

 b) Write a program to sort an integer array (int arr [5] = {3, 5, 2, 1, 4}). **8**

6. a) Explain copy constructor with suitable example. **8**

 b) Write a program to copy the contents of a text file into another file. **8**

7. Write notes on **(any four)** : **16**

 1) Dynamic memory allocation

 2) Friend function

 3) File stream classes

 4) Benefits of OOP

 5) Abstract base class.

_____

Seat No.

B.C.A. (Old) (Part – I) (Semester – II) Examination, 2015
COMPUTER SCIENCE
Web Technology

Day and Date : Saturday, 18-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Q. *1* and *7* are ***compulsory.***

2) Attempt ***any two*** questions from Q. *2* to Q. *4.*

3) Attempt ***any one*** question from Q. *5* to Q. *6.*

4) ***All*** questions carry ***equal*** marks.

1. A) Choose correct alternative :   **8**

   1) _____ is the keywords that affects the tag behavior.
      a) tab   b) attribute   c) select   d) readonly

   2) The _____ indicates a server side image map.
      a) ismap   b) map   c) server   d) servermap

   3) IIS is developed by _____
      a) Netscape   b) Adobe   c) Microsoft   d) Corel

   4) _____ tag gives additional information about a document.
      a) <embed>   b) <meta>   c) <input>   d) <applet>

   5) Detecting errors in program is known as_____
      a) alert   b) confirm   c) debug   d) error prompt

   6) _____ event take place when the focus is removed from an element or window.
      a) click   b) load   c) focus   d) blur

P.T.O.

7) In vbscript _____keyword is used to declare variable.

    a) datatype   b) var   c) vbscript   d) dim

8) The specific area within the image is called as _____

    a) Hotspot   b) area

    c) map   d) none of these

B) State whether **True** or **False** :   **4**

1) In XML we can create your own tag.

2) Hyperlink tag is used for linking the documents.

3) Prompt dialog box is used in JavaScript for display message as well as entering values.

4) In vbscript for constant declaration constant word is used.

C) Fill in the blanks :   **4**

1) A class always starts with_____

2) We embed JavaScript into HTML by using_____ tag.

3) In vbscript by default date is entered in _____format.

4) Default scrolling value in <frame> tag is _____

2. A) How you can create image as hyperlink ?   **6**

   B) Explain array in JavaScript with its properties.   **6**

   C) Write a program in vbscript to calculate area and perimeter of triangle.   **4**

3. A) Explain types ISS and ESS of CSS with example.   **6**

   B) Explain event handling in JavaScript with example.   **6**

   C) Explain dialog boxes in a vbscript.   **4**

4. A) Explain general structure of HTML document. **6**

   B) Explain validation in JavaScript with example. **6**

   C) Why there is need of option explicit ? Demonstrate with example. **4**

5. A) What is table ? Explain table tag with its attributes and example. **8**

   B) Write a JavaScript program to find out given number is Armstrong or not. **8**

6. A) What is Frameset tag ? Explain frameset tag with example. **8**

   B) Write a vbscript program to find out given number is perfect or not. **8**

7. A) Write a short notes on **(any 2)** : **16**

    a) Evaluation of internet

    b) POP and IMAP

    c) Cross browser testing

    d) 3D-Layer

    e) Logical tag.

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SLR-K – 18

B.C.A. – I (Semester – II) Examination, 2015
FINANCIAL ACCOUNTING WITH TALLY (Old)

Day and Date : Tuesday, 21-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) *Question No.* ***1*** *and No.* ***7*** *are* ***compulsory.***

2) *Attempt* ***any two*** *questions from Q.* ***2, 3*** *and* ***4.***

3) *Attempt* ***any one*** *question from Q.* ***5*** *and Q.* ***6.***

4) *Figures to* ***right*** *indicate* ***full*** *marks.*

1. A) Choose the correct alternative :   **8**

   1) The activate gateway of tally _____ shortcut key is used.

      a) Ctrl + M   b) Ctrl + P   c) Ctrl + O   d) Ctrl + g

   2) To, configure a company_____ key is used.

      a) F4   b) F2   c) F12   d) Alt + F12

   3) In tally, for receipt voucher_____ key is used.

      a) F6   b) F7   c) F8   d) F9

   4) To, print the invoice_____key is used.

      a) F3   b) Alt + F10   c) Ctrl + P   d) Alt + P

   5) In tally, to change the feature of the company_____key is used.

      a) F12   b) F4   c) F11   d) F7

   6) Tally provides a set of _____ number of predefined groups mainly based on the traditional methods of accounting system.

      a) 15   b) 28   c) 32   d) 30

P.T.O.

7) In receipts voucher, cash account has _____ type of balance.

    a) Cash   b) Journal   c) Credit   d) Debit

8) Shortcut key Alt + F1 is used for company option.

    a) Open   b) Copy   c) Shut   d) Select

B) Answer in **one** sentence :   **8**

1) Long form of TAN.

2) VAT stands for.

3) BOM stands for.

4) What is mean by voucher ?

5) Long form of E-TDS.

6) Write down the rules of real account.

7) MIS stands for.

8) LIFO stands for.

2. a) What is meant by sales order ? How can create, alter and delete sales order ? **6**

   b) Define groups and explain types of groups with example. **6**

   c) What are the features of tally ? **4**

3. a) Define accounting and explain different concept of accounting. **6**

   b) Software maintenance. **4**

   c) Explain the opening screen of tally. **6**

4. a) Draw Journal specimen, Ledger specimen, Trial Balance and Balance Sheet specimen. **6**

   b) How to create new company in Tally ? **6**

   c) Exception report. **4**

5. The following transaction to create a ledger and their group for tally.　　**16**

   1) Mr. Anil starts business with Rs. 50,000 and deposited into Bank Rs. 40,000

   2) Received interest on bank amount Rs. 500.

   3) Paid wages Rs. 2,000

   4) Paid salary Rs. 10,000

   5) Sold old furniture Rs. 4,000

   6) Sold goods to Mr. Shekar Rs. 5,000

   7) Purchase a raw material of Rs. 10,000 on credit from Mukesh.

   8) Sold old news paper Rs. 450.

6. a) Scenario management in Tally.　　**8**

   b) Define voucher and explain types of vouchers.　　**8**

7. Write a short note **(any four)** :　　**16**

   a) Budget management.

   b) Dealer excise.

   c) Units of measures.

   d) Godowns (Warehouse).

   e) Final account.

_____

SLR-K – 19

B.C.A. – I (Semester – II) Examination, 2015
DEVELOPMENT OF HUMAN SKILLS (Old)

Day and Date : Thursday 23-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Choose the correct alternative :   **8**

1) The speech is given without any preparation is _____
   a) Seminar   b) Conference
   c) Prepared speech   d) Extempore speech

2) _____ refers to the ability one can apply to knowledge of techniques.
   a) Human skills   b) Technical skills
   c) Conceptual skills   d) None of these

3) Good part of personality can be termed as _____ of the personality.
   a) Weakness   b) Semi Skill   c) Strength   d) a) and b)

4) Mr. Milton Rokeach has classified the _____
   a) Learning   b) Motivation   c) Values   d) Attitude

5) The better the person _____ can have better relationship.
   a) Read   b) Lead   b) Listen   d) Judge

6) Goal setting is essential _____
   a) To under-come weakness   b) To over-down weakness
   c) To over-come weakness   d) To out-come weakness

7) Learning involves _____
   a) Change   b) Moment   c) Nothing   d) Organization

8) The term _____ refers to coming together of a group of persons for the purpose of discussions.
   a) Interview   b) Seminar   c) Career   d) None of these

P.T.O.

B) State **true** or **false** :   **8**

1) Memory is function of vision.
2) Clarity is the characteristic of good speech.
3) Goal setting is essential to overcome skills.
4) Interview is a form of Oral Communication.
5) The word 'Reinforcement' is related to demand.
6) Muscular ability plays an important role in manual and semi-skilled job.
7) The act of reading is essentially a process of attitude.
8) Optimum stress helps to work effectively.

2. Answer the following questions :
   1) What do you mean by attitude ? Write the sources of attitude.   **6**
   2) What do you mean by interview ? Explain promotion and assessment
      interview.   **6**
   3) What do you mean by postures and gestures ?   **4**

3. Answer the following questions :
   1) What is stress ? Explain the procedure to control stress.   **6**
   2) Explain the importance of goal setting to overcome weaknesses.   **6**
   3) Write a note on conducting seminar.   **4**

4. Answer the following questions :
   1) Explain the concept of journey of self discovery in detail.   **6**
   2) Extempore speech.   **6**
   3) Benefits of emotional intelligence.   **4**

5. A) What is meant by learning ? Explain types of learning.   **8**
   B) Write the guidelines for making presentation interesting.   **8**

6. A) What do you mean by leader ? Explain types of leadership.   **8**
   B) What is leadership ? Explain different leadership skills.   **8**

7. Write short notes **(any 4)** :   **16**
   1) Team role skills
   2) Sensor skills
   3) Oral communication
   4) Five universal values
   5) Extempore skills.

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Seat No.	

B.C.A. – I (Semester – I) (New C.G.P.A Pattern) Examination, 2015
PROCEDURAL PROGRAMMING THROUGH 'C'

Day and Date : Friday, 17-04-2015   Total Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

N.B. : 1) Question **1** and question **7** are **compulsory**.

      2) Attempt **any two** questions from question **2** to question **4**.

      3) Attempt **any one** question from question **5** to question **6**.

1. a) Select **correct** alternative :   **7**

   1) _____ is invalid keyword in 'C' language.

    a) union   b) int   c) char   d) scan f

   2) The statement $++p \rightarrow q$ increment value of _____

    a) p   b) q

    c) both a and b   d) None of these

   3) By default compiler assigns _____ value for global variable.

    a) Negative   b) Non-positive

    c) Non-zero   d) Zero

   4) If structure and union contains same number of data members with same data type then _____ requires less memory.

    a) Union   b) Structure

    c) Both a and b   d) Both requires same memory

   5) String manipulation functions are available in _____ header file.

    a) array.h   b) stdio.h

    c) string.h   d) conio.h

6) Statement terminator is represented by _____

a) : b) blank

c) NULL d) ;

7) _____ function is used to close the opened file.

a) fclose() b) close()

c) exit() d) fopen()

b) Fill in the blanks **True** or **False** : **7**

1) _____ is the extension of 'C' source program.

2) _____ operators are used to manipulate data at bit level.

3) _____ is capable to store address of another variable.

4) _____ function reverses the entered string.

5) File is nothing but location on disk where information is stored.

a) True b) False

6) '%' operator cannot operates on floating type data.

a) True b) False

7) One pointer cannot holds address of another pointer.

a) True b) False

2. Attempt **any two** questions of the following : **14**

a) Write a program to check number is prime or not by using pointer.

b) Explain strcmp() & strcpy() string functions in details.

c) Explain 'if' statement with its different forms.

3. Attempt **any two** questions of the following : **14**

a) Write a program to find maximum number between array elements.

b) Explain fprintf() and fscanf() functions in details.

c) What is data type ? Explain all primitive data types in details.

4. Attempt **any two** questions of the following : **14**

   a) Explain the concept "call by value" and "call by pointer".

   b) What is file ? Explain different file opening modes in details.

   c) Write an algorithm and draw flow chart to check entered number is Armstrong or not.

5. A) What is operator ? Explain different types of operators in 'C' language. **7**

   B) Write a program to implement 'student' structure. Accept student information and pass it to myinfo() user defined function, which displays accepted information. **7**

6. A) Write a program to find addition of two matrices having order 4 by 4. **7**

   B) Explain 'Recursion' with suitable example. **7**

7. Write short note on the following (**any two**) : **14**

   1) Array of structure.

   2) Multi-way decision making statement.

   3) Dynamic memory allocation.

_____

Seat No.

B.C.A. (Part – I) (Semester – II) Examination, 2015
BUSINESS STATISTICS (Old)

Day and Date : Saturday, 25-4-2015　　　　　　　　　　　Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Q. No. **1** and Q. No. **7** are **compulsory**.
　　　　　　　 2) Attempt **any two** questions from Q. No. **2** to Q. No. **4**.
　　　　　　　 3) Attempt **any one** question from Q. No. **5** and Q. No. **6**.
　　　　　　　 4) Figures to the **right** indicates **full** marks.
　　　　　　　 5) **Graph** paper will be supplied on request.
　　　　　　　 6) **Use** of any type of calculator is **allowed**.

1. A) Choose most correct alternative.　　　　　　　　　　　　　**8**

　　1) In _____ sampling method each unit in the population has equal probability being selected in the sample.

　　　　a) SRS　　　　　　　　　　　　b) stratified

　　　　c) systematic　　　　　　　　　d) all of these

　　2) Continuous variable takes _____ number of values.

　　　　a) finite　　　　　　　　　　　 b) countable infinite

　　　　c) uncountable infinite　　　　 d) none of these

　　3) The A.M. of 30 observations is 35, if each observation is decreased by 5, then A.M. will be _____

　　　　a) 30　　　　　　b) 40　　　　　c) 35　　　　　d) 25

　　4) If c.v. of group – I = 28.5 and c.v. of group – II = 30.5, then _____

　　　　a) group – I is more consistent

　　　　b) group – II is more consistent

　　　　c) both the groups are equally consistent

　　　　d) none of these

5) If two variables are changes in same direction and in proportion, then there is _____ correlation.

   a) perfect   b) perfect+ve

   c) only+ve   d) none of these

6) If regression coefficient Y on X is – 1.5, then the correlation between X and Y is _____

   a) positive   b) negative

   c) may be +ve or –ve   d) none of these

7) If price index number is 120, its interpretation is _____

   a) price in current period is increased by 20 Rs.

   b) price in current period is increased by 20%

   c) price in base period is increased by 20%

   d) none of these

8) The probability of any event is _____

   a) always less than 1

   b) some times less than 1

   c) never less than 1

   d) none of these

B) Fill in the blanks :   **4**

   1) S.D. is absolute measure of _____

   2) The sub-set of population is called _____

   3) If $P(A) = 0.6$, then $P(\overline{A}) =$ _____

   4) The difference between upper and lower limit of a class is called _____ of that class.

C) State whether following statements are **true** or **false** :   **4**

   1) Classification condenses the size of raw data.

   2) Selection of base period is one of the problem in construction of index number.

   3) The probability of impossible event is one.

   4) Range is simplest measure of dispersion.

2. A) Define classification and state its objectives. **6**

   B) Find A.M. for the data given below : **5**

X	5	6	7	8	9
f	3	7	11	8	4

   C) A box contains 25 tickets having numbers 1 to 25. A ticket is drawn at random. Find probability of getting a ticket with number divisible by 3. **5**

3. A) Define A.M. and state its merits and demerits. **6**

   B) Find S.D. for the observations 22, 31, 26, 16, 35, 41, 53. **5**

   C) Find price index number for 2004 by

   i) simple aggregate method

   ii) simple average of relatives.

Commodity	A	B	C
Price in 2004	40	70	35
Price in 2003	25	60	40

   5

4. A) Explain simple random sampling methods. **6**

   B) The mean weight 50 students in B.A. – I is 60.5 kg. and that of 75 students in B.A. – II is 67 kg. Find combined mean weight of all students. **5**

   C) Given :

   $n = 10, \sum X = 134, \sum Y = 144, \sum X^2 = 2027, \sum Y^2 = 2517, \sum XY = 1622$.

   Find correlation coefficient between X and Y. **5**

5. A) Define :

   i) mutually exclusive events

   ii) equally likely events

   iii) impossible events

   iv) certain event. **8**

B) From the data given below find Laspeyre's, Paasche's and Fisher's price index number for the year 1997. **8**

Commodity	Year 1997		Year 1996	
	Price	**Quantity**	**Price**	**Quantity**
A	10	3	8	2
B	7	5	10	7
C	14	2	12	2

6. A) Define regression coefficients and state its properties. **8**

   B) Represent the following data by histogram and hence obtain mode. **8**

Class	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120
Frequency	20	33	50	46	27

7. Attempt **any four** : **16**

   a) Interpret : r = +1, –1, 0.

   b) Write a note on lines of regression.

   c) If $\overline{X} = 27$, $\overline{Y} = 36$, $b_{yx} = -1.5$, $b_{xy} = -0.2$ obtain equation of line of regression Y on X and estimate Y for X = 30.

   d) If P(A) = 0.4, P(B) = 0.7, $P(A \cap B) = 0.3$ find $P(A \cup B)$.

   e) If n = 10, $\sum X = 89$, $\sum X^2 = 1214$ find c.v.

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**Seat
No.**

B.C.A. – II (Semester – III) Examination, 2015
DATA STRUCTURE USING 'C'

Day and Date : Wednesday, 15-04-2015   Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

Instructions :   1) Q. **1** and Q. **7** are **compulsory**.

2) Attempt **any two** questions from Q. No. **2, 3** and **4**.

3) Attempt **any one** question from Q. No. **5,** and **6**.

4) Figures to the **right** indicate **full** marks.

1. Choose the single **correct** alternative.   **16**

1) Which of the following data structure is not linear data structure ?
   a) Array   b) Linked List
   c) Both a) and b)   d) None of these

2) _____ is a step by step procedure for calculation.
   a) Data Structure   b) Abstract Data Type
   c) Primitive Data type   d) Algorithm

3) The correct array initialization statement (s) is/ are _____
   a) int A [3] = {1, 2, 3} ;   b) int A [3] = {123} ;
   c) int A [3] = "123"   d) All the above

4) <operand> <operator> <operand> is known as infix expression.
   a) True   b) False

5) The condition top = –1 indicates that
   a) Stack is empty   b) Stack is full
   c) Stack has only one element   d) None of these

6) The prefix expression for the infix expression : A*B + C*D
   a) *+ AB*CD   b) +*AB*CD
   c) **+ ABCD   d) +** ABCD

P.T.O.

7) In linked lists there are no NULL links in _____
   a) Singly linked list
   b) Doubly linked list
   c) Circular linked list
   d) None of these

8) Linked list is a collection of nodes.
   a) True
   b) False

9) A binary tree whose every node has either zero or two children is called _____
   a) Complete binary tree
   b) Binary Search tree
   c) Extended binary tree
   d) None of the above

10) To represent hierarchical relationship between elements, which data structure is suitable ?
   a) Deque
   b) Priority
   c) Tree
   d) All of the above

11) Following is not a type of sorting
   a) Simple sort
   b) Bubble sort
   c) Insertion sort
   d) Quick sort

12) A postfix expression is merely the reverse of the prefix expression
   a) True
   b) False

13) Representation of data structure in memory is known as
   a) Recursive
   b) Abstract Data Type
   c) Storage Structure
   d) File Structure

14) The data structure required to evaluate a postfix expression is _____
   a) Queue
   b) Array
   c) Linked list
   d) Stack

15) Which of the following data structure may give overflow error, even though the current number of element in it is less than its size ?
   a) Simple queue
   b) Priority queue
   c) Circular queue
   d) None of these

16) In doubly linked list, there are 3 parts.
   a) True
   b) False

2. A) What is ADT ? Explain stack as an ADT. **6**

   B) What is an array ? Which operations can be performed on array ? Explain with example. **6**

   C) Explain Deque with example. **4**

3. A) Convert the following infix expression to prefix expression : **6**
   12/3 * 6 + 6 – 6 + 8/2

   B) Explain operations of doubly linked list with algorithm. **6**

   C) Explain data structure. **4**

4. Write short notes on the following :
   1) Selection sort **4**
   2) Stack **4**
   3) Data structure **4**
   4) AVL tree. **4**

5. A) What is sorting ? List out different sorting methods and explain any one of them with suitable example. **8**

   B) Explain implementation of stack using linked list. **8**

6. A) Explain different tree traversal methods. **8**

   B) Write a program in C, to accept any 10 elements, store in an array and sort them in ascending order by using bubble sort. **8**

7. A) What is Queue ? Explain different types of queue. **8**

   B) What is binary tree ? List out types of binary tree and explain any one of them with suitable example. **8**

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Seat No.

B.C.A. – II (Semester– III) Examination, 2015
COMPUTER SCIENCE
Networking and Data Communication

Day and Date : Friday, 17-4-2015
Time : 3.00 p.m. to 6.00 p.m.

Total Marks : 80

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** to Q.**6**.

1. a) Choose the **correct** alternative : **8**

   1) To which TCP/IP architecture layer do TCP and UDP belong ?

      a) Application   b) Internet

      c) Network interface   d) Transport

   2) A network address prefixed by 1000 is _____

      a) Class A   b) Class B

      c) Class C   d) Class D

   3) UDP is _____

      a) Connectionless   b) Message oriented

      c) Connection-oriented   d) Both (a) and (b)

   4) Protocol used to monitor and control network devices operates at _____

      a) Application layer   b) Transport layer

      c) Network layer   d) Data link layer

   5) ATM is an example of _____

      a) Ring topology   b) Star topology

      c) Bus topology   d) Mesh topology

6) _____ standard provides for a collision-tree protocol.

    a) 802.2   b) 802.3

    c) 802.5   d) 802.6

7) _____ uses the greatest number of layers in OSI model.

    a) Bridge   b) Repeater

    c) Router   d) Gateway

8) Network address prefixed by 1110 is a _____

    a) Class A   b) Class B

    c) Multicast address   d) Reserve address

b) Fill in the blanks :   **4**

    1) _____ primitive is used by an entity to indicate the completion of the service as requested by another entity.

    2) _____ network provides a dedicated link.

    3) A network uses _____ topology if all computers attach to a central point.

    4) In IP addressing scheme, class used for multicasting is _____

c) State **True/False** :   **4**

    1) In cyclic redundancy checking remainder is CRC.

    2) Transport layer is responsible for process to process delivery.

    3) Communication between two computers is always serial.

    4) Four number of layers are in TCP/IP model.

2. a) What is switching ? Explain circuit switching and packet switching.   **6**

   b) What do you mean by computer network ? Explain the types of it.   **6**

   c) Explain the types of errors.   **4**

3. a) What is algorithm ? Explain shortest path routing with example. **6**

   b) Explain congestion control in virtual circuit subnet. **6**

   c) Explain the concept of service primitives. **4**

4. a) Explain FDMA and TDMA. **6**

   b) Discuss an elements of transport protocol. **6**

   c) Define the following : **4**

      1) Bandwidth

      2) Multiplexing.

5. a) Explain CSMA and CSMA/CD protocols in detail. **8**

   b) Discuss unguided transmission media in detail. **8**

6. a) Explain OSI model vs TCP/IP model. **8**

   b) Explain link state routing with example. **8**

7. Write a short note on **(any four)** : **16**

      1) DNS

      2) CRC

      3) MAN

      4) Applications of internet

      5) Wavelength Division Multiplexing.

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SLR-K – 23

Seat No.	

B.C.A. – II (Semester – III) Examination, 2015
COMPUTER SCIENCE
Database Management System

Day and Date : Monday, 20-4-2015   Total Marks : 80
Time : 3.00 p.m.to 6.00 p.m.

Instructions :   1) Q. No. **1** and Q. No. **7** are **compulsory.**
                     2) Attempt **any two** questions from Q. **2** to **4**.
                     3) Attempt **any one** question from Q. **5** to **6**.
                     4) **All** questions carry **equal** marks.

1. Choose the **correct** alternatives :   **16**

   1) In an architecture of database system, external level is _____
      a) Physical Level   b) Logical Level
      c) Conceptual Level   d) View Level

   2) Generalization is _____ process.
      a) Top-down   b) Bottom-Up
      c) Both a and b   d) None of these

   3) The schema of a table is an example of _____
      a) Relationship   b) Entity
      c) Metadata   d) Object

   4) Which of the following is database Administrator's Function ?
      a) Performance Monitoring   b) Schema definition
      c) Deciding access strategy   d) All of these

   5) Attributes refers to _____
      a) The Properties of entity
      b) The Names of an entity
      c) Both a and b
      d) None of these

P.T.O.

6) Which of the following is not a property of transaction ?
   a) Atomicity
   b) Concurrency
   c) Isolation
   d) Durability

7) Union operator is _____
   a) Unary operator
   b) Binary operator
   c) Ternary operator
   d) None of these

8) Relationships among relationships can be represented in an E-R model using _____
   a) Aggregation
   b) Association
   c) Weak entity sets
   d) None of these

9) _____ attribute has more than one value for a particular entity.
   a) Multiple
   b) Multicast
   c) Multivalued
   d) Multi

10) Which of the following is Database user ?
    a) Application Programmers
    b) Sophisticated users
    c) DBA
    d) All of the above

11) In relational Algebra _____ operation is used to combine information from two or more tables.
    a) Select
    b) Project
    c) Assignment
    d) Join

12) The entity relationship model comes under _____
    a) Object based data model
    b) Record based data model
    c) Physical data model
    d) All of the above

13) A tuple refers to a row in a relation.
    a) True
    b) False

14) A phase during which all locks are requested is known as _____
    a) Growing phase
    b) Shrinking phase
    c) Aborted phase
    d) None of the above

15) The initial state of transaction is known as committed state.
    a) True   b) False

16) _____ key is used to identify each row uniquely.
    a) Foreign   b) Primary
    c) Both a and b   d) None of these

2. a) Explain two tier and three tier architecture.   **6**

   b) Explain the advantages of DBMS.   **6**

   c) Write note on Normalization.   **4**

3. a) What is functional dependency ? Explain in detail.   **6**

   b) What is Indexing ? Explain the methods of indexing.   **6**

   c) Write note on deadlock.   **4**

4. a) Explain log base recovery.   **6**

   b) Explain E-R diagram with suitable example.   **6**

   c) Write note on cardinality.   **4**

5. a) What is data model ? Explain record based data model.   **8**

   b) Explain following relational algebra operators.   **8**
     i) Natural join   ii) Outer join   iii) Set difference

6. a) Explain different components of DBMS.   **8**

   b) What is Transaction ? Explain three problems of concurrency control.   **8**

7. Write short notes on (**any four**) :   **16**

   i) Data Abstraction.

   ii) Stored and derived attribute.

   iii) Weak and strong entity sets.

   iv) Aggregation.

   v) File organization.

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Seat
No.

B.C.A. (Part – II) (Semester – III) Examination, 2015
CORE JAVA

Day and Date : Wednesday, 22-04-2015   Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

Instructions. : 1) Question No. **1** and **7** are **compulsory**.
2) Attempt **any two** questions from Question No. **2, 3** and **4.**
3) Attempt **any one** question from Question No. **5** and **6.**
4) Figures to the **right** indicate **full** marks.

1. A) Choose the single **correct** alternative :   **8**

   1) Which of these is an incorrect array declaration ?
      a) int arr[] = new int[5]   b) int [] arr = new int[5]
      c) int arr[]arr = new int   d) int arr[] = int[5] new

   2) Modulus operator, % can be applied to which of these ?
      a) Integers
      b) Floating – point numbers
      c) Both integers and floating – point numbers
      d) None of the mentioned

   3) What is the return type of Constructors ?
      a) int   b) float
      c) void   d) none of the mentioned

   4) Which of the following is a method having same name as that of its class ?
      a) finalize   b) delete
      c) class   d) constructor

5) Which of these selection statements test only for equality ?

   a) if   b) switch

   c) if and switch   d) none of the mentioned

6) Which of these operators is used to allocate memory to array variable in Java ?

   a) malloc   b) alloc

   c) new   d) new malloc

7) Which of these keywords is not a part of exception handling ?

   a) try   b) finally

   c) thrown   d) catch

8) Which of these keywords is used to refer to member of base class from a sub class ?

   a) upper   b) super

   c) this   d) none of the mentioned

B) Fill in the blanks :   **8**

   1) Another term for _____ is data hiding.

   2) The term _____ refers to a way of organizing classes that share properties.

   3) In Java, a library of classes is called _____

   4) Every variable in Java must be _____ before it is used.

   5) _____ keyword is used by method to refer to the object that invoked it.

   6) The value of 42% 10 is _____

   7) Using _____ variable names helps make a program self-documenting.

   8) The Boolean type has only _____ values.

2. a) What is Java ? Explain JDK environment and tools used in Java. **6**

   b) Explain looping statements in Java with suitable example. **6**

   c) Write a note on operators in Java. **4**

3. a) What is Arrays ? Explain array in Java with suitable example. **6**

   b) What is constructor ? Explain types of constructor in Java with suitable
   example. **6**

   c) Write a note on this keyword. **4**

4. a) What is inheritance ? Explain types of inheritance in Java with suitable
   example. **6**

   b) Explain try catch block with suitable example. **6**

   c) Write a program to input any two numbers and swap this numbers. **4**

5. a) Write an OOP program to input any number and find it is perfect or not. **6**

   b) Explain Frame, Panel, Button in Java with suitable example. **6**

   c) Write a note on File reader and writer in Java. **4**

6. a) Write a program to display following pattern using nested loops. **8**

```
        1
      1   2
    1   2   3
  1   2   3   4
1   2   3   4   5
```

   b) Write an OOP Array program to accept values of 3 by 3 two matrices and print
   addition, substraction and multiplication. **8**

7. Write short notes on the following : **16**

   a) Comments in Java programming.

   b) Abstract classes in Java.

   c) Listeners in Java.

   d) Method overriding.

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Seat
No.

B.C.A. – II (Sem. – III) Examination, 2015
FINANCIAL MANAGEMENT

Day and Date : Friday, 24-4-2015   Max. Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

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**.

1. A) State **true** or **false** :   **8**

    1) Financial Management is related with acquisition, financing and management of assets with some overall goals in mind.

    2) Working capital management is concerned with management of the current liabilities.

    3) Leverage affects EBIT and Earning per share.

    4) A business requires either fixed capital or working capital.

    5) The formula for computation of operating leverage = contribution/operating profit.

    6) Trading on equity means issue of equity shares to maximise earning per equity shares.

    7) Operating cycle starts with cash and end with profit.

    8) Working Capital is considered to be the life blood of business.

   B) Select correct alternative :   **8**

    1) The appropriate objective of financial decisions of an enterprise is _____
       A) Maximisation of Sales   B) Maximisation of Profit
       C) Maximisation of Wealth   D) None of these

    2) Financial decisions involve _____
       A) Investment, Financial and Dividend decisions
       B) Sales decisions
       C) Profit decisions
       D) None of these

3) Excess of current assets over current liabilities is termed as _____
   A) Fixed Assets
   B) Total Liabilities
   C) Current Assets
   D) Working capital

4) Market Value of Shares = EPS × _____
   A) EBIT
   B) EBT
   C) Price Earning Ratio
   D) Contribution

5) Traditional approach of financial management dealt with _____
   A) Corporate enterprise
   B) Episodic events
   C) Working capital management
   D) Only (A) and (B) above

6) 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

7) Temporary working capital also known as _____
   A) Variable working capital
   B) Gross working capital
   C) Net working capital
   D) Fixed working capital

8) When a corporation is earning an extraordinarily large return on its outstanding stocks it is said to be _____
   A) Working Capital Management
   B) Over Capitalised
   C) Under Capitalised
   D) All above

2. Write short notes (**any two**) :   **16**
   1) Types of Financial Plan
   2) Theories of capitalization
   3) Combined leverage.

3. Write short notes (**any two**) :   **16**
   1) Concept of under capitalization
   2) Merits and demerits of wealth maximization
   3) Steps of financial plan.

4. Calculate the average amount of working capital of Narrow Product Ltd. from following : **16**

Lag in Payments		Figures for the year Rs.
A) Wages – 1.5 weeks		5,20,000
Stores and Material –	1.5 Months	96,000
Office Staff	– 0.5 Month	1,24,800
Rent	– 6 Months	20,000
Other Expenses	– 1.5 Months	96,000
Manager Salary	– 0.5	9,600
B) Average amount locked up in stock		
Finished goods		10,000
Stock of Stores		16,000
C) Pre-payments		
Expenses paid quarterly in advance		16,000
D) Period of average credit given		
Domestic sales – 6 weeks		6,24,000
Foreign sales – 1.5 weeks		1,56,000

Add : 10% for contingencies.

5. Define Finance. Explain functions of Financial Manager. **16**

6. Define Working Capital Management. Explain types and determinants of working capital. **16**

7. Define Financial Management. Explain the significance of financial management and objectives of profit maximisation and wealth maximisation. **16**

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Seat No.

B.C.A. – II (Semester– IV) Examination, 2015
COMPUTER SCIENCE
Software Engineering

Day and Date : Thursday, 16-4-2015　　　　　　　　Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

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

1. A) Choose the **correct** alternatives :　　　　　　　　　　　　　**8**

　　1) _____ is objective for which the system is designed.

　　　　a) Process　　　　　　　　b) Input

　　　　c) Output　　　　　　　　d) None of these

　　2) _____ system are concerned with theoretical structures, which may or may not have any counter part in the real world.

　　　　a) Abstract　　　　　　　　b) Physical

　　　　c) Open　　　　　　　　　d) Closed

　　3) In detailed feasibility study, first an expert committee called _____ is appointed.

　　　　a) Feasibility committee

　　　　b) Management committee

　　　　c) Risk reduction committee

　　　　d) Steering committee

　　4) A _____ can be considered as a structured interview.

　　　　a) Observation　　　　　　　b) Record review

　　　　c) Questionnaires　　　　　　d) None of these

P.T.O.

5) _____ emphasizes on function of system rather than structure.

   a) VTOC   b) HIPO

   c) IPO   d) None of these

6) The _____ mainly depends on the module structure of software and the interaction among modules.

   a) Decision table   b) Structure chart

   c) System flowchart   d) None of these

7) _____ checks are used to ensure the validity of results by performing arithmetic operations in different ways.

   a) Limit checks   b) Picture checks

   c) Cross checks   d) Arithmetic checks

8) White Box Testing is also called _____

   a) Glass-Box Testing   b) Green-Box Testing

   c) Functional Testing   d) Black-Box Testing

B) **True** or **False** :   **8**

   1) Waterfall model is rigid and monolithic.

   2) Limit check are applied to detect any missing transaction.

   3) 1NF can not be achieved unless data is in the 2NF achieved.

   4) A relationship is represented by diamond box.

   5) ROI stands for Return On Investment.

   6) The programmer works within the framework provided by user.

   7) The spiral model uses prototyping as a risk reduction mechanism.

   8) Software is portable if it can work in different environments.

2. A) Explain system with its elements. **6**

   B) Explain "Feasibility study" in detail. **6**

   C) Explain system evaluation. **4**

3. A) Explain Requirement Investigation Process. **6**

   B) Explain flow chart with its types. **6**

   C) Explain rules of Entity Relation Diagram. **4**

4. A) What is Normalization ? Why it is necessary ? **6**

   B) Explain spiral model in detail. **6**

   C) Explain Structured English. **4**

5. A) Explain System Development Life Cycle. **8**

   B) Draw Entity Relation diagram for library system. **8**

6. A) Explain good software qualities. **8**

   B) Draw zero level data flow diagram for pay roll system. **8**

7. Write short note on : **16**

   A) Interview

   B) Decision table

   C) Requirement specification

   D) Testing principles.

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Seat No.

B.C.A. – II (Semester – IV) Examination, 2015
RDBMS WITH ORACLE

Day and Date : Saturday, 18-4-2015   Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

N.B. : 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** to Q. **6**.
         4) **All** questions carry **equal** marks.

1. A) Choose the **correct** alternatives.   **8**

    1) Which of the following statements regarding primary key is false ?
      a) Primary key can have null values
      b) Primary key may contain duplicate values
      c) Primary key can not be applied for multiple columns
      d) All of the above

    2) Which of the following SQL operations demands the use of wild cards comparisons ?
      a) IN   b) BETWEEN
      c) EXISTS   d) LIKE

    3) Which of the following is not an oracle supported trigger ?
      a) BEFORE   b) DURING
      c) AFTER   d) INSTEAD OF

    4) Which statements are used to UNLOCK the users ?
      a) Alter user scott account lock
      b) Modified user scott account unlock
      c) Alter user scott account unlock
      d) Alter user scott unlock

5) A _____ is a structure that contains definitions, blocks of PL / SQL code, or both in a single unit.
   a) Package body
   b) Package
   c) Procedure
   d) Both a and b

6) The statement in SQL which allows to change the definition of table is
   a) Alter
   b) Update
   c) Create
   d) Select

7) Key to represent relationship between table is called
   a) Primary key
   b) Secondary key
   c) Foreign key
   d) None of these

8) Which of the following is a comparison operator in SQL ?
   a) =
   b) LIKE
   c) BETWEEN
   d) All of the above

B) Fill in the blanks :   **8**

1) The RDBMS terminology for a row is _____

2) _____ functions operate against a group of values but returns only one value.

3) In PL / SQL, the package specification contains _____ declarations.

4) In _____ the cursor advances to the next row in the active set each time the fetch command is executed.

5) _____ cursors are declared and used by the user to process multiple row, returned by select statement.

6) _____ is a virtual table which is defined as a stored procedure based on one or more tables.

7) _____ value is neither zero nor it is a blank space.

8) _____ enforce integrity of the database.

2. a) What is RDBMS ? What are the differences between DBMS and RDBMS ?   **6**

   b) Explain integrity constraints in oracle.   **6**

   c) Write a note on group by clause.   **4**

3. a) Explain the date function with suitable example. **6**

   b) Explain self join and equi join with suitable example. **6**

   c) Why we need a view ? **4**

4. a) What is an Index ? Why to use an Index ? **6**

   b) Explain the features of PL / SQL. **6**

   c) Write a note on synonyms. **4**

5. a) Write a PL / SQL block to check number is palindrome or not. **8**

   b) Write a PL / SQL block to find grade of the student from percentage. **8**

6. a) Consider the following table and solve the following queries : **8**

   empdetail (eno, ename, eaddr, edname, emgr, edoj, esal).

     1) Sort the employee list according to joining date

     2) Increase 8% salary whose joining date is before 2014.

     3) List the department name, number of employees in each department.

     4) Revise the salary of all salesman by 10%.

   b) What is Cursor ? Explain types of cursor with suitable example. **8**

7. Write short notes on the following : **16**

   a) Exception handling

   b) Nesting queries

   c) Operators in SQL

   d) Triggers.

_____

Seat No.

B.C.A. – II (Semester – IV) Examination, 2015
COMPUTER SCIENCE
Operating System

Day and Date : Tuesday, 21-04-2015 Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

Instructions : 1) Q. No. **1** and Q. No. **7** are **compulsory**.

2) Attempt **any two** questions from Q. No. **2** to Q. No. **4**.

3) Attempt **any one** question between Q. No. **5** and Q. No. **6**.

4) **All** questions carry **equal** marks.

1. Choose the single **correct** alternative. **16**
   1) Multi programming systems are _____
      a) Easier to develop than single programming system
      b) Executes each job faster
      c) Executes more jobs in the same time
      d) Used only one large mainframe computers

   2) Compaction is solution for
      a) External fragmentation   b) Starvation
      c) Deadlock   d) Internal fragmentation

   3) Scheduling is
      a) Allowing job to use processor
      b) Unrelated to performance considerations
      c) Quite simple to implement
      d) The same regardless of the purpose of the system

   4) Process is called as passive entity
      a) True   b) False

   5) The mechanism that brings page into memory only when it is needed is called
      _____
      a) Segmentation   b) Fragmentation
      c) Demand paging   d) Page replacement

P.T.O.

6) The priority scheduling algorithm suffers by _____
   a) Starvation   b) Aging   c) Deadlock   d) None

7) The compile time address binding is also known as absolute binding.
   a) True   b) False

8) The _____ is used for mapping logical address to physical address in MMU.
   a) Stack Register   b) Base Register
   c) Relocation Register   d) None

9) _____ conditions are necessary to hold in system for occur deadlock.
   a) One   b) Two   c) Three   d) Four

10) File is sometimes called as
    a) Collection of data   b) Collection of different programms
    c) Temporary place to store data d) None

11) The CPU schedular is frequently executed for scheduling the processes
    a) True   b) False

12) Fork is
    a) The creation of new application
    b) The dispatching of a task
    c) Increasing the priority of task
    d) The creation of new process

13) The wait for graph contains processes and resources with edges
    a) True   b) False

14) The critical section is program segment
    a) Runs specified amount of time
    b) Which avoids deadlocks
    c) Where shared resources are accessed
    d) All process are executes simultaneously

15) The semaphore is synchronization tool used for handling deadlock problem
    a) True   b) False

16) The Bankers algorithm is used for deadlock avoidance
    a) True   b) False

2. a) What is operating system ? Explain any two types of operating system. **6**

   b) Explain the deadlock recovery technique. **6**

   c) Discuss the different operations performed on file. **4**

3. a) Explain the memory allocation techniques used in system. **6**

   b) Describe the services provided by operating system. **6**

   c) Explain working of FCFs scheduling algorithm with example. **4**

4. a) Write critical section problem in detail. **6**

   b) What is deadlock ? Write all necessary conditions to occurs deadlock in system. **6**

   c) Define system call. Write the all process management related system call in detail. **4**

5. a) Write any two page replacement algorithm with example. **8**

   b) What is process ? Explain process state transition diagram. **8**

6. a) Explain different file access methods in detail. **8**

   b) What is mean by scheduling ? Write the scheduling criteria considered for scheduling process. **8**

7. Write short notes on the following (**any 4**) : **16**

   a) Virtual memory

   b) Thread

   c) Wait for graph

   d) Wait () and signal ()

   e) Monolithic system.

_____

Seat No.

B.C.A. – II (Semester – IV) Examination, 2015
COMPUTER SCIENCE
Web Technology – II

Day and Date: Thursday, 23-4-2015　　　　　　　　　　　Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

N.B. :　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**.
　　　　4) Figures to the **right** indicate **full** marks.

1. Choose the **correct** alternative :　　　　　　　　　　　　　　**16**

　　1) PHP stands for _____

　　　　a) Hypertext Processor　　　　b) Hypertext Preprocessor

　　　　c) Hypermarkup Processor　　　d) Hypermarkup Preprocessor

　　2) In PHP, variable needs to be declare before assign.

　　　　a) True　　　　　　　　　　　b) False

　　3) PHP is a _____ scripting language.

　　　　a) Server-side　　　　　　　　b) Client-side

　　　　c) Both a & b　　　　　　　　d) Middle-side

　　4) Which of the following is not true ?

　　　　a) PHP can be used to develop web applications

　　　　b) PHP makes a website dynamic

　　　　c) PHP cannot be embedded into html

　　　　d) PHP applications cannot be compiled

　　5) Which of the following function returns the number of characters in string variable ?

　　　　a) count ($ variable)　　　　　b) len ($ variable)

　　　　c) strcount ($ variable)　　　　d) strlen ($ variable)

6) The function setcookie ( ) is used to _____

    a) Store data in cookie variable

    b) Declare cookie variable

    c) Enable or disable cookie support

    d) All of the above

7) In PHP string data are _____

    a) Delimited by single quote

    b) Delimited by double quote

    c) Delimited by < < < identifier

    d) All of the above

8) Which of the following function return 1 when output is successful ?

    a) echo ( )   b) print ( )

    c) both a & b   d) None of these

9) _____ method is suitable when you need to send larger form submissions.

    a) Get   b) Post

    c) Both a & b   d) None of these

10) Which of the following will combine string $S1 and $S2 into a single string ?

    a) $S1.$S2   b) $S1 + $S2

    c) $S1, $S2   d) All of these

11) fgets ( ) is used to read a file one line at a time.

    a) True   b) False

12) Which is the correct way to create a function in PHP ?

    a) Create myfunction ( )   b) New-function myfunction ( )

    c) Function myfunction ( )   d) None of these

13) In PHP, the die ( ) and exit ( ) functions do the exact same thing.

    a) True   b) False

14) In PHP, class members are by default _____

    a) Private   b) Public

    c) Protected   d) Static

15) _____ function count elements in an array.
    a) Count – Array   b) Array – Count
    c) Count   d) All of these

16) How do you write "Hello World" in PHP ?
    a) Document. Write ("Hello World");
    b) echo "Hello World";
    c) display "Hello World";
    d) "Hello World" ;

2. a) Explain the history of PHP.   **6**
   b) What are the differences between Get and Post methods ?   **6**
   c) Write note on switch statement.   **4**

3. a) Explain regular expression with suitable example.   **6**
   b) Explain different types of errors in PHP.   **6**
   c) Write note on Sorting Arrays.   **4**

4. a) Explain the use of session variable in state management with example.   **6**
   b) Explain the concept of constructors and destructors.   **6**
   c) Write note on hidden fields.   **4**

5. a) What is data validation ? Explain client-side validations with example.   **8**
   b) Explain following functions with syntax, purpose and example.   **8**
     i) mysql – connect ( )
     ii) mysql – query ( )
     iii) mysql – close ( )

6. a) Explain different file handling functions with example.   **8**
   b) Write a program to implement different types of inheritance.   **8**

7. Write short notes on **(any four)** :   **16**
   i) Super global array
   ii) User defined function
   iii) Creating session cookie
   iv) Interface
   v) MySQL Architecture.

_____

Seat No.

B.C.A. – I (Semester – I) Examination, 2015
FUNDAMENTALS OF FINANCIAL ACCOUNTING
(New CGPA Pattern)

Day and Date : Monday, 20-04-2015   Total Marks : 70
Time : 11.00 a.m. to 2.00 p.m.

Instructions :   1) Q. **1** and Q. **7** are **compulsory**.

             2) Attempt **any 2** from Q. **2**, Q. **3** and Q. **4**.

             3) Attempt **any 1** from Q. **5** and Q. **6**.

             4) Figures to the **right** indicate **full** marks.

             5) **Use** of calculator is **allowed**.

1. A) Select **correct** alternative and rewrite sentences :   **7**

    1) Fixed assets are valued at cost less _____

      a) Sales price   b) Expenses
      c) Depreciation   d) Repairs

    2) Trading A/c shows _____

      a) Asset   b) Net profit
      c) Liability   d) Gross profit/loss

    3) Only those transactions which can be expressed in _____ terms are recorded in accounting book.

      a) Monetary   b) Credit
      c) Expenditure   d) None of the above

    4) The journal is called a book of _____ entry.

      a) Original   b) Ledger
      c) Real   d) Profit

    5) Transferring an entry from the Journal to the ledger is called _____

      a) Journal posting   b) Ledger posting
      c) Transaction   d) Entry

P.T.O.

6) The Capital Account always shows a _____ balance.
   a) Debit   b) Credit
   c) Negative   d) None of the above

7) LIFO stands for _____
   a) First In First Out   b) Last In Last Out
   c) Last In First Out   d) First In Last Out

B) Fill in the blanks :   **7**
   1) In _____ method of depreciation amount of depreciation in constant.
   2) Rule of Nominal A/c is debit all expenses and losses, credit _____
   3) Sales subsidiary books records _____ sales of goods.
   4) The statement containing list of ledger balance as a particulars date known as _____
   5) Furniture A/c is _____ type of A/c
   6) Prepaid expenses is appear on _____ side of balance sheet.
   7) Purchase return goods are recorded in _____ book.

2. Write short notes : (**any two**)   **14**
   a) Bank Reconciliation Statement.
   b) Concept of Accounting.
   c) Types of subsidiary books.

3. Journalise the following transactions in the books of Mr. Satej Trading Co.   **14**
   2013
   Iˢᵗ May -   Mr. Satej started business with cash of Rs. 5,00,000/-,
               Machinery Rs. 2,00,000/-, Building of Rs. 1,00,000/- and Furniture
               of Rs. 50,000.
   4ᵗʰ May -   He sold goods of Rs. 70,000/- with 10% cash discount.
   7ᵗʰ May -   Commission received Rs. 1,000.
   28ᵗʰ May -   Provide depreciation on building @ 10%.
   29ᵗʰ May -   Cash deposited in to bank of Rs. 10,000/-.
   30ᵗʰ May -   Telephone bill paid of Rs. 5,000/-.
   31ˢᵗ May -   Sold goods to Ajay of Rs. 70,000/-.

4. a) Write short note on (**any one**) :   **7**
      1) Types of Accounting.
      2) Merits and Demerits of Reducing Balance Method.

b) Following is record of receipt and issue of certain factory during a week. **7**

1) Opening stock is of 100 tons at Rs. 110 per ton.

2) Issued 60 tons

3) Received 80 tons @ Rs. 100 per ton.

4) Issued 30 tons.

5) Received 80 tons @ Rs. 90 per ton.

6) Issued 50 tons.

7) Received 62 tons @ Rs. 80 per ton.

Prepare store Ledger A/c using LIFO method.

5. a) Define 'Accounting'. Explain Internal and external uses of Accounting. **7**

   b) Explain the needs and importance of depreciation. **7**

6. Pooja Homes Limited purchased a machinery of Rs. 50,000/-. On 1st April, 2010. Another machinery was purchased on 1st April 2011 for Rs. 40,000/-. Company decided to charge depreciation at 10% p.a. Under fixed installment method on

   31st March every year. **14**

   Prepare Machinery A/c and Depreciation A/c for 3 years. (working note must be part of your answer).

7. Following is Trial Balance of Mr. Prathamesh for the year ended 31st March 2011. Prepare his Trading A/c, Profit and Loss A/c for the year ended 31st March 2011 and Balance Sheet on that date. **14**

Trial Balance for the year ended 31st March, 2011

Particulars	Dr. (Rs.)	Cr. (Rs.)
Stock on 1-4-2010	3,500	-
Drawings	1,200	.-
Purchases	11,000	-
Return Inward	800	-
Investment	4,000	-
Carriage Inward	470	-
Import Duty	250	-
Wages	3,240	-
Power charges	480	-

Particulars	Dr. (Rs.)	Cr. (Rs.)
Salaries	4,130	-
Printing and Stationary	510	-
Postage	20	-
Plant and Machinery	21,500	-
Furniture	2,800	-
Cash at Bank	350	-
Land and Building	12,600	-
Cash in hand	70	-
Capital	-	35,000
Sales	-	27,000
Return outward	-	500
Discount received	-	320
Interest received	-	400
Creditors	-	3,700
Total	**66,920**	**66,920**

Adjustments :

i) Depreciation on Plant and machinery 10%, Land and Building 5%, Furniture 5%.

ii) Closing stock on 31st March 2011 is valued at Rs. 6,500/-.

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Seat No.	

B.C.A. – II (Semester – IV) Examination, 2015
E-COMMERCE

Day and Date : Saturday, 25-04-2015   Total Marks : 80
Time : 3.00 p.m. to 6.00 p.m.

Instructions. : 1) Q. **1** is **compulsory**.
2) Solve **any 2** questions from Q. **2**, Q. **3**, Q. **4**.
3) Solve **any 1** question from Q. **5**, Q. **6**.
4) Q. **7** is compulsory.

1. A) Select **correct** alternative and rewrite statement :   **8**

   1) A computer communication technology that provides a way to interconnect multiple computer across short distance is _____
      A) LAN   B) MAN
      C) WAN   D) Wireless network

   2) A digital signature is _____
      A) Scanned signature   B) Signature in binary form
      C) Encrypting information   D) Hand written

   3) The term ISP refers to _____
      A) Internal Software Protocol   B) International Shareware Pool
      C) Internet Service Provider   D) Interface Standard Protocol

   4) In a client/server network. the user's computer is considered the _____
      A) Server   B) Client
      C) Website   D) Library

                                                                    P.T.O.

5) Moving from one web site to another is called _____

   A) Jumping　　　　　　　　　B) Moving

   C) Surfing　　　　　　　　　 D) Applying

6) The most widely used web protocol is _____

   A) http://　　　　　　　　　 B) URL

   C) HTML　　　　　　　　　　 D) ISP

7) Applets are typically written in a programming language called _____

   A) XML　　　　　　　　　　　B) Basic

   C) Pascal　　　　　　　　　　D) JAVA

8) Which of the following is not one of the basic elements of an e-mail message ?

   A) Header　　　　　　　　　　B) Footer

   C) Message　　　　　　　　　 D) Signature

B) Fill in the blanks : **4**

   1) The actual, physical network used for international communication is called _____

   2) _____ providers include national, regional and wireless service providers.

   3) _____ are programs that provide access to web resources.

   4) The connections from one page of information on the world wide web to another are called _____

C) State **True** or **False** : **4**

   1) The web is another name for the Internet.

   2) A programming language used to write animation for the world wide web is called JAVA.

   3) Cyber cash is a medium of exchange on the Internet.

   4) This basic type of e-commerce C2L involves individuals selling to individuals.

2. A) Explain the different phases of E-commerce Evaluation Model.   **6**

   B) What is Competitive Advantages ? Describe the competitive strategies.   **5**

   C) Explain different perspectives of e-commerce.   **5**

3. A) Define electronic markets. Explain types of electronic markets.   **6**

   B) Define E-Diversity.   **5**

   C) Describe the technology used in e-commerce with its elements.   **5**

4. A) What is Supply Chain Management ? Explain with Supply Chain Modeling.   **6**

   B) Describe the Porter's competitive strategy Mode.   **5**

   C) Define E-commerce trade cycle.   **5**

5. A) Define e-commerce. Explain major categories of e-commerce.   **8**

   B) Explain E-commerce drivers.   **8**

6. A) Write a case study on e-commerce in booking system.   **8**

   B) Define Internet banking and Internet Book Shops.   **8**

7. What is evaluation of e-commerce applications ? Explain the different framework
   and methodologies for evaluation of e-commerce application.   **16**

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SLR-K – 31

B.C.A. – III (Semester– V) (Old) Examination, 2015
CLIENT SERVER ENVIRONMENT (Using MS-SQL and VB)

Day and Date : Wednesday, 15-4-2015　　　　　　　　　Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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** to Q.**6**.

1. Choose the **correct** alternatives :　　　　　　　　　　　　**16**

　　1) _____ is the rowset function.

　　　　a) Open rowset　　　　　　　　b) Len

　　　　c) Trim　　　　　　　　　　　d) Right

　　2) _____ key is used to maintain relationship between tables.

　　　　a) Primary key　　　　　　　　b) Foreign key

　　　　c) Candidate key　　　　　　　d) None of these

　　3) In SQL server global variables are accessed by _____ sign.

　　　　a) @　　　　　　　　　　　　b) @@

　　　　c) @@@　　　　　　　　　　d) None of these

　　4) Primary data files ends with _____ extension.

　　　　a) ldf　　　　　　　　　　　　b) mdf

　　　　c) ndf　　　　　　　　　　　　d) None of these

　　5) Triggers can be called with EXEC command.

　　　　a) True　　　　　　　　　　　b) False

6) _____ is used to combine data from two or more multiple tables.

   a) Select

   b) Join

   c) Select ..... Into

   d) None of these

7) The _____ clause limits number of rows returned in the result set of query.

   a) TOP

   b) FROM

   c) COUNT

   d) None of these

8) A variable is in TSQL is declared by using _____ keyword.

   a) SET

   b) SELECT

   c) DECLARE

   d) None of these

9) The _____ operator is used to compare string pattern.

   a) BETWEEN

   b) SOME

   c) LIKE

   d) None of these

10) Stored procedures do not return value.

   a) True

   b) False

11) _____ is used to display name of local server.

   a) @ @ SPID

   b) @ @ servername

   c) @ @ servicename

   d) @ @ version

12) The _____ function replaces any null value with specified replacement value.

   a) ISNULL

   b) ISDATE

   c) ISNUMERIC

   d) None of these

13) The len ( ) function returns length of integer.

   a) True

   b) False

14) _____ is data type used to hold either 1 or 0 value.

   a) Bit

   b) Int

   c) TinyInt

   d) None of these

15) _____ data type is used to hold large object up to 2 GB.

    a) Bit   b) Text/Image

    c) Char   d) Varchar

16) An extent is collection of eight contiguous pages used to keep the database from becoming fragmented.

    a) True   b) False

2. A) What are different programs installed with SQL server ? **8**

   B) What is view ? What are advantages of view ? **8**

3. A) Explain primary data file, secondary data file and transaction log file in detail. **8**

   B) Explain three tier architecture in detail with neat diagram. **8**

4. A) What are various issues concern with building good user interface ? **8**

   B) What is Trigger ? Write syntax to create trigger and explain detail. **8**

5. A) What is Enterprise Manager ? Explain linked server queries. **8**

   B) What is ADO, DAO and RDO ? How to make connectivity with ADO ? **8**

6. A) Consider following table structure : **8**

    Table name : Employee (Empid, Name, Address, Age, Contact No.)

    Perform following operations on the table given above.

    1) Create table and assign primary key constraint to empid.

    2) Add 5 records.

    3) Display all employeenames whose name starts with A.

    4) Change name of employee to peter where empid is 'E10'.

   B) What is Join ? What are different types of Join ? Explain in detail. **8**

7. Write short notes on **(any 4)**. **16**

    1) Stored procedure

    2) Role of server

    3) Variables in SQL server

    4) Group by and Having Clause

    5) CUBE operator.

_____

Seat
No.

B.C.A. – III (Semester – V) (Old) Examination, 2015
COMPUTER SCIENCE
Web Technologies

Day and Date : Friday, 17-4-2015　　　　　　　　　　Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. Choose **correct** alternative.　　　　　　　　　　　　　　　　**16**

　1) _____ object is used to share information among several users
　　visiting the same group of pages.

　　a) Application　　　　　　b) Request
　　c) Session　　　　　　　　d) Response

　2) In ASP while loop is terminated with _____

　　a) Dowhile　　　　　　　　b) Braces
　　c) Wend　　　　　　　　　d) End

　3) ASP response object is used to send output to the user from _____

　　a) Server　　　　　　　　b) Client
　　c) PC　　　　　　　　　　d) Circuit

　4) In ASP single line comment is given by using _____ word.

　　a) Comment　　　　　　　b) Rem
　　c) Const　　　　　　　　　d) Option

P.T.O.

5) _____ are bits of information stored by server on client computer.

    a) Application   b) Session

    c) Cookies   d) Server

6) A client computer requests information from a browser.

    a) True   b) False

7) Cookies are stored and read using _____ header.

    a) FTP   b) SMTP

    c) HTTP   d) TCP/IP

8) _____ statement is used to make the variable declaration compulsory.

    a) declare   b) var

    c) dim   d) option explicit

9) Cookies can be permanent.

    a) True   b) False

10) The parameter n of date diff ( ) returns the _____ between two dates.

    a) hour   b) month

    c) minute   d) year

11) Cookies are created by using _____ object.

    a) request   b) session

    c) response   d) application

12) _____ operator is used for 'not equal to' comparison.

    a) ! =   b) < >

    c) < =   d) = !

13) _____ sends the contents of the buffer to the client before it empties it.

    a) response . flush

    b) response .end

    c) response . clear

    d) response . write

14) The _____ object is used to access methods and properties on server.

    a) request   b) server

    c) response   d) cookies

15) _____ is used to create instance of server component.

    a) command   b) connection

    c) create object   d) execute

16) Each user has session id.

    a) True   b) False

2. a) Explain how to configure PWS. **6**

   b) Explain client-server model in detail. **6**

   c) Explain validation functions with example. **4**

3. a) What is operator ? Explain operators with its type. **6**

   b) Explain looping structures in ASP with suitable example. **6**

   c) How to declare and use array in ASP. **4**

4. a) Explain session object in detail. **6**

   b) Write a ASP code to calculate face value of any number. (Access number by using form). **6**

   c) Explain steps used in connectivity. **4**

5. a) Explain server object in detail. **8**

   b) Write a ASP code to access information of student with basic operation insert, update, save and delete in student table. **8**

6. a) Explain cursor types with example. **8**

   b) Design web form for book information. You can do insert, search, update and delete record. **8**

7. Write short note on **(any 4)** : **16**

   a) Command object

   b) A sub procedure

   c) Browser

   d) Difference between application and session

   e) Environmental variable.

_____

B.C.A. – III (Semester – V) (Old) Examination, 2015
COMPUTER SCIENCE
Linux and Shell Programming

Day and Date : Monday, 20-4-2015   Total Marks : 80
Time : 11.00 a.m.to 2.00 p.m.

N.B. : 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**.
4) **All** questions carry **equal** marks.

1. Choose the **correct** alternative :   **16**

   1) Which of the following is the functionality of shell ?
      a) Interprets commands
      b) Allocates time and memory to programs
      c) Both a and b
      d) None of these

   2) _____ command reduces the size of a file.
      a) pzip   b) gcat
      c) pgcat   d) gzip

   3) The symbol > is used to redirect the output of a command.
      a) True   b) False

   4) Which is the core of the operating system ?
      a) Shell   b) Kernel
      c) Script   d) Commands

   5) _____ command is used to display the octal value of the text.
      a) Octal   b) Oct   c) Oc   d) Od

   6) In Linux file system _____ is the top level directory.
      a) boot   b) home   c) bin   d) root

P.T.O.

7) LILO stands for linux loader.
   a) True
   b) False

8) _____ is not type of shell.
   a) Bourne shell
   b) 'C' shell
   c) d shell
   d) Korn shell

9) Cat command is used only to create a file.
   a) True
   b) False

10) Which of the following features supported by Linux ?
    a) Communication
    b) Portability
    c) Security
    d) All of these

11) PWD stands for print working directory.
    a) True
    b) False

12) Process information in the current shell can be obtained by using _____
    a) kill
    b) bg
    c) fg
    d) ps

13) Which command reads user input from the terminal and assign this value to a variable name ?
    a) get
    b) declare
    c) read
    d) set

14) The expression 'expr – 9%2' evaluates to _____
    a) 0
    b) 1
    c) –1
    d) 2

15) Which file contains the file systems to be automatically mounted during boot ?
    a) /etc/mount
    b) /etc/fstab
    c) /etc/inittab
    d) /etc/boot

16) In chmod command _____ represents read permission.
    a) 1
    b) 2
    c) 4
    d) 6

2. a) Explain the history of Linux. **6**

   b) Explain any two features of Linux operating system. **6**

   c) Write note on shell script. **4**

3. a) What do you mean by filter ? Explain any two filter commands. **6**

   b) Explain user defined commands with suitable example. **6**

   c) Write short note on open source software. **4**

4. a) Explain any two commands are available to communicate with other users. **6**

   b) Explain the following commands. **6**

      i) cp   ii) mv   iii) rm

   c) Write short note on NFS. **4**

5. a) Explain ls command with different options. **8**

   b) Write a shell script to check entered number is prime or not. **8**

6. a) Write a shell script to display Fibonacci series upto n numbers. **8**

   b) Explain the concept of archiving and compressing files with different example. **8**

7. Write short notes on (**any four**) : **16**

    i) Hard links.

   ii) Switch structure.

   iii) Home directories.

   iv) **.**exrc file.

    v) cd and mkdir.

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Seat No.

B.C.A. – III (Semester– V) (Old) Examination, 2015
COMPUTER SCIENCE
Core Java

Day and Date : Wednesday, 22-4-2015　　　　　　　　　Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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** to Q.**6**.

1. a) Choose the **correct** alternative :　　　　　　　　　　　　　　　**8**

　　1) After the following code fragment, what is the value in a ?

　　　string s ;

　　　int a;

　　　s = "Foolish boy" ;

　　　a = s.index of ("tool") ;

　　　a) – 1　　　　　　　　　　　　b) 0

　　　c) 4　　　　　　　　　　　　 d) Random value

　　2) If s = "text", what is the value returned by s.length ( ) ?

　　　a) False　　　　　　　　　　　b) True

　　　c) 4　　　　　　　　　　　　 d) 5

　　3) What is the value of K after the following code fragment ?

　　　int k=0 ;

　　　int n=12 ;

　　　while (k<n)

　　　{k=k+1 ;

　　　}

　　　a) 0　　　　　b) 11　　　　　c) 12　　　　　d) Unknown

P.T.O.

4) Given the following code fragment

int A[ ] ;
int i=0 ;
A = new int A[4] ;
While (i<4)
{
   A[i] = 10 ;
   i = i+1 ;
}

What is the value of A[3] ?

a) 0   b) 3   c) 10   d) Unknown

5) The method setlabel can be used with what type of object ?

a) Double field   b) Int

c) Text field   d) String

6) A constructor _____

a) must have the same name as the class it is declared within

b) is used to create objects

c) may be declared private

d) all of above

7) if you write system.exit (o) at the end of try block, will the finally block still execute ?

a) Yes   b) No

c) It depends upon return   d) cannot say

8) Which is a keyword ?

a) String   b) Unsigned

c) Float   d) this

b) Fill in the blanks :   **4**

1) _____ are not checked by the compiler at compile time.

2) _____ is a run time environment for the compiled Java files.

3) _____ method accepts an array of string objects as argument.

4) _____ variables should be initialized before using them.

c) State **True/False**: **4**

1) Encapsulation is the process of binding together the methods and data variables as a single entity.

2) Threads block on i/O i.e. enters the waiting state, so that other threads may execute while the i/O operation is performed.

3) Native code is highly optimized set of instructions designed to be executed by the Java run time system, which is called JVM.

4) Event classes are used to handle Java event handling.

2. a) What is an interface ? Explain its advantages with example. **8**

b) Write a program on multilevel inheritance which uses super keyword. Also explain the need of super keyword. **8**

3. a) Explain parameter passing techniques supported by Java. **8**

b) What is method overloading ? Explain the advantages of it with example. **8**

4. a) What is package ? Explain the advantages of package. **8**

b) Comment of inter thread communication. **8**

5. a) Write a program to create user defined exception in Java. **8**

b) What is layout manager ? Explain different layout manager available in Java.awt. **8**

6. a) Discuss the features of Java in detail. **8**

b) Write a program on multi threading by inplementing runnable interface. **8**

7. Write a short note on. **16**

1) uses of final keyword
2) inner class
3) need of synchronization
4) method overriding.

_____

SLR-K – 35

Seat No.	

B.C.A. – III (Semester – V) (Old) Examination, 2015
MANAGEMENT INFORMATION SYSTEM

Day and Date : Friday, 24-04-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Choose the **correct** alternatives :   **8**

    i) _____ is characteristic of MIS.

       1) Management Oriented   2) Presenting of Information

       3) Processing Data   4) Problem Specification

    ii) OIS stands for _____

       1) Operating Information System   2) Office Information System

       3) Online Incharge System   4) Office Incharge System

    iii) SCM stands for _____

       1) Server Client Management   2) Supply Cyber Management

       3) Supply Chain Management   4) None of the above

    iv) _____ is a DSS model.

       1) Management Science Model   2) Decision Support Model

       3) Data Model   4) Relational Model

P.T.O.

v) _____ application in manufacturing sector.

1) Hospital Management   2) Airline Management

3) Marketing Management   4) Banking Management

vi) Information system will improve the _____

1) Quantity of life   2) Quality of life

3) Management of life   4) Expert of life

vii) The personal management function consists of _____

1) Recruitment   2) Budget control

3) General Ledger   4) Sales

viii) Strategic information is required _____

1) Top Management   2) Middle Management

3) Lower Management   4) None of these

B) Answer **one** sentence :   **8**

i) Long form of GDSS.

ii) What do you mean by market ?

iii) Example of MIS in service sector.

iv) What is mean by system ?

v) What is mean by Data ?

vi) What is mean by life cycle ?

vii) Long form of TPS.

viii) What is mean by software ?

2. a) Write down importance of Information system. **6**

   b) Write down function of CRM. **6**

   c) Concept of Management. **4**

3. a) Explain the characteristics of MIS. **6**

   b) Explain the security and control. **6**

   c) Write down role of Manager. **4**

4. a) Write down features of organization. **6**

   b) Write down characteristics of system. **6**

   c) Explain component of MIS. **4**

5. a) Explain application in Hospital Management System. **8**

   b) Explain application in Marketing Management System. **8**

6. a) Explain the customer relationship management. **8**

   b) Explain application in Hotel Management System. **8**

7. Write short notes (**any 4**) : **16**

   a) DSS and GDSS

   b) System Vulnerability

   c) Banking Service

   d) Characteristic of Good Information.

   e) Advantage of DBMS.

   _____

Seat
No.

B.C.A. – III (Sem. – V) (New) Examination, 2015
COMPUTER SCIENCE
ADVANCED JAVA – I

Day and Date : Wednesday, 15-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

N. B. : 1) *Figure to **right** indicates **full** marks.*
2) *Question **one** and question **seven** are **compulsory**.*
3) *Solve **any two** questions from Q. **2**, Q. **3** and Q. **4**.*
4) *Solve **any one** question from Q. **5** and Q. **6**.*

1. a) Choose correct alternative :   **16**

   I) The DTD begins with the word _____
      a) # PCDATA   b) XML   c) DOCTYPE   d) HTTPS

   II) Which method is used to perform DML statement in JDBC ?
      a) execute ( )   b) executeUpdate
      c) executeQuery ( )   d) executeResult ( )

   III) How many servletContex object is/are available for an entire web
      applications ?
      a) one each per servlet   b) one each per request
      c) one each per response   d) only one

   IV) By default how long does a cookies last ?
      a) 24 hours   b) 30 days   c) 365 days   d) None of these

   V) _____ is a subinterface of servletRequest.
      a) HttpServletRequest   b) HttpServletResponse
      c) HttpServlet   d) Http

   VI) An XML component that defines the structure of document is known as
      _____
      a) DOCTYPE   b) DTD   c) # PCDATA   d) HTML Stylesheet

   VII) Which method is used to unload an applet ?
      a) main ( )   b) destroy ( ) c) stop ( )   d) init ( )

   VIII) By default tomcat runs an port _____
      a) 8080   b) 80   c) 1080   d) 8888

b) Fill in the blanks :

I) In an URL query string, the _____ symbol denote space character.

II) DTD stands for _____

III) _____ is a return type of executeQuery ( ) method.

IV) A servlet is an instance of _____ class.

c) I) XML tag's are case sensitive.

II) Type – 2 driver is called JDBC-ODBC bridge driver.

III) Applet have a main ( ) method.

IV) executeUpdate ( ) method returns integer value.

2. a) What is applet ? Explain its type.   **8**

b) Write an applet to take two strings from textbox and check both are same
or not.   **8**

3. a) Explain session handling in servlet.   **8**

b) Write a program to update a record in a database.   **8**

4. a) Write a servlet to handle session using cookie.   **8**

b) Explain XML tree in detail.   **8**

5. a) Explain XML tags and it's rule.   **8**

b) What is servlet ? Explain advantages of servlet over CGI.   **8**

6. a) Explain servlet life cycle with suitable example.   **10**

b) Explain steps for database connectivity.   **6**

7. Write note on **(any four)** :   **16**

a) Type-4 driver

b) HttpServlet

c) Prepared statement

d) JDBC features

e) Advantages of cookies.

_____

Seat No.

B.C.A. – III (Semester – V) (New) Examination, 2015
COMPUTER SCIENCE
Visual Programming

Day and Date : Friday, 17-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

N.B. :   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** to Q. **6.**

1. Choose correct alternatives.   **16**

   1) Which of the following service provided by CLR ?

      a) Verification of type safety   b) Inter operability

      c) Automatic garbage collection   d) All of these

   2) The default value of integer type is _____

      a) Garbage   b) 0

      c) 1   d) Null

   3) Which of the following is predefined reference type ?

      a) Structure   b) Enumeration

      c) Class   d) Object

   4) _____ objects are mutable strings.

      a) String   b) String Builder

      c) Both a) and b)   d) None of these

   5) The conversion from an object type to a value type is known as boxing.

      a) True   b) False

   6) Which of the following method is used to remove the element at the specified place in arraylist ?

      a) Remove ( )   b) RemoveAt ( )

      c) Delete ( )   d) RemovePosition ( )

P.T.O.

7) Virtual method can be overriden by a derived class.

   a) True   b) False

8) Structure members cannot be specified as _____

   a) abstract   b) virtual

   c) protected   d) All of these

9) A variable which is declared inside a method is called _____ variable.

   a) Serial   b) Private

   c) Local   d) Static

10) Defining two methods with the same name but with different parameters is called _____

   a) Overriding   b) Duplexing

   c) Multiplexing   d) Overloading

11) Properties cannot made read-only or write-only

   a) True   b) False

12) _____ control is used to select multiple items at a time.

   a) Text Box   b) Combo Box

   c) List Box   d) Option Box

13) MDI stands for Multiple Document Information.

   a) True   b) False

14) Which of the following is not event of form ?

   a) Load   b) Closed

   c) Click   d) Deactivate

15) Which of the following is incorrect about a delegate ?

   a) A delegate can invoke more than one method

   b) Delegate is like as a function pointer

   c) Delegates are value types

   d) Delegates are stored references of a method

16) Which of the following is component of assembly ?

   a) Assembly manifest   b) MSIL source code

   c) Type metadata   d) All of these

2. a) Describe various forms of implementing interfaces. **6**

   b) How does an array of Arraylist class differ from an array of array class ? Explain. **6**

   c) Differentiate between ref and out parameters. **4**

3. a) What is operator overloading ? Give one example of unary operator. **6**

   b) Explain the following methods of thread class. **6**

      i) start ( )

      ii) sleep ( )

      iii) join ( )

   c) Write note on properties. **4**

4. a) What is static constructor ? Explain with suitable example. **6**

   b) Explain the following controls. **6**

      i) Check Box

      ii) Radio Button

      iii) Combo Box.

   c) Write note on deployment. **4**

5. a) Create a Windows application for modifying an existing record using stored procedure. **8**

   b) What is generic collection ? Explain any two generic classes with example. **8**

6. a) What is method overriding ? Explain with suitable example. **8**

   b) What is event ? Explain in detail. **8**

7. Write short notes on (**any four**) : **16**

      i) CLR

      ii) Dataset

      iii) Abstract classes

      iv) StreamReader and StreamWriter

      v) Garbage collection.

———————————

Seat	
No.	

B.C.A. – III (Semester – V) (New) Examination, 2015
COMPUTER SCIENCE
Linux and Shell Programming

Day and Date : Monday, 20-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

N. B. : 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*** to Q. ***6***.
        4) ***All*** questions carry ***equal*** marks.

1. Choose the correct alternatives :   **16**

   1) Which one of the following is not a Linux distribution ?

     a) Debian   b) Gentoo   c) Multics   d) Open SUSE

   2) The file _____ contains a list of valid boot targets and Kernel options.

     a) /lilo.conf   b) /etc/lilo.conf

     c) /home/lilo.conf   d) /usr/lilo.ini

   3) Bourne shell offers a command history feature

     a) True   b) False

   4) _____ directory contains binary executable files.

     a) lib   b) dev   c) etc   d) bin

   5) The rcp command is used to copy files to and from remote and local systems.

     a) True   b) False

   6) Which command is used to close the vi editor ?

     a) : q   b) : wq

     c) Both a) and b)   d) None of these

   7) Process information in the current shell can be obtained by using _____

     a) fg   b) bg   c) info   d) ps

8) If two files on same partition point to the same inode structure are called
_____

a) soft links   b) hard links   c) special files   d) alias

9) _____ command is used to change permission of files.

a) grant   b) perm   c) chmod   d) change

10) Which of the following interacts directly with hardware ?

a) Shell   b) Applications   c) Commands   d) Kernel

11) _____ command is used to extract a column from a text file.

a) tar   b) cut   c) get   d) read

12) Which of the following command is used to avoid accidentally removing files ?

a) rm – i   b) rm – a   c) rm – k   d) rm – r

13) In tar command _____ option is used to display files in archieve.

a) – x   b) – t   c) – d   d) – r

14) The default system wide permission for a file are _____

a) 645   b) 777   c) 644   d) 475

15) The wild card characters '∗' and '?' have the same meaning in Linux

a) True   b) False

16) Which of the following is not selection criteria used in a find command ?

a) – size   b) – name   c) – inum   d) – num

2. a) Explain different Linux partitions with its uses.   **6**

    b) How do you create a new user account ? Explain.   **6**

    c) What is NFS ? What is its purpose.   **4**

3. a) What do you mean by a filter ? Explain any two filter commands.   **6**

    b) Explain the concept of RAID.   **6**

    c) Write note on background jobs.   **4**

4. a) Explain boot and super block.   **6**

    b) What is file ? Explain different types of files available in Linux.   **6**

    c) Write note on X-windows.   **4**

5. a) Write a shell script to print entered number is palindrome or not. **8**

   b) Explain the following commands : **8**

      a) cmp

      b) ping

      c) diff

      d) finger.

6. a) Write a shell script to display Fibonacci series upto n numbers. **8**

   b) What is grep command and explain with different examples. **8**

7. Write short notes on **(any four)** : **16**

   i) LILO

   ii) Sort command

   iii) Types of Shell

   iv) LDAP

   v) NIS.

_____

Seat
No.

B.C.A. – III (Semester – V) (New) Examination, 2015
COMPUTER SCIENCE
Introduction to Data Mining and Warehousing

Day and Date : Wednesday, 22-4-2015　　　　　　　　　　Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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** to Q. **6.**

1. A) Choose the correct alternative :　　　　　　　　　　　　　　　　**8**

　　1) First phase of Apriori algorithm is _____

　　　　a) candidate generation　　　　b) itemset generation

　　　　c) pruning　　　　　　　　　　　d) partitioning

　　2) _____ is the application of data mining techniques to discover
　　　patterns from web.

　　　　a) Text mining　　　　　　　　b) Multimedia mining

　　　　c) Web mining　　　　　　　　d) Link mining

　　3) _____ supports basic OLAP operations including slice and dice,
　　　drill down, rollup and pivoting.

　　　　a) Information processing　　　b) Analytical processing

　　　　c) Data mining　　　　　　　　d) Transaction processing

　　4) Fact tables are _____

　　　　a) completely denormalized　　b) partially denormalized

　　　　c) completely normalized　　　d) partially normalized

　　5) In smoothing by bin means each value in a bin is replaced by the
　　　_____ value of the bin.

　　　　a) Bin　　　　　　　　　　　　b) Exact same

　　　　c) Mean　　　　　　　　　　　d) Close

　　6) Data cleaning used to _____ noise and inconsistent data.

　　　　a) Extend　　　　　　　　　　b) Remove

　　　　c) Merge　　　　　　　　　　d) Repeat

P.T.O.

7) Business intelligence and data warehousing is used for _____
   a) Data mining
   b) Forecasting
   c) Analysis of large volume of product sales data
   d) All of the above

8) _____ is a subject oriented, integrated, time-variant, nonvolatile collection of data in support of management decisions.
   a) Data mining　　　　　　　b) Data warehousing
   c) Web mining　　　　　　　d) Text mining

B) State **true** or **false** :　　　　　　　　　　　　　　　　　　　**4**
   1) Highest level of summarization is apex cuboid.
   2) Main function of OLTP is decision support.
   3) Market Basket analysis is example of frequent patler, association and correlation relationship between huge amount of data.
   4) Metadata describes data contained in the data warehouse.

C) Fill in the blanks :　　　　　　　　　　　　　　　　　　　　　**4**
   1) KDD is _____
   2) Data is stored, retrieved and updated in _____ type of transaction.
   3) _____ is good alternative to star schema.
   4) Support $(A \Rightarrow B)$ = _____

2. a) Explain metadata component in detail.　　　　　　　　　　　**6**
   b) Explain text data mining with its applications.　　　　　　**6**
   c) Explain OLTP and OLAP.　　　　　　　　　　　　　　　　**4**

3. a) What are different issues related with data mining ? Explain in detail.　**6**
   b) Explain data cube technique in detail.　　　　　　　　　　**6**
   c) Explain different applications of data mining in education.　**4**

4. a) Why we need data cleaning technique ? Explain different data cleaning technique used in data mining.　　　　　　　　　　　　　　**6**
   b) Explain data mining functionalities in detail.　　　　　　　**6**
   c) Sorted data is given as

      5, 9, 10, 16, 22, 22, 25, 26, 27, 29, 30, 35

      Explain different binning method on this data.　　　　　　**4**

5. a) Explain different trends used in data warehousing. **8**

   b) Explain different schemas with examples. **8**

6. a) From following table find frequent itemset using Apriori algorithm. **8**

Tid	Items
10	A, C, D
20	B, C, E
30	A, B, C, E
40	B, E

   minimum support = 2.

   b) Explain data warehouse implementation in detail. **8**

7. Write short note on (**any 4**) : **16**

   1) Report, query, EIS tool.

   2) Data reduction.

   3) Frequent pattern mining.

   4) Need of data warehouse.

   5) Apriori property.

   6) Support and confidence.

   _____

SLR-K – 4

Seat No.	

B.C.A. (Semester– I) (New) Examination, 2015
BUSINESS COMMUNICATION (CGPA Pattern)

Day and Date : Wednesday, 22-4-2015
Time : 11.00 a.m. to 2.00 p.m.

Total 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.**

1. A) Choose the **correct** alternative from the following questions.   **10**

   1) Which are common uses of communication ?

      a) To inform, innovate and instigate

      b) To inform, instruct and influence

      c) To instruct, imitate and innovate

      d) To influence, instigate and inform

   2) Why is communicating effectively to employees an important management skill ?

      a) Managers must be able to keep superiors informed

      b) Managers must collaborate with other department heads

      c) Managers must be able to motivate people

      d) Managers must be able to report to external stakeholders

   3) Which of the following best defines the act of exchanging information ?

      a) e-mail

      b) social media

      c) communication

      d) assimilation

P.T.O.

4) Which of the following best defines what a manager must do in order to communicate successfully ?

   a) Identify the audience

   b) Develop good listening skill

   c) Understand the importance of non-verbal communication

   d) All the above

5) In business, what is the most frequently used form of communication ?

   a) Using email

   b) Using written documents that are then mailed

   c) Using written documents within the company

   d) Oral communication

6) To complete the function of the written word, we require

   a) Four persons   b) Two persons

   c) One person   d) Three persons

7) The principles of effective writing includes

   a) Clarity

   b) Brevity, clarity and accuracy

   c) Brevity

   d) Accuracy

8) How many kinds of articles are there in English ?

   a) Three : an, an, and the

   b) Two : definitive and indefinitive

   c) Five : a, an, the definitive and indefinitive

   d) One : a

9) Oral communication is the interchange of _____ between the sender and receiver.

    a) Written messages

    b) Signs and gestures

    c) Verbal messages

    d) Cues and clues

10) Minutes of the meeting are always written in _____ tense.

    a) Simple present   b) Simple past

    c) Future   d) Continuous

B) Say whether the following statements are **true** or **false**.   **4**

    1) Silence is always embarrassing in a communication situation.

    2) Body language is entirely unconscious and involuntary.

    3) Non-verbal communication max convey meaning that conflicts with the words used.

    4) If you have good communication skills, there is no need to prepare for an interview.

2. Write short essay type answers of the following questions **(any two)**.   **14**

    1) Discuss in brief principles of communication.

    2) Differentiate between upward, downward and horizontal communication.

    3) What are the objectives of communication ?

3. Write short essay types answers of the following questions **(any two)**.   **14**

    1) What are barriers to communication ?

    2) Process of communication.

    3) Characteristics of a report.

4. Write short essay type of answers of the following questions **(any two)**. **14**

   1) Non-verbal communication.

   2) Modern office communication.

   3) Grapevine communication.

5. Write answers of following questions. **14**

   1) Define communication and state the importance of communication.

   2) Advantages and disadvantages of upward communication.

6. Write answers of following questions. **14**

   1) Types of meetings.

   2) Write an application for the post of software engineer.

7. Write short notes **(any two)**. **14**

   1) You attitude

   2) Body language

   3) Internet

   4) Punctuations.

_____

Seat No.	

B.C.A. – III (Semester – V) Examination, 2015
MANAGEMENT INFORMATION SYSTEM (New)

Day and Date : Friday, 24-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Solve the multiple choice questions :   **8**

   i) ERP stands for _____
      a) Easy Resource Planning
      b) Enquiry Resource Planning
      c) Enterprises Resource Planning
      d) None of these

   ii) Philosophy, Theology are classic example of _____ system.
      a) Conceptual   b) Deterministic
      c) Expert   d) Open

   iii) _____ is benefit of SCM.
      a) Right Product   b) Right Place
      c) Low Cost   d) All of the above

   iv) PKM stands for _____
      a) Personal Knowledge Management
      b) Private Knowledge Management
      c) Public Knowledge Management
      d) Project Knowledge Management

   v) Data has to be _____ before it can be converted into information.
      a) Transformed   b) Processed
      c) Changed   d) Engineered

P.T.O.

vi) MIS always refers to _____

    a) Computer System   b) Manual System

    c) Both a) and b)   d) None of these

vii) Database is pivotal to_____

    a) MIS   b) EIS   c) TPS   d) OAS

viii) BIS stand for _____

    a) Business Intelligence System

    b) Business Import System

    c) Business International System

    d) Business Interface System

B) Answer in **one** sentence :   **8**

  i) What is meant by Decision ?

  ii) What is meant by Management ?

  iii) What is meant by Customer ?

  iv) What is meant by Resource ?

  v) Long form of DSS.

  vi) What is meant by Business ?

  vii) What is meant by Service ?

  viii) Long form of ESS.

2. a) Write down types of Decision.   **6**

   b) Explain types of Information System.   **6**

   c) Difference between Data and Information.   **4**

3. a) Explain evolution of ERP.   **6**

   b) Advantage of Executive Support System.   **6**

   c) Write down need of MIS.   **4**

4. a) Explain the security of Information System.   **6**

   b) Explain MIS applications in Hotels.   **6**

   c) Short note on Knowledge Management.   **4**

5. a) Explain application of MIS in Service Industry.   **8**

   b) Explain the objective and characteristics of MIS.   **8**

6. a) Explain the advantages and disadvantages of SCM.   **8**

   b) Explain the meaning, scope and need of CRM.   **8**

7. Write short notes on **(any 4)** :   **16**

   a) Good Information

   b) Features of Organization

   c) Components of MIS

   d) Feed Back Control

   e) Accounting System.

_____

SLR-K – 41

B.C.A. (Part – III) (Semester – VI) Examination, 2015
ADVANCED JAVA AND WAP (Old)

Day and Date : Thursday, 16-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Choose the correct alternative :   **8**

    1) Which method is called first by an applet ?

       a) start( )   b) init( )

       c) paint( )   d) run( )

    2) The _____ method executes a simple query and returns a single ResultSet object.

       a) executeUpdate( )   b) executeQuery( )

       c) execute( )   d) executeNonQuery( )

    3) _____ are designed to be an extensions of servers and to extend the capability of servers.

       a) EJB   b) JSP

       c) Servlet   d) Applet

    4) Which scripting element is used to declare a method ?

       a) declaration   b) expression

       c) include   d) page

    5) _____ is used for developing and deploying distributed application in java environment.

       a) JSP   b) EJB

       c) Applet   d) RMI

6) In the following JDBC drivers which is known as partially java driver ?

   a) JDBC-ODBC bridge driver   b) Native-API driver

   c) Network Protocol driver   d) Thin driver

7) In Naming class which method specifies name to a remote object ?

   a) bind(String name)   b) rebind(String name)

   c) Both a) and b)   d) None of the above

8) Which method is used for an SQL statement that is executed frequently ?

   a) prepareStatement   b) prepareCall

   c) createStatement   d) None of the above

B) Fill in the blank :   **4**

1) TLD stands for _____

2) The proxy layer contains the client _____ and server _____ object.

3) _____ method is used to call stored procedure.

4) _____ method of Class class is used to register the driver.

C) State **True** or **False** :   **4**

1) EJB technology is built on the top of Socket Programming.

2) Servlet technology is used to create web application.

3) JSPs eventually are compiled into Java servlets; you can do as much with JSPs as you can do with Java servlets.

4) RMI does not allow an object to invoke methods on an object running in another JVM.

2. A) Explain the different steps in Java Database Connectivity.   **6**

  B) Explain the life cycle of servlet.   **6**

  C) Explain the applet tag with example.   **4**

3. A) Explain the different types of implicit objects used in JSP.   **6**

   B) What is EJB ? Explain the different types of EJB.   **6**

   C) Explain RMI architecture.   **4**

4. A) Explain the Callable Statement interface.   **6**

   B) Explain the use of <jsp:forword> action element with example.   **6**

   C) Explain deployment descriptor in web.xml.   **4**

5. A) Write a servlet to handle http post request.   **8**

   B) Write a JDBC based program to update the salary of each employee by
      incrementing 1000 to the current salary.   **8**

6. A) Create html user interface for capturing employee information
      (empid,empname, empaddress, salary). This form will accept data from the
      user and then create a JSP pageto display the data upon page submission.   **8**

   B) Create an RMI application to calculate the factorial of a number.   **8**

7. Write short note on **(any four)** :   **16**

   1) Methods of ResultSet

   2) Methods of HTTP Request

   3) Scripting elements in JSP

   4) WAP gateway

   5) 3G Technology.

Seat
No.

B.C.A. – III (Semester – VI) Examination, 2015
CYBER LAWS AND SECURITY CONTROL (Old)

Day and Date : Saturday, 18-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Q.**1.** and Q.**7.** are **compulsory**.
                        2) Attempt **any two** questions from Q.No.**2, 3** and **4**.
                        3) Attempt **any one** question from Q.No.**5** and **6**.
                        4) Figures to the **right** indicate **full** marks.

1. A) Choose the single correct alternative.   **12**

   1) Which of the following is a cyber crime ?

      a) Hacking   b) Worm attack

      c) Virus attack   d) All of these

   2) Information Technology Amendment Act form in the year _____

      a) 2000   b) 2001

      c) 2008   d) 2009

   3) _____ means a representation of any electronic record by a subscriber
      by means of electronic method.

      a) Digital signature   b) Access

      c) Addressee   d) E-Commerce

   4) Digital signature uses private key and a public key.

      a) True   b) False

   5) Shareware is a software _____

      a) That can be distributed feely to use on permanent basis

      b) That can be shared with the user without license

      c) That can be distributed freely for trial period

      d) That can be copyrighted

6) _____ is fully product oriented commerce.

    a) Traditional Commerce   b) E-Commerce

    c) M-Commerce   d) None of these

7) Order and deliver forms includes _____ phase of trade cycle.

    a) Presale   b) Execution

    c) Settlement   d) Aftersales

8) IT Act is the super structure for e-commerce.

    a) True   b) False

9) EDI works under _____ system.

    a) ANSI   b) ASCII

    c) ISO   d) ISI

10) _____ is a barrier between two networks.

    a) Password   b) Firewall

    c) Digital certificate   d) Encryption

11) Viruses are detected and prevented by using _____

    a) System software   b) Firewall

    c) Antivirus software   d) O/S software

12) In encryption process, random text is converted to plain text.

    a) True   b) False

B) Fill in the blanks :   **4**

1) IT Act of India was framed in the year _____

2) _____ property rights deals with issues of copyright, trademark and patent laws.

3) EDI stands for _____

4) Invoice and payment are _____ phase of trade cycle.

2) A) Differentiate between traditional commerce and e-commerce.   **6**

  B) Define the cyber law ? Why the need of cyber law arises ?   **6**

  C) Explain digital certificate.   **4**

3) A) Explain authentication and authorization. **6**

   B) Write on "Intranet and Extranet security". **6**

   C) What is security audit ? **4**

4) Write short notes on the following : **16**

   1) Theft of information

   2) Intellectual property aspects

   3) Data encryption

   4) Authentication protocols.

5) A) Explain IT Act, 2000 in brief. **8**

   B) Explain types of security. **8**

6) A) What is EDI ? Explain benefits of EDI. **8**

   B) What is digital signature ? Explain in detail. **8**

7) A) Discuss on "E-Commerce and Indian Economy". **8**

   B) Explain hardware and software security. **8**

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SLR-K – 43

Seat No.

B.C.A. – III (Semester – VI) (Old) Examination, 2015
SOFTWARE PROJECT MANAGEMENT

Day and Date : Tuesday, 21-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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** to Q. **6**.

1. A) Choose the correct alternative :   **12**

   1) CPM provides the following benefit(s) _____
      a) Graphical view of the project
      b) Predicts time required to complete the project
      c) Inter-relationship among various tasks
      d) All of the above

   2) _____ model can be seen as expanding the activity testing in the waterfall model.
      a) Spiral   b) V – process
      c) Throw-away Prototypes   d) Evolutionary Prototypes

   3) The requirement specification involve(s) _____ requirement(s).
      a) Functional   b) Quality
      c) Resource   d) All of the above

   4) A COCOMO model is _____
      a) Constructive Cost Model   b) Common Cost Model
      c) Complete Cost Model   d) Comprehensive Cost Model

   5) Booch suggests that there are two levels of development
      a) Mini and micro process   b) Top-down and bottom up
      c) Macro and micro process   d) Main and micro

P.T.O.

6) The _____ pass is carried out to calculate the earliest dates on which each activity may be started and completed.
   a) forward
   b) upward
   c) backward
   d) downward

7) _____ is generally taken to mean the ability to influence others in a group to act in a particular way to achieve group goals.
   a) Ownership
   b) Leadership
   c) Friendship
   d) Relationship

8) _____ method(s) that might be used to measure software quality.
   a) Reliability
   b) Maintainability
   c) Extendibility
   d) All of the above

9) _____ assessment of a proposed system consists of evaluating the required functionality against the hardware and software available.
   a) Technical
   b) Logical
   c) Physical
   d) None of these

10) The Return On Investment (ROI), also known as _____
   a) Accounting rate of return
   b) Accurate rate of return
   c) Investment rate
   d) Accounting rate of right

11) _____ has overall responsibility for setting, monitoring and modifying objectives.
   a) Development team manager
   b) Project Management Board
   c) Testing team
   d) Designer

12) _____ will indicate when expenditure and income will take place we need to spend money, such as staff wages, during the development stages of a project.
   a) Cash flow forecasting
   b) Cash flow find
   c) Credit and debit
   d) None of these

B) State whether statements are **true** or **false** : **4**

1) PERT was developed to take account of the uncertainty surrounding estimates to task duration.
   a) True
   b) False

2) Cost-benefit evaluation techniques not involve net present value.

   a) True   b) False

3) CMM stand for capability maturity models.

   a) True   b) False

4) In critical path of CPM used in project planning techniques indicates time require for the completion of the project

   a) True   b) False

2. A) Explain dynamic systems development method in detail. **6**

   B) Explain the forward pass with example. **6**

   C) What is meant by project ? **4**

3. A) What is the nature of resources ? Explain its categories. **6**

   B) Explain types of contract. **6**

   C) Write a note on "Spiral Model". **4**

4. A) Explain the detail V-process model. **6**

   B) Explain incremental delivery with advantages and disadvantages. **6**

   C) What are the problems with software projects ? **4**

5. A) Write in detail about step-wise project planning procedure with diagram. **8**

   B) Explain the Oldham-Hackman job characteristics model in detail. **8**

6. A) What are cost-benefit evaluation techniques ? Explain in detail. **8**

   B) Explain risk planning and control in detail. **8**

7. Write short notes on **(any four)** : **16**

   a) Requirement specification.

   b) COCOMO model

   c) Cash flow forecasting

   d) Importance of software quality

   e) Stakeholders.

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Seat
No.

B.C.A. – III (Semester – VI) (Old) Examination, 2015
BUSINESS DATA PROCESSING, ERP AND BPR

Day and Date : Thursday, 23-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. A) Choose correct alternative.   **8**

   i) Contract is very important _____ the implementation.
     a) before
     b) during
     c) after
     d) before, during and after

   ii) MRP stands for _____
     a) Material Requirement Planning
     b) Manufacturing Resource Planning
     c) Manufacturing Requirement Planning
     d) Material Resource Planning

   iii) ERP system is for _____
     a) Major department only
     b) Entire organization
     c) Marketing and sales
     d) Production department

   iv) _____ is group of people with common goal.
     a) Department   b) System
     c) Resource   d) Enterprise

    v) The investment for ERP will be _____

      a) 5000 – 10000

      b) 10000 – 50000

      c) 100000 – 500000

      d) above 1 crore

    vi) Peoplesoft is strong in _____

      a) Manufacturing

      b) HR

      c) Plant and maintenance

      d) Finance

    vii) _____ is one of the objectives when selecting a ERP package.

      a) Accuracy   b) Flexibility

      c) Project planning   d) Gap analysis

    viii) Baan company is strong in _____

      a) Manufacturing   b) HR

      c) Plant and maintenance   d) Finance

  B) Answer in **one** sentence :   **8**

    1) Long form of BPR.

    2) What is meant by Resource ?

    3) Define team formation.

    4) Define management.

    5) What is meant by implementation ?

    6) Long form of BDP.

    7) What is meant by career ?

    8) What is meant by system ?

2. a) Write down Indian Market Share.   **6**

   b) Explain benefit of ERP.   **6**

   c) Short note on plant maintenance.   **4**

3. a) Explain human resource module. **6**

   b) Explain re-engineering concepts. **6**

   c) Short note on quality management. **4**

4. a) Explain oracle corporating. **6**

   b) Write down role of sales and distribution in ERP. **6**

   c) Write note on Data Processing. **4**

5. a) Explain the evolution of ERP. **8**

   b) Describe career of ERP. **8**

6. a) Write down opportunities and problem in ERP selection. **8**

   b) Explain the advantage of business process re-engineering. **8**

7. Write a short note on (**any 4**) : **16**

   a) SAP AG

   b) Process of ERP

   c) Difference ERP Vs BPR

   d) Total quality management

   e) Phase of ERP.

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SLR-K – 45

Seat No.	

B.C.A. – III (Semester – VI) (New) Examination, 2015
ADVANCED JAVA – II

Day and Date : Thursday, 16-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Question No. **1)** and **7)** are **compulsory**.
　　　　　　　 2) Solve **any two** question from Question No. **2), 3)** and **4)**.
　　　　　　　 3) Solve **any one** question from Question No. **5)** and **6)**.
　　　　　　　 4) Figures to the **right** indicates **full** marks.

1. A) Choose correct alternatives :   **12**

　　1) The Hibernate XL configuration file name is _____

　　　　a) hibernate.cfg.xml　　　　　b) hibernate.config.xml

　　　　c) hibernate.configration.xml　　d) none of these

　　2) A JSP is transformed into a _____

　　　　a) java　　　　　　　　　　b) servlet

　　　　c) applet　　　　　　　　　d) html

　　3) The _____ subelement of <bean> is used for constructor injection.

　　　　a) <constructor-arg>　　　　b) <constructor-bean>

　　　　c) <property>　　　　　　　d) <const-property>

　　4) Which of these packages contains Locale class ?

　　　　a) java.lang　　　　　　　　b) java.io

　　　　c) java.util　　　　　　　　d) java.awt

　　5) Syntax for Expression Language is _____

　　　　a) ${expression}　　　　　　b) $(expression)

　　　　c) {expression}　　　　　　d) All of these

P.T.O.

6) The _____ subelement of joined-subclass is used to generate the foreign key in the subclass mapped table in HB.

a) foreign key   b) id

c) key   d) properties

7) If you don't use @Table annotation, hibernate will use the _____ as the table name by default.

a) class name   b) HibernateTable

c) Object Name   d) annotationTable

8) The JSP _____ tag is used to declare fields and methods.

a) Action   b) directive

c) expression   d) declaration

9) In case of _____ autowiring mode, bean id and reference name must be same.

a) byType   b) byName

c) costrutor   d) both a) and b)

10) WAP stands for wireless Application profile.

a) true   b) false

11) In <jsp:include> which attributes are used

a) id and scope   b) type and id

c) file and flush   d) page and flush

12) All the HB annotations are defined in the _____ package.

a) Org.hibernate.*   b) javax.persistence.*

c) org.hibernate.cfg.*   d) hibernate.annotation.*

B) State whether **true** or **false** :   **4**

1) Hibernate is a framework.

2) ORM stands for object relational module.

3) pageContext is a user defined object in jsp.

4) <hibernate-mapping> is the root level element in a hibernate mapping file.

2. a) Explain JSP Tag Elements in detail. **6**

   b) Explain the Hibernate with Annotation. **6**

   c) What is ORM ? **4**

3. a) Explain steps to create Hibernate Application with example. **6**

   b) Explain JSTL Core Tags. **6**

   c) List out advantages of Spring. **4**

4. a) Explain jsp life cycle in details. **6**

   b) What is generator class and explain it's type in HB ? **6**

   c) Explain the Architecture of WAP. **4**

5. a) What is Dependency injection and explain constructor injection ? **8**

   b) Write a Demonstrate program to exception in jsp (using jsp Tags) **8**

6. a) Explain implicit object in jsp in details. **8**

   b) What is hibernate and explain the advantages of HB ? **8**

7. Write short note on followings **(any four)** : **16**

   a) Explain internationalization.

   b) Advantages of jsp over Servlet.

   c) Architecture of spring.

   d) WAP.

   e) Architecture of hibernate.

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Seat No.

B.C.A. – III (Semester – VI) (New) Examination, 2015
CYBER LAWS AND SECURITY CONTROL

Day and Date : Saturday, 18-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Q. No. **1** and Q. No. **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.

1. A) Choose correct alternatives.   **8**

   I) Ethics was invented by _____
      a) Immanual Kant   b) Thomas
      c) Rodrics   d) Ritche

   II) _____ is not a victimless crime.
      a) Murdur   b) Software piracy
      c) Copy right   d) Law

   III) _____ indicates rules and regulations to be obeyed in the organization.
      a) ethics   b) law   c) moral   d) privacy

   IV) As per IT act _____ cannot be in electronic form.
      a) form   b) license   c) cheques   d) records

   V) _____ means authentication os any electronic records by a subscriber by means of electronic method.
      a) digital signature   b) addressee
      c) access   d) E-commerce

   VI) Cyber law is contained in _____
      a) IT Act 2000   b) Negotiable Instrument Act
      c) Power of attorney   d) Code of ethics

   VII) Linux is _____ software.
      a) Freeware   b) Public domain
      c) Shareware   d) Hardware

P.T.O.

VIII) _____ means the official Gazette published in the electronic form.

    a) electronic gazette   b) electronic record

    c) electronic form   d) all of above

B) Answer **one** sentence :   **8**

    1) What is mean by information ?

    2) What is mean by theft ?

    3) What is mean by security ?

    4) What is mean by contract ?

    5) What is crime ?

    6) Define Morel.

    7) What is mean by License ?

    8) What is mean by copyright ?

2. a) Explain the information society.   **6**

   b) Explain hardware and software security.   **6**

   c) Write a short note on data encryption.   **4**

3. a) Write down advantages of E-commerce.   **6**

   b) Explain the scope of E-commerce.   **6**

   c) Short note on security audit.   **4**

4. a) Discuss ethics for computer user.   **6**

   b) What is digital signature ? Where is it used ?   **6**

   c) Write a short note on "Copy right".   **4**

5. a) Write down difference between traditional commerce and E-commerce.   **8**

   b) Write down Information Technology Act 2000.   **8**

6. a) Explain the benefit of Electronic Data Interchange.   **8**

   b) Explain the UNCTRAL objectives and scope.   **8**

7. Write a short note on (**any 4**) :   **16**

   a) Types of security

   b) Theft of information

   c) Indian economy

   d) Internet application services

   e) E-Market.

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Seat
No.

B.C.A. – III (Semester – VI) (New) Examination, 2015
SOFTWARE PROJECT MANAGEMENT

Day and Date : Tuesday, 21-4-2015   Total Marks : 80

Time : 11.00 a.m to 2.00 p.m.

Instructions : 1) *Q. No. **1** and Q. No. **7** are **compulsory**.*

2) *Attempt **any two** questions from Q. No. **2** to Q. No. **4**.*

3) *Attempt **any one** questions from Q. No. **5** to Q. No. **6**.*

4) ***All** questions carry **equal** marks.*

1. Choose the correct alternatives.   **16**

   1) The first step in project planning is to _____

      a) Determine the budget

      b) Select a team organizational model

      c) Determine the project constraints

      d) Establish the objectives and scope

   2) The _____ has overall responsibility for setting, monitoring and modifying objectives of the project.

      a) Project steering committee   b) Team manager

      c) Team member   d) Project manager

   3) The _____ model is useful to guide the risks in the project.

      a) Prototyping   b) Spiral

      c) SDLC   d) Waterfall

4) COCOMO was developed initially by B.W. Boehm.

   a) True   b) False

5) Which of the following is the goal of project management ?

   a) Keeping overall costs within budget

   b) Delivering the software to the customer at the agreed time

   c) Maintaining well-functioning development team

   d) All of the above

6) Which of the following is not generally considered a player in the software process ?

   a) Customers   b) End-users

   c) Project managers   d) Sales people

7) The people who have interest in project are called as _____

   a) Project holders   b) Stake holders

   c) Project leaders   d) Team members

8) Which of the following risks are derived from the software or hardware technologies that are used to develop the system ?

   a) Managerial risks   b) Technical risks

   c) Estimation risks   d) Organizational risks

9) 4KLOC = _____ LOC.

   a) 400   b) 4000   c) 40000   d) 400000

10) Capability Maturity Model is based on the principles of _____

   a) Initial   b) Defined

   c) Total Quality Management   d) Managed

11) NPV stands for _____

   a) Net production value   b) Net profile value

   c) Net profit value   d) Net present value

12) _____ is based on the idea of some kind of authority or power.

    a) Decision making   b) Motivation

    c) Leadership   d) Organizational behavior

13) IRR stands for _____

    a) Internal rate of return

    b) Intermediate rate of return

    c) Individual rate of return

    d) Internal rate refund

14) The _____ an activity Bar Chart indicating scheduled activity dates and durations frequency augmented with activity float.

    a) Timeline chart   b) Ball chart

    c) Gantt chart   d) Slip chart

15) The rule of _____ states that the latest date for an event is the latest start date for all the activities that may commence from that event.

    a) Backward pass   b) Forward pass

    c) CPM network   d) Network analysis

16) A record on how much the organization is willing to spend on the system is called as functional requirements

    a) True   b) False

2. a) Explain Albrecht function point analysis.   **6**

   b) Explain spiral model with its advantages.   **6**

   c) How plans, methods and methodologies differ from each other ?   **4**

3. a) Differentiate between risk planning, risk avoidance, risk reduction, risk acceptance. **6**

   b) What is project management ? Explain with suitable example. **6**

   c) Difference between strategic assessment and technical assessment. **4**

4. a) Explain different motivation technique. **6**

   b) Define project. How does software project differs from other project ? **6**

   c) Give the advantages of project scheduling. **4**

5. a) Draw and explain the network model with calculating forward pass, backward pass and identifying the critical path activities. **8**

   b) Explain the different types of contract in detail. **8**

6. a) Explain Visualizing progress in detail with example. **8**

   b) Explain the various activities covered by software project management. **8**

7. Write short note on : **16**

   a) Cash flow forecasting

   b) Leadership

   c) RAD

   d) Quality plans.

_____

Seat
No.

B.C.A. – III (Semester – VI) Examination, 2015
WEB TECHNOLOGY – III (New)

Day and Date : Thursday, 23-4-2015　　　　　　　　　　Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Question **1** and question **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.**
　　　　　　　　4) Figures to the **right** place indicates **full** marks.

1. a) Choose correct alternatives :　　　　　　　　　　　　　　　　**10**

　　1) How do you disable client side validation ?

　　　a) Set the language property to C#

　　　b) Set the Runat property to Server

　　　c) Set the Client Target property to Downlevel

　　　d) Set the inherits property to codeb

　　2) How do you manage states in ASP.NET application

　　　a) Session objects

　　　b) Application objects

　　　c) View State

　　　d) All of the above

　　3) Which of the following is not a valid state management tool ?

　　　a) QueryState　　　　　　　　b) Hidden form field

　　　c) Application state　　　　　　d) Cookies

　　4) Select the validation control used for Pattern Matching.

　　　a) Field Validator

　　　b) RegularExpressionValidator

　　　c) RangeValidator

　　　d) PatternValidator

P.T.O.

5) Which set of symbols are used to signify the presence of ASP.NET code ?

    a) <@   b) <#

    c) <%   d) <&

6) The full form of WSDL is _____

    a) Web System Description Language

    b) Web Services Detail Language

    c) Web Service Description Language

    d) None

7) _____ is the default authentication mode for IIS.

    a) Windows   b) Anonymous

    c) Basic Authentication   d) None

8) How many configuration files can an ASP.NET projects have ?

    a) One   b) Two

    c) Three   d) None

9) AJAX based on

    a) Javascript and XML

    b) VBscript and XML

    c) Javascript and HTTP request

    d) None

10) What server support AJAX ?

    a) SMTP   b) WWW

    c) HTTP   d) All of the above

b) Fill in the blanks :   **6**

1) You can use a _____ to specify the default programming language.

2) The two types of code render blocks are in line code and _____ expressions.

3) The _____ property specifies which field from the DataSource to bind to the Text Property of each item in the control.

4) ASP.NET personalization service is based on _____ profile.

5) AJAX stands for _____

6) Before using the web service, a _____ must be created.

2. a) What is ASP.NET ? Explain ASP.NET page life cycle. **8**

   b) What is Web Forms ? Write features of ASP.NET Web Forms. **8**

3. a) Explain any four properties of Calendar control with suitable example. **8**

   b) What is validation ? Explain Validation Server control with suitable example. **8**

4. a) How to use TreeView in ASP.NET ? Explain. **8**

   b) Explain Silverlight architecture. **8**

5. a) What is AJAX ? Explain UpdatePanel. **8**

   b) Explain AdRotator control. **8**

6. a) Explain State Management in ASP.NET. **8**

   b) Write a note on SOAP,WSDL. **8**

7. Write short notes on the following : **16**

   1) Managing Web Server (IIS)

   2) FileUpload

   3) List Controls

   4) Nested Master Pages.

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Seat No.	

B.C.A. – I (Semester – I) Examination, 2015
DISCRETE MATHEMATICS (New C.G.P.A. Pattern)

Day and Date : Friday, 24-4-2015   Max. Marks : 70
Time: 11.00 a.m. to 2.00 p.m.

Instructions : 1) Question No. **1** and question No. **7** are **compulsory.**

2) Attempt **any two** questions from question No. **2, 3** and **4.**

3) Attempt **any one** question from question No. **5** and **6.**

4) Figures to the **right** indicate **full** marks.

5) **Use** of calculator is **allowed.**

1. a) Select the correct alternative :   **7**

    1) If A and B are disjoint sets then cardinality of the set $(A \cap B)$ is _____

       a) 0   b) 1   c) ϕ d) 2

    2) If statement 'p' is true and statement 'q' is false then the truth value of the statement $p \rightarrow q$ is _____

       a) T   b) F   c) T and F   d) $q \rightarrow p$

    3) If $aRb \rightarrow bRa$ then relation R is called as _____ relation.

       a) Reflexive   b) Anti symmetric

       c) Symmetric   d) Asymmetric

    4) The function f : $A \rightarrow B$ is invertible if and only if f is _____

       a) Only one-one   b) Only onto

       c) Both one-one and onto   d) One-one or onto

    5) If $*$ is a binary operation defined on the set A. Let a, b, c $\in$ A.

       If $(a*b) * c = a*(b*c)$ then '$*$' is _____

       a) Commutative   b) Associative

       c) Distributive   d) Collective

P.T.O.

6) If the integers a and b are co-prime integers then their _____

   a) g.c.d. is 1   b) l.c.m.is 1

   c) g.c.d. is 0   d) None of these

7) The converse of the conditional statement $p \rightarrow q$ is _____

   a) $q \rightarrow p$ b) $\sim p \rightarrow \sim q$ c) $\sim q \rightarrow \sim p$ d) $\sim p \rightarrow q$

b) I) State whether the following statement is **True** or **False** :   **(4+3)**

   1) If the sets A and B are finite sets then $|A \cup B| = |A| + |B| - |A \cap B|$.

   2) If a set A contains 'n' number of elements then it's power set will contains 2^n elements.

   3) Relation 'R' which is reflexive, anti-symmetric and transitive is called as equivalence relation.

   4) $\sim(p \vee q) \equiv \sim p \vee \sim q$.

II) Fill in the blanks :

   1) If $A = \{1, 2, 3\}$ and $B = \{4, 8\}$ then $A \times B = $ _____

   2) Cardinality of a singleton set is _____

   3) If $f(x) = (x - 2)(x + 3)$ then $f(3) = $ _____

2. Attempt **any two** of the following: **14**

a) Define symmetric relation, transitive relation and equivalence relation.

b) Define cardinality of a set.

   Let $U = \{a, b, c, d, e, f, g, h, i, j, k\}$. Let $A = \{a, b, e, g, h, i\}$, $B = \{a, b, c, d, f, i, k\}$ be the subsets of the set U. Then find cardinalities of the sets A', B', $A \cap B$, $A \cup B$, U.

c) Let R be the relation defined on the set z by xRy iff $(3x + 4y)$ is divisible by 7, $x, y \in z$. Show that R is an equivalence relation defined on the set Z.

3. Attempt **any two** of the following :   **14**

a) Determine whether the following statement is tautology or contradiction or neither.

   $[(p \rightarrow q) \wedge (q \rightarrow r)] \rightarrow (p \rightarrow r)$.

b) State DeMorgan's laws for the sets. Hence prove any one law for the following sets.

U = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10}, A = { 2, 3, 6, 9, 10} and B = {1, 2, 3, 5, 8, 10}.

c) Let f: R → R be a function defined by f(x) = $\dfrac{7x+2}{5}$ for x ∈ R. Show that 'f' is bijective function.

4. Attempt **any two** of the following : **14**

a) Construct the switching circuit for the following Boolean expression.

$[(x \vee y) \wedge (y' \vee z)] \wedge [(x \vee z') \vee y'] \wedge (x \wedge y) \wedge z]$

b) Let A, B and C be the three finite sets, then show that,

$|A \cup B \cup C| = |A| + |B| + |C| - |A \cap B| - |A \cap C| - |A \cap B| + |A \cap B \cap C|$

c) Show that :

i) If a|b and a|c then prove that a| (b + c), where a, b, c ∈ Z.

ii) If a|b and b|c then prove that , a|c, where a, b,c∈ Z.

5. A) Check the validity of the following argument by using truth table. **7**

p ∧ q, ~r, p → q ⊢ p ↔ q.

B) How many integers between 1 to 789, which are divisible either by 3 or 5 or 7 ? **7**

6. A) Show that any two equivalence classes are either disjoint or identical. **7**

B) Find the remainder when 5^{38} is divisible by 7, by using Fermat's theorem. **7**

7. Attempt **any two** of the following : **14**

a) Let A = {a, b, c, d}. Let R be the relation defined on the set A given by R = {(a, a), (a, b), (a, d), (b, a), (b, c), (c, c), (c, b), (c, d), (d, a), (d, d)}. Write matrix of relation R. Also draw diagraph for relation R. Hence write in-degree and out-degree of each vertex.

b) Define co-prime integers, one-one function and bijective function.

c) Check the following equivalences.

i) ~ (p ∨ q) ≡ ~ p∧ ~ q

ii) (p→q) ∧ (p ↔ q) ≡ (~ p →~ q)

_____

Seat No.

B.C.A. – I (Semester – I) (Old) Examination, 2015
INTRODUCTION TO INFORMATION TECHNOLOGY

Day and Date : Wednesday, 15-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

N.B. : 1) Q. No. **1** and Q. No. **7** are **compulsory.**
           2) Attempt **any two** questions from Q. No. **2, 3** and **4.**
           3) Attempt **any one** question from Q. No. **5** and **6.**
           4) Figures to the **right** indicates **full** marks.

1. A) Choose the single **correct** alternative.   **16**

   1) UNIVAC stands for _____
      a) Universal Automatic Computer
      b) Universal Array Computer
      c) Unique Automatic Computer
      d) Unvalued Automatic Computer

   2) A computer program that converts an entire program into machine language is called _____
      a) Interpreter   b) Simulator
      c) Compiler   d) Commander

   3) Which of the following first generation of computer ?
      a) EDSAC   b) IBM-1401
      c) CDC-1604   d) ICL 2900

   4) Dot Matrix is a type of _____
      a) Tape   b) Printer   c) Disk   d) BUS

   5) ALU stands for _____
      a) Array Logic Unit   b) Application Logic Unit
      c) Arithmetic Logic Unit   d) None of the above

   6) A byte consists of _____
      a) One bit   b) Four bits
      c) Eight bits   d) Sixteen bits

P.T.O.

7) Which of the following terms is the most closely related to main memory ?
   a) Non volatile
   b) Permanent
   c) Control unit
   d) Temporary

8) Which is considered a direct entry input device ?
   a) Optical Scanner
   b) Mouse
   c) Light pen
   d) All of the above

9) The two kinds of main memory are _____
   a) Primary and secondary
   b) Random and Sequential
   c) ROM and RAM
   d) All of the above

10) The second generation were developed during _____
   a) 1949 to 1955
   b) 1956 to 1965
   c) 1965 to 1970
   d) 1970 to 1990

11) Which of the following produces the best quality graphics reproduction ?
   a) Laser printer
   b) Inkjet printer
   c) Plotter
   d) Dot matrix printer

12) Which of the following topologies is not of broadcast type ?
   a) Star
   b) Bus
   c) Ring
   d) Mesh

13) The language that the computer can understand and execute is called _____
   a) High level language
   b) Application software
   c) Machine language
   d) System program

14) Which of the following is not hardware ?
   a) Magnetic tape
   b) Printer
   c) VDU terminal
   d) Assembler

15) Execution of two or more programs by a single CPU is known as _____
   a) Multiprocessing
   b) Time sharing
   c) Multiprogramming
   d) Real time

16) Which of the following devices can be used to directly input printed text ?
   a) OCR
   b) OMR
   c) MICR
   d) None of the above

2. a) What are the five basic operations performed by any computer system ? **6**

   b) Explain the printing mechanism of inkjet printer. **6**

   c) Why BCD code was extended to EBCDIC ? **4**

3. a) Define computer. Give the characteristics and limitations of computer. **6**

   b) Discuss Machine Language with their advantages and disadvantages. **6**

   c) What is Time Sharing System ? **4**

4. a) What is magnetic memory ? Explain the Hard disk in detail. **6**

   b) Carry out the following conversion : **6**

      i) $(2B.(4)_{16} = (?)_{10}$

      ii) $(44)_{10} = (?)_2$

      iii) $(1101110)_2 = (?)_8$

   c) Explain compiler in details ? **4**

5. a) What are the factors which should while purchasing the computer ? **8**

   b) Define Computer Network ? Explain different types of Computer Network ? **8**

6. a) What are types and characteristics of computer viruses ? **8**

   b) Draw the block diagram of computer. Explain in details all its functional unit. **8**

7. Write short note on (**any four**) : **16**

   1) Protocols

   2) Concept of spooling

   3) MICR

   4) Binary Arithmetic

   5) Applications of computer in various fields.

   _____

Seat No.

B.C.A. – I (Semester – I) (Old) Examination, 2015
COMPUTER SCIENCE
Procedural Programming Through 'C'

Day and Date : Friday, 17-4-2015   Max. Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

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

1. Choose correct alternatives :   **16**

   1) By default a real number is treated as

     a) Float   b) Double   c) Long double   d) Far double

   2) A multidirectional conditional control structure is

     a) If..else   b) goto   c) switch case   d) none of these

   3) In c indexing of array starts from

     a) 0   b) 1

     c) size-1   d) depends on compiler

   4) Which of the following is used to detect end of string ?

     a) '\n'   b) '\O'   c) '\t'   d) '\s'

   5) Which storage class is considered as default storage class in C ?

     a) default   b) extern   c) register   d) auto

   6) Which arithmetic operator is allowed with pointer ?

     a) *   b) –   c) /   d) %

   7) All the elements of the union are active at a time

     a) True   b) False

8) Which of the following is used to permanent store the data ?

   a) Array   b) Structure   c) File   d) Variable

9) What will the statement – char ch = 'A'

Store in variable ch ?

   a) Character A   b) 'A'

   c) ASCII value of A   d) None

10) What will be the output of the following code :

void main () {

int a = 10 ;

printf("%d %d %d ",a,a++,++a);}

   a) 12 11 11   b) 12 10 10   c) 11 11 12   d) 10 10 12

11) What will be the output of the following code :

void main () {

  char * str = "Hello world";

  printf ("%d", printf ("%s", str));

     }

   a) 11 Hello world   b) 10 Hello world

   c) Hello world 10   d) Hello world 11

12) The function used to position the file pointer in 'C' is

   a) seekg()   b) fseekg()   c) tellg()   d) fileseek()

13) The value contained in pointer is _____ of another variable.

   a) name   b) address   c) value   d) none of these

14) Which storage class specifies local variables ?

   a) auto   b) register   c) static   d) extern

15) Which of the following is keyword ?

   a) break   b) continue   c) if   d) all

16) The parameter passed to function call are

   a) Dummy parameters   b) Actual parameters

   c) Formal parameters   d) Optional

2. A) What is algorithm ? Write an algorithm to find largest of two numbers. **6**

   B) What is constant ? Explain its types. What is difference between constant and variable ? **6**

   C) Write a program to convert temperature from Fahrenheit to Celsius. **4**

3. A) What is String ? Explain string handling functions in detail. **6**

   B) Write a program to swap the values of two variables using function (use call by reference). **6**

   C) State demerits of array. **4**

4. A) What is pointer ? Explain pointer arithmetic. **6**

   B) Write a program for multiplication of two matrices. **6**

   C) What is union ? How it is differ from structure ? **4**

5. A) Write a program to reverse a given string (do not use built in string function). **8**

   B) Which are file opening modes ? Explain formatted input functions for file. **8**

6. A) Write a program to copy contents of one file to another file using command line argument. **8**

   B) What is structure ? Explain pointer to structure with example. **8**

7. Write short note on **(any 4)** : **16**

   1) Dynamic memory allocation

   2) Standard output functions for file

   3) Features of c language

   4) Array of structures

   5) Preprocessor Directives.

_____

B.C.A. – I (Semester – I) Examination, 2015
FUNDAMENTALS OF FINANCIAL ACCOUNTING (Old)

Day and Date: Monday, 20-4-2015　　　　　　　　　　　Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

N.B. : 1) Q.**1** and Q.**7** are **compulsory**.
　　　　2) Attempt **any 2** from Q. **2**, Q. **3** and Q. **4**.
　　　　3) Attempt **any 1** from Q. **5** and Q. **6**.
　　　　4) Figures to the **right** indicate **full** marks.
　　　　5) **Use** of calculator is **allowed**.

1. A) Select **correct** alternative and rewrite statement :　　　　　**8**

　　1) Fixed assets are valued at cost less _____

　　　a) Price　　　　　　　　b) Discount

　　　c) Scrape value　　　　　d) Depreciation

　　2) Debit all expenses/losses and credit all incomes/gains is the rule
　　　of _____

　　　a) Real A/c　　　　　　　b) Personal A/c

　　　c) Nominal A/c　　　　　d) All of the above A/c

　　3) Narration is an explanation of _____

　　　a) Single entry　　　　　b) Journal entry

　　　c) Double entry　　　　　d) None of the above

　　4) Only those transactions which can be expressed in _____ terms
　　　are recorded in accounting books.

　　　a) Monetary　　　　　　b) Credit

　　　c) Expenditure　　　　　d) Debit

　　5) _____ books are called books of original entry.

　　　a) Subsidiary　　　　　　b) Cash

　　　c) Sales　　　　　　　　d) Purchase

6) A _____ is a copy of customer's A/c in the bank ledger.
   a) Credit sales
   b) Bank pass book
   c) Cash book
   d) Credit purchase

7) _____ Expenses appear on the asset side of Balance Sheet.
   a) Outstanding Exps.
   b) Sundry Exps.
   c) Prepaid Exps.
   d) Petty cash Exps.

8) Under _____ system, amount of depreciation changes every years.
   a) Fixed instalment
   b) Annuity
   c) Depreciation fund
   d) Written down value

B) Fill in the blanks : **8**

1) Bank overdraft is an _____ of the business.
2) Single Entry is _____ method of accounting.
3) _____ discount does not appear in the books of A/c.
4) When a proprietor brings cash in business _____ A/c is credited.
5) Overdraft is a _____ balance of Bank A/c.
6) Closing stock is valued of cost or market price which ever is _____
7) Depreciation is charged on _____ assets.
8) _____ is the main or the principal book of accounts.

2. Write short notes (**any two**) : **16**

a) Bank Reconciliation Statement.

b) Advantages of Double Entry System.

c) Format of Balance Sheet under Company Law.

3. Journalise the following transactions in the books of Pravin Trading Co. **16**

   2012

   June – 1 – Pravin transferred Rs. 20,000 from his private A/c to business bank A/c.

   4 – Gave a cheque for Rs. 5,000 to Prashant on account.

   8 – Purchased printings and stationery of Rs. 1,000.

   11 – Received cash Rs. 8,800 from our debtor Mr. Satish in full settlement of his A/c for Rs. 9,000.

   15 – Sold old Typewriter for Rs. 1,500.

   18 – Gave a loan to Sunil by cheque Rs. 5,000 at 10% interest p.a.

   21 – Paid LIC premium of Rs. 750 by cheque on the life of Pravin.

   30 – Purchased computer from Sahil Computers of Rs. 15,000 paying half the amount in cash.

4. Following is record of receipt and issue to certain factory : **16**

   1-4-2012 – Op.stock of 100 tons at Rs. 100 per ton.

   5-4-2012 – Issued 50 tons.

   9-4-2012 – Received 50 tons @ Rs. 90 per ton.

   14-4-2012 – Received 100 tons @ Rs. 80 per ton.

   17-4-2012 – Issued 100 tons.

   22-4-2012 – Issued 50 tons.

   24-4-2012 – Received 30 tons @ Rs. 90 per ton.

   27-4-2012 – Issued 20 tons.

   30-4-2012 – Issued 35 tons.

   Prepare Store Ledger A/c using FIFO and LIFO method.

5. a) What do you mean by 'Book Keeping' ? Explain the objectives of 'Book Keeping' ? **8**

   b) Explain the need and importance of Depreciation. **8**

6. Shivam Ltd. Co. purchased a machinery on 1-7-2008 for Rs. 1,20,000 and paid installation charges of Rs. 10,000. Depreciation is written off @ 10% p.a. Using Diminishing Balance Method, show 5 years Machinery A/c, Depreciation A/c assuming that Co.close its books of A/c on 31st March every year. **16**

7. From the following Trial Balance for the year ended 31st March, 2012 of Mr. Sachin, prepare Trading, Profit and Loss A/c and Balance Sheet as on that date. **16**

Particulars	Debit (Rs.)	Credit (Rs.)
Cash in hand	2,400	–
Purchases	2,40,000	–
Stock as on 1-4-11	70,000	–
Sundry Debtors	1,00,000	–
Plant and Machinery	1,20,000	–
Furniture	30,000	–
Bills Receivable	40,000	–
Rent and Taxes	20,000	–
Wages	32,000	–
Salary	37,600	–
Capital	–	2,00,000
Bills payable	–	44,000
Creditors	–	48,000
Sales	–	4,00,000
	6,92,000	**6,92,000**

Adjustments :

1) Closing stock on 31/3/2012 Rs. 50,000.

2) Outstanding wages Rs. 5,000.

3) Depreciation on Plant and Machinery @ 10% and on Furniture @ 5%.

SLR-K – 9

B.C.A. I (Semester – I) (Old) Examination, 2015
BUSINESS COMMUNICATION

Day and Date : Wednesday, 22-4-2015   Total Marks : 80
Time : 11.00 a.m. to 2.00 p.m.

Instructions : 1) Question No. **1** and **7** are **compulsory**.
                 2) Attempt **any two** questions from Q. Nos. **2, 3** and **4**.
                 3) Attempt **any one** question from Q. No. **5** and **6**.
                 4) Figures to the **right** indicate **full** marks.

1. A) Fill in the blanks with **correct** alternative :   **8**

    1) _____ refers to the quality of avoiding vagueness in the communication.
       a) Concise   b) Concrete   c) Coherent   d) Complete

    2) Physical barrier called as _____ barrier.
       a) Internal   b) External
       c) Co-related   d) Psychological

    3) _____ mark is used at the end of the sentence, which expresses a strong feeling.
       a) Semicolon   b) Question
       c) Quotation   d) Exclamation

    4) Necessary elements in planning of the letter _____
       a) Find out the main aim of writing letter
       b) Collect all relevant information
       c) Proper knowledge of the situation
       d) All of the above

    5) A record of the decisions taken at a formal meeting is called _____
       a) Agenda   b) Letter
       c) Notice   d) Minutes

6) _____ is the person to whom the message is sent.

   a) Sender   b) Receiver

   c) Mediator   d) Caller

7) An acceptable form of writing the complementary close in the letter writing is _____

   a) yours faithfully**.**   b) Yours faithfully**.**

   c) yours Faithfully**,**   d) Yours faithfully**,**

8) _____ is an importance of upward communication.

   a) Feedback   b) Freedom for expression

   c) Creative suggestion   d) All of the above

B) Fill in the blanks.   **4**

1) Traffic lights are an example of _____ communication.

2) _____ report is required when an organization intends to launch a new product in the market.

3) The barriers resulted from psychological set up of man known as _____ barrier.

4) _____ is a list of items of the business to be done in the meeting.

C) Say whether the following statements are **true** or **false**.   **4**

1) A business letter is not a friendly chatting between two close friends.

2) Presenting ideas suggestions in such a way that reader sees now it is helpful to him is called 'You' attitude.

3) A good report should contain facts and figures systematically.

4) Correct punctuation marks can confuse the meaning of a sentence.

2. A) What is mean by Communication ? Explain the concept of signification of good communication. **8**

   B) What is downward communication ? Explain its importance. **8**

3. A) Explain the informal channels of communication in detail. **8**

   B) What is mean by report ? Explain the steps of writing report. **8**

4. A) Draft a letter to your supplier complaining about the inferior quality of goods which you received. **8**

   B) Draft an application letter to the advertisements given below. **8**

   Young energetic fresh graduates required for Sales and Accounts work in our group of companies. Write application at Laxmi Boards Ltd., Das Chambers 16, Dalal street, Mumbai – 400 001.

5. A) What is process of Formal Written Communication ? **8**

   B) What is meant by meeting ? Explain its types. **8**

6. A) Explain the principles of communication in detail. **8**

   B) Write a note on mechanism of writing. **8**

7. Write a short note (**any four**) : **16**

   a) Objectives of communication.

   b) Modern office communication.

   c) You attitude.

   d) Horizontal communication.

   e) Physical Barrier.

—————————