



6) _____ accept input by allowing the user to place a fingertip directly on the computer screen.

- a) Light pen b) Glidpad c) Touch screen d) Mouse

7) The printing speed of dot matrix printer is about

- a) 50 cps to 500 cps b) 50 cps to 100 cps
c) 500 cps to 5000 cps d) 50 cps to 1000 cps

b) Fill in the blank :

7

- 1) The printing speed of laser printer can be measured in _____.
- 2) In _____ communication can take place in both direction but not simultaneously.
- 3) LAN communication speed ranges from _____ to _____ mbps.
- 4) The third generation of computer was characterized by _____.
- 5) EDSAC stands for _____.
- 6) WWW stands for _____.
- 7) The access method used for magnetic disk is _____.

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

14

- a) What do you mean by computer ? Explain the block diagram of computer.
- b) Explain the RAM and ROM with their different types.
- c) Define computer generation ? Explain first generation of computer.

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

14

- a) What is operating system ? Explain the functions of operating system.
- b) Define impact and non-impact printer. Explain printing mechanism of laser printer.
- c) Solve the following :
 - i) $(42)_{10}$ to $()_2$
 - ii) $(1101110)_2$ to $()_8$
 - iii) $(502.327)_8$ to $()_{10}$



4. Write the answer of the following questions **(any two)** : **14**
- a) What are pointing devices ? Explain commonly used pointing device in details.
 - b) Explain multiprogramming and multiprocessing in details.
 - c) Discuss the factors which should be consider while purchasing the computer.
5. A) Define network topology ? Explain different types of topology. **7**
- B) What is computer virus ? Explain different types of computer virus. **7**
6. A) Define computer language. Explain high level language with its advantages and limitations. **7**
- B) What is software ? Explain different types of software. **7**
7. Write short note on **(any two)** : **14**
- a) EBCDIC code
 - b) Scanner
 - c) Introduction to internet.
-



Seat No.	
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B.C.A. – I (Semester – I) (CGPA Pattern) Examination, 2015
COMPUTER SCIENCE
Procedural Programming Through ‘C’

Day and Date : Wednesday, 18-11-2015
Time : 10.30 a.m. to 1.00 p.m.

Max. Marks : 70

- Instructions :** 1) Question 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 alternative. **10**
- 1) Which of the following is not a logical operator ?
a) & b) && c) || d) !
 - 2) Which of the following cannot be checked in a switch-case statement ?
a) character b) integer c) float d) enum
 - 3) When we mention the prototype of a function ?
a) Defining b) Declaring c) Prototyping d) Calling
 - 4) If the two strings are identical, then strcmp () function returns
a) – 1 b) 1 c) 0 d) Yes
 - 5) If you pass an array as argument to a function, what actually gets passed ?
a) Value of elements in array
b) First element of the array
c) Base address of the array
d) Address of the last element of array
 - 6) If a variable is a pointer to a structure, then which of the following operator is used to access data members of the structure through the pointer variable ?
a) • b) & c) * d) →



7) What will be output if you will compile and execute the following 'C' code ?

```
void main ( )  
{  
int x;  
for (x = 1; x <= 5; x + +) ;  
Print f(“ %d”, x) ;  
}
```

- a) 4 b) 5 c) 6 d) Error

8) How will you free the allocated memory ?

- a) remove (var_name); b) free (var_name);
c) delete (var_name); d) dalloc (var_name);

9) Which header file should be included to use functions like malloc () and calloc () ?

- a) memory.h b) string . h c) alloc . h d) dos . h

10) What will be the output of the program ?

```
int main ( )  
{  
const int i = 0;  
printf (“%d”, i + +);  
return 0;  
}
```

- a) 0 b) 1 c) no output d) error

b) Fill in the blanks :

4

- 1) Pointers allow the direct access of _____
- 2) A global variable is also known as _____
- 3) By default the function returns _____ type value.
- 4) _____ statement is used to bypass the portion of the loop.

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

14

- a) What is array ? Explain types of array.
- b) What is algorithm ? Write algorithm and program to check whether the given number is palindrome or not.
- c) Write a program to find multiplication of two matrices.



3. Attempt **any two** of the following. **14**
- a) What is use of looping statements ? Which are various looping statements ? Explain difference between while and do . . . while.
 - b) Write a program to count number of vowels in given string. (do not use any built in function).
 - c) Write a program to convert given decimal number to its binary equivalent number.
4. Attempt **any two** of the following : **14**
- a) What are different storage classes in 'C' ? Explain register in detail with example.
 - b) Write a program which shows the concept passing entire array to the function.
 - c) What are different types of operators ? Explain logical operators in detail.
5. A) Which are the various derived data types in 'C' ? Explain difference between structure and union with example. **14**
- B) Write a program to accept roll no.; name and marks of three different subjects of 5 students and display roll no., name, total of marks and percentage of each student using structure.
6. A) What is file ? Explain : **14**
- i) fopen () ii) fgetc() iii) fputc()
- B) Write a program to accept 5 numbers from user and write it into the file and display it on the console.
7. Write short notes (**any 2**) : **14**
- a) Structure of 'C' program and identifier declaration rules.
 - b) Explain goto statement with types.
 - c) Array Vs structure with example.
-



- " 13 Paid for stationery Rs. 1,000
- " 17 Purchased computer with printer Rs. 40,000
- " 21 Purchased goods from Ravi for Rs. 50,000 on credit
- " 25 Paid for office rent Rs. 2,000
- " 26 Received commission Rs. 1,000
- " 30 Withdrawn from bank for office use Rs. 5,000 and personal use Rs. 500
- " 31 Paid salary Rs. 4,500 and commission Rs. 100.

4. a) The following transactions took place in respect of an item of material. 7

Date	Receipts	Rate	Issue
2-9-2008	400	2.00	–
10-9-2008	600	2.40	–
15-9-2008	–	–	500
18-9-2008	500	2.60	–
20-9-2008	–	–	400

Record the above transactions in the store ledger pricing the issues at FIFO method.

- b) Write short notes (**any one**) : 7
- 1) Written down value method of depreciation.
 - 2) Fundamental accounting assumptions.

5. a) What are objectives of maintaining books of accounts ? 7

b) State the merits and demerits of LIFO and FIFO. 7

6. XYZ and company Jalgaon purchased building for Rs. 8,00,000 on 1st July 2007 on 1st April 2008 on extension was made to the above building spending Rs. 4,00,000. 14

On 1st October 2009 half of the building was sold for Rs. 5,60,000 and brokerage at 2% of the selling price paid.

Depreciation charged on 31st March every year @ 10% p.a. under diminishing balance method.

Prepare Building A/c, Depreciation A/c for 2007-08, 2008-09 and 2009-10.

Note : Working is part of your answer.



7. From the following information prepare Trading, Profit and Loss A/c and Balance Sheet as on 31st March 2010.

14

Trial Balance

Particulars	Debit (Rs.)	Credit (Rs.)
Insurance	1,000	–
Discount	500	400
Postage and Telegram	1,500	–
Salaries	28,000	–
Debtors/Creditors	33,000	34,000
Wages	12,000	–
Opening stock	20,000	–
Carriage	4,500	–
Goods returns	2,800	4,600
Purchases/sales	96,600	1,50,800
Bank loan	–	60,000
Plant and Machinery	20,000	–
Buildings	80,000	–
Drawings	4,000	–
Capital	–	50,000
Office rent	2,000	–
Bad debts	600	–
Bank overdraft	–	10,200
Cash in hand	3,500	–
Total	3,10,000	3,10,000

Adjustment :

- 1) Stock on 31-3-2010 was valued at Rs. 32,000.
-



Seat No.	
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**B.C.A. (Semester – I) Examination, 2015
(CGPA Pattern)
BUSINESS COMMUNICATION**

Day and Date : Monday, 23-11-2015
Time : 10.30 a.m. to 1.00 p.m.

Max. Marks : 70

Instructions: 1) Q. No. 1 and Q. No. 7 are **compulsory**.
2) Attempt **any two** from Q. 2, Q. 3 and Q. 4.
3) Attempt **any one** question from Q. 5 and Q. 6.

1. A) Multiple Choice questions : 10

- 1) Communication is effective when _____
 - a) everyone agrees with you and your position
 - b) the message is understood and stimulated action
 - c) opinion is not included
 - d) communication is rarely effective
- 2) Which of the following is the final phase of the communication process ?
 - a) The receiver sends feedback
 - b) The sender has an idea
 - c) The receiver gets the message
 - d) The sender transmits the message
- 3) _____ is a group of people who are appointed to solve a specific problem.
 - a) Standing committee
 - b) A committee
 - c) A task force
 - d) A help desk
- 4) _____ are routine reports prepared at regular time interval – daily, weekly, monthly, quarterly or annually.
 - a) Periodic reports
 - b) Formal reports
 - c) Progress reports
 - d) Conference reports



4. Write answers of the following questions (**any two**) : **14**
- a) Modern office communication
 - b) Types of meetings.
 - c) Barriers to communication.
5. Write answers of the following questions : **14**
- a) What are basic principles of communication ?
 - b) Write a complaint letter to Shivani Enterprises about the broken part of washing machine that you newly purchased.
6. Write the answers of following questions : **14**
- a) Prepare a Resume of your education qualification, extra activities, social work etc.
 - b) Write a notice and an agenda for annual general meeting of Students Council.
7. Write short notes of the following (**any two**) : **14**
- a) E-mail and Mobile
 - b) Objectives of communication
 - c) Non-verbal communication
 - d) Formal and informal communication.
-



B) State whether the following statements are **true** or **false**. **7**

- 1) If $A = \{x, y, z\}$ and $B = \{p, q\}$ then $B \times A = \{(x, p), (x, q), (y, p), (y, q), (z, p), (z, q)\}$.
- 2) The relation R which reflexive, antisymmetric and transitive is called as equivalence relation.
- 3) If A and B are disjoint sets then, $|A \cup B| = |A| + |B|$.
- 4) The inverse of the conditional statement $p \rightarrow q$ is $\sim p \rightarrow \sim q$.
- 5) DeMorgan's Law is $(A \cap B)' = A' \cap B'$.
- 6) If $*$ is a binary operation defined on a set A and $(a * b) * c = a * (b * c)$, for $a, b, c \in A$ then the operation $*$ is associative.
- 7) For any two non zero integers a and b , $a.b = (\text{g.c.d. of } a \& b) \times (\text{e.c.m. of } a \& b)$.

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

- A) Define : intersection of two sets, anti-symmetric relation and complement of a set.
- B) Define bijective function. Hence show that the function $f : \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = \frac{5x+3}{2}$, for all $x \in \mathbb{R}$, is bijective.
- C) Show that :
 - i) $p \vee (q \vee r) \equiv (p \vee q) \vee r$
 - ii) $\sim (p \wedge q) \equiv \sim p \vee \sim q$.

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

- A) Let $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$. Let $A = \{1, 3, 4, 5, 10\}$ and $B = \{1, 2, 5, 7, 8, 10\}$ be the subsets of U . Then write the sets $A', B', A \cup B, A \cap B, A - B, B - A, (A \cap B)'$.
- B) Let $A = \{1, 2, 3, 4\}$. Let R be the relation defined on the set A by xRy iff $x \geq y$, $x, y \in A$. Write the elements of relation R . Also write matrix of 'R'. Also draw digraph of relation R . Hence find in-degree and out-degree of each vertex.
- C) Find the g.c.d. of 1122 and 493 by using Euclidean algorithm.



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

A) Construct the switching circuit for the following Boolean expression

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

B) How many integers between 1 to 786 which are divisible by 3 or 5 or 7 ?

C) Prepare the truth table for the conditional statement $q \rightarrow p$, it's converse, inverse and contrapositive form.

5. A) Let $A = \{p, q, r, s\}$. Let R be the relation defined on the set A given by $R = \{(p, p), (p, s), (q, p), (q, r), (r, q), (r, r), (r, s), (s, p), (s, s)\}$. Find transitive closure of relation R by using Warshall's algorithm. 7

B) Show that the integers 315 and 221 are relatively prime integers. And express the g.c.d. of 315 and 221 in the form $315x + 221y$. Where $x, y \in \mathbb{Z}$. 7

6. A) Check the validity of the following argument by using truth table. 7

$$p \leftrightarrow q, \sim p, p \vee r \vdash \sim q.$$

B) By using Fermat's theorem find the remainder when 4^{398} is divided by 7. 7

7. Attempt **any two** of the following. 14

A) Define tautology and contradiction. Hence check whether the following statement is tautology or contradiction or contingent

$$[(p \wedge \sim q) \rightarrow (p \vee \sim q)] \leftrightarrow (p \rightarrow q).$$

B) Let $A = \{x | x \in \mathbb{N} \text{ and } x \leq 10\}$ and $B = \{x | x \text{ is a positive even number and } 3 \leq x \leq 14\}$

Write cardinalities of the sets, A, B, $A \cup B, A \cap B, A - B$.

C) Define partial ordering relation, one-one function and equivalence relation.



Seat No.	
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**B.C.A. I (Semester – II) Examination, 2015
OOP WITH C++ (CGPA Pattern) (New)**

Day and Date : Tuesday, 17-11-2015

Max. Marks : 70

Time : 10.30 a.m. to 1.00 p.m.

- N.B. :** 1) Question no. 1 and 7 are **compulsory**.
2) Attempt **any two** questions from question no. 2, 3, 4.
3) Attempt **any one** question from question no. 5, 6.

1. A) Select the correct alternative : 5

- 1) Encapsulation is wrapping up of _____, _____ into single unit.
a) data, functions b) data, class members
c) functions, objects d) none of these
- 2) _____ language is object based language.
a) C++ b) Small talk c) Java d) Ada
- 3) Classes containing pure virtual function are known as _____ classes.
a) abstract b) friend c) static d) none of these
- 4) Late binding is achieved through _____ function.
a) stati b) friend c) abstract d) virtual
- 5) _____ append mode, all writes occurs at the end.
a) ios :: app b) ios :: ate c) ios :: in d) ios :: out

B) State **True** or **False** : 5

- 1) Reference variables are internally treated as constant pointers.
- 2) In C++ function prototyping is essential.
- 3) An in line function is a function that expands in a single line when it is invoked.
- 4) A friend function can not be invoked like a normal function without the help of any object.
- 5) Constructors are invoked in the order of parent to child, where as destructors are invoked in the order of child to parent.



C) Fill in the blanks : 4

- 1) The function eof () returns a _____ value if the end of the file condition is reached.
- 2) Creating of class instance is called as _____
- 3) The members of structure are _____ and members of class are _____ by default.
- 4) A static member function can have access to only other static members declared in the _____

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

- A) Differentiate between procedure oriented programming and object oriented programming.
- B) Differentiate between function overloading and function overriding.
- C) Differentiate between class and structure.

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

- 1) Explain the process of invocation of constructors and destructors in inheritance.
- 2) What are the advantages of call by reference over call by address ?
- 3) Describe the memory management operators in C++.

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

- 1) What is virtual base class ? When we make class virtual ? Explain with example.
- 2) Explain hierarchy of File stream classes.
- 3) Describe with example the uses of enumeration data types.



5. Write answer of the following question : 14

1) Define a class to represent a Bank Account. Include the following data members.

- a) Name of the depositor
- b) Type of Account
- c) Account No.
- d) Balance Amount

Member functions :

- a) To assign initial value
- b) To deposit an amount
- c) To withdraw an amount
- d) To display name of depositor and balance

Define all member function and main ().

2) Write a program to achieve addition of two objects using friend function.

6. Write answers to the following questions : 14

1) Explain the process of dynamic construction and dynamic destruction with example.

2) Explain run time polymorphism with suitable example.

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

1) Binary file operations.

2) Static member functions.

3) Program structure in C++.

4) File operation mode.



Seat No.	
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B.C.A. (Part – I) (Semester – II) Examination, 2015
COMPUTER SCIENCE
Web Technology
(New – CGPA Pattern)

Day and Date : Thursday, 19-11-2015

Max. Marks : 70

Time : 10.30 a.m. to 1.00 p.m.

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

1. A) Choose correct alternative. 7
- 1) Target = _____ will open linked file in new window.
a) _parent b) _top c) _self d) _blank
 - 2) The _____ indicates a server side image map.
a) ismap b) map c) server d) servermap
 - 3) PWS 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) Internet programming is based on _____ model.
a) Client-server b) Local
c) Desktop d) Standalone
 - 7) In vbscript _____ keyword is used to declare variable.
a) datatype b) var
c) Vbscript d) dim



- B) State whether **true** or **false** : 4
- 1) In DHTML 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 : 3
- 1) A class in CSS always starts with _____
 - 2) We embed JavaScript into HTML by using _____ tag.
 - 3) In vbscript by default date is entered in _____ format.
2. Write short essay type question (**any 2**) : 14
- A) How you can create image as hyperlink and internal hyperlink.
 - B) Explain array in JavaScript with its properties and give example.
 - C) Write a program in vbscript to calculate area and perimeter of circle.
3. Write short essay type question (**any 2**) : 14
- A) Explain types ESS of CSS with example.
 - B) Explain event handling in JavaScript with example.
 - C) Explain dialog boxes in a vbscript and JavaScripts.
4. Write short essay type question (**any 2**) : 14
- A) Explain general structure of HTML document.
 - B) Explain validation in JavaScript with example.
 - C) Explain statement in vbscript. Why there is need of option explicit ?
Demonstrate with example.
5. A) What is table ? Explain table tag with its attributes and example. 7
B) Write a JavaScript program to find out given number is perfect or not. 7
6. A) What is Framset tag ? Explain frameset tag with example. 7
B) Write a vbscript program to find out given number is prime or not. 7
7. Write a short notes on (**any 2**) : 14
- a) Lists in HTML with example.
 - b) Finger, SMTP and POP.
 - c) Logical tag and text formatting tag.
-



- B) Fill in the blanks : 7
- 1) Expense incurred on administration come under _____ expense group.
 - 2) The simplest and the most commonly used type of journal is _____
 - 3) Stock items can be viewed through _____ book.
 - 4) Comparing ratios of different months are called _____
 - 5) Loans taken from bank is _____
 - 6) In any company _____ is defined as a unit in which definite cost can be allocated or attributed.
 - 7) To print profit and loss account press _____ keys simultaneously.
2. Attempt **any two** : 14
- A) Explain different accounting concepts.
 - B) Explain different types of vouchers in Tally.
 - C) Explain the need and importance of Bank Reconciliation Statement.
3. Attempt **any two** : 14
- A) Explain how to create single and multiple groups in Tally.
 - B) Discuss different types of MIS Reports in Tally.
 - C) Explain security control.
4. Attempt **any two** : 14
- A) How can we create, alter and delete units of measure ?
 - B) What is TDS ? and how to create TDS Master and Ledger in Tally ?
 - C) Explain printing configuration for vouchers.
5. The following transactions to create journal entry and ledger with their groups in Tally. 14
- | Date | Particulars |
|-----------|--|
| 2-8-2003 | Cash purchase Rs. 18,500 |
| 4-8-2003 | Sold goods to Sameer worth Rs. 21,000 on credit. |
| 5-8-2003 | Bought furniture for office use from M/s Ashok Trading Co on credit. |
| 7-8-2003 | Cash deposited into State Bank of India cash credit account Rs. 500 |
| 9-8-2003 | Rent paid Rs. 200 |
| 12-8-2003 | Salary paid Rs. 500 |
| 14-8-2003 | Commission received Rs. 100 |
6. What do understand by Value Added Tax (VAT) ? Discuss its main features. 14
7. A) Explain meaning and scope of service tax. 14
- B) What are the advantages of computerized accounting software ?
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Seat No.	
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B.C.A. – I (Semester – II) (CGPA Pattern) Examination, 2015
DEVELOPMENT OF HUMAN SKILLS (New)

Day and Date : Tuesday, 24-11-2015
Time : 10.30 a.m. to 1.00 p.m.

Total Marks : 70

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

1. A) Choose the correct alternative : 7

- 1) _____ is an objective which is very precisely or exactly expressed in specific terms.
a) Achievement b) Goal c) Commitment d) None
- 2) The word 'Reinforcement' is related to _____
a) Values b) Ability c) Learning d) All of these
- 3) The term _____ refers to coming together of a group of persons for the purpose of discussion.
a) Interview b) Seminar
c) Career d) Individual presentation
- 4) Positive and negative reinforcement are the types of _____
a) Values b) Interview c) Presentation d) Learning
- 5) The ability to work with other people is known as _____
a) Physical ability b) Sensory ability
c) Social ability d) Mental ability
- 6) Memory is function of _____
a) Vision b) Behaviour c) Self image d) Brain
- 7) Goal setting is essential to overcome _____
a) Strength b) Weakness c) Skills d) Values

B) State **true** or **false** : 7

- 1) Human skills are also called as people skills.
- 2) Good part of personality can be termed as strength of the personality.
- 3) The speed is given without any preparation is seminar.



- 4) Mr. Milton Rokeach has classified the motivation.
- 5) Goal setting is essential for to under come weakness.
- 6) There are five Universal values.
- 7) The act of reading is essentially a process of writing.

2. Write short notes on (**any 2**) : **14**
 - 1) Leadership skills
 - 2) Extempore speech
 - 3) Team role skill.
 3. Write short notes on (**any 2**) : **14**
 - 1) Human skills
 - 2) Conducting seminars
 - 3) SWOT analysis.
 4. Write short notes on (**any 2**) : **14**
 - 1) Components of body language
 - 2) Benefits of emotional intelligence
 - 3) Oral communication.
 5. A) What is leadership ? Explain different leadership skills. **14**
B) What is meant by values ? Explain types of values.
 6. A) What do you mean by conference ? Explain the objectives and types of conference. **14**
B) What is meant by learning ? Explain types of learning.
 7. Write short notes on (**any 2**) : **14**
 - 1) Explain business etiquettes.
 - 2) Types of abilities.
 - 3) Types of attitude.
 - 4) How to prepare for a presentation ?
-



3) Find median for the data given below :

Class	25 – 35	35 – 45	45 – 55	55 – 65	65 – 75
Frequency	5	12	19	16	5

3. Attempt **any two** : **14**

- 1) Define median. Explain step by step procedure of obtaining median for grouped data.
- 2) Given : $n = 10$, $\Sigma X = 125$, $\Sigma Y = 136$, $\Sigma X^2 = 1801$, $\Sigma Y^2 = 2027$, $\Sigma XY = 1577$
Find correlation coefficient between X and Y and interpret the result.
- 3) Given : $\bar{X} = 30$, $\bar{Y} = 25$, $\sigma_x^2 = 49$, $\sigma_y^2 = 64$, $\text{cov}(X, Y) = 57$ obtain equations of lines of regression and hence estimate X for Y = 20 and Y for X = 40.

4. Attempt **any two** : **14**

- 1) Explain construction of ogives.
- 2) A ticket is drawn at random from a bag containing 25 tickets numbered 1 to 25, Find probability of getting a ticket having number i) even ii) perfect square iii) divisible by 3.
- 3) Find range and s.d. for the data given below :

X	9	11	14	17	18	20
f	4	7	13	10	8	3

5. A) Define regression coefficients and state its properties. **7**
B) Draw less than ogive to represent the following data and hence obtain median. **7**

Class	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
Frequency	5	12	18	23	21	14	4

6. A) Define class limits, class-width, frequency, discrete variable. **7**
B) The mean of 100 observations is found to be 65. Later on it was observed that an observation 76 was wrongly taken as 67. Find correct A.M. **7**



7. Attempt **any two** :

14

- 1) Define-index number. Explain selection of base period in construction of I, No.
 - 2) Define-probability. State addition and multiplication laws of probability.
 - 3) The A.M. and S.D. of weights of 80 students from college A were 56 kg. and 12 kg. and that of 100 students from college B were 62 kg. and 14 kg. respectively. Find which college students shows homogeneity in weights.
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Seat No.	
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B.C.A. (Part – I) (Semester – II) Examination, 2015
OOP WITH C++ (Old)

Day and Date : Tuesday, 17-11-2015

Total Marks : 80

Time : 10.30 a.m. to 1.30 p.m.

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

1. A) Choose correct alternatives.

8

- 1) Which of the following operator can not be overloaded ?
a) >> b) ? : c) + d) none of these
- 2) _____ gives the current position of the get pointer.
a) seekg b) seekp c) tellg d) tellp
- 3) A base class containing pure virtual function is called as
a) derived b) abstract base class
c) inheritance d) none of these
- 4) In C++ _____ keyword is used for memory allocation.
a) free b) delete c) new d) virtual
- 5) A class can inherit the attributes of two or more classes is known as
a) Single inheritance b) Multiple inheritance
c) Multilevel inheritance d) Hybrid inheritance
- 6) In case of C++, main focus is on
a) Data b) Function c) Procedure d) Inheritance
- 7) Identify invalid character constant
a) 'c' b) '!' c) 'A' d) 'a'
- 8) _____ contains a sequence of zero or more characters enclosed in double quotes.
a) Character b) Array c) String d) '\n'



- B) Fill in the blanks. 4
- 1) _____ is the process by which objects of one class acquires the properties of objects of another class.
 - 2) _____ is a function that is expanded in line when it is invoked.
 - 3) _____ destroy the objects when they are no longer required.
 - 4) _____ is one that is not used to create objects.
- C) State **true** or **false**. 4
- 1) Constructor should be declared in public section.
 - 2) Operator overloading is also called compile time polymorphism.
 - 3) By default the members of the class are public.
 - 4) The derived class inherits some or all of the properties of the base class.
2. A) What is Object Oriented Programming ? Explain at least four new operators added by C++ with example. 8
- B) When a inline function is compulsory ? Give an example. 8
3. A) What do you mean by function overloading ? When do we use this concept ? 8
- B) What is the main advantage of passing arguments by reference ? Explain with one example. 8
4. A) Explain basic concepts of OOP. 8
- B) What is constructor ? How do we invoke a constructor function ? 8
5. A) Write a program for unary operator overloading. 8
- B) When do we make a virtual function “pure” ? What are the implications of making a function a pure virtual function ? 8
6. A) What is stream ? Explain C++ stream classes. 8
- B) List out the different manipulators used in C++. Explain with example. 8
7. Write short note on : 16
- a) Nested classes
 - b) Pointer to object
 - c) Scope resolution operator
 - d) Command line argument.
-



Seat No.	
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B.C.A. (Old) (Part – I) (Semester – II) Examination, 2015
COMPUTER SCIENCE
Web Technology

Day and Date : Thursday, 19-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

- 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) Target = _____ will open linked file in new window.
 - a) _parent
 - b) _top
 - c) _self
 - d) _blank
- 2) The specific area in image is called as _____
 - a) hotspot
 - b) area
 - c) map
 - d) servermap
- 3) PWS is developed by _____
 - a) Netscape
 - b) Adobe
 - c) Microsoft
 - d) Corel
- 4) ID attribute is preceded by _____ sign.
 - a) @
 - b) &
 - c) #
 - d) ^
- 5) Detecting errors in program is known as _____
 - a) alert
 - b) confirm
 - c) debug
 - d) error prompt



- 4. A) Explain lists in HTML with its type. 6
 - B) Explain looping statements in vbscript. 6
 - C) How to access value of form in JavaScript ? Explain with example. 4
 - 5. A) What is form ? Explain form tag with its attributes and example. 8
 - B) Write a vbscript program to find out given number is perfect or not. 8
 - 6. A) What is CSS ? Explain CSS with its type and example. 8
 - B) Write a JavaScript program to calculate face value of any number. 8
 - 7. Write a short notes on (**any 4**) : 16
 - a) Hyperlink in HTML
 - b) TCP/IP
 - c) SMTP
 - d) Get and Post method
 - e) Working with form in vbscript
-



Seat No.	
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**B.C.A. – I (Semester – II) Examination, 2015
FINANCIAL ACCOUNTING WITH TALLY (Old)**

Day and Date : Saturday, 21-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

- Instructions:** 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** indicate **full** marks.

1. A) Choose the correct alternative :

8

- 1) The charges of service tax is on the
 - a) Service provided
 - b) Service provided or to be provided
 - c) Service to be provided
 - d) None of these
- 2) CENVAT is applicable in respect of
 - a) Excise duties
 - b) Custom duties
 - c) Service tax
 - d) Excise duty and service tax
- 3) Party account can be created through
 - a) Group creation window
 - b) Ledger creation window
 - c) Inventory creation window
 - d) Any one of them
- 4) Which shortcut key is used to display list of inventory reports within balance sheet ?
 - a) F8
 - b) F9
 - c) F10
 - d) F11



- 5) How can data be imported in tally ?
- One company to another company created within the tally package
 - Other program a spreadsheet or database file
 - Depends the number of companies
 - Both a) and b)
- 6) For “ stock journal” entry we press _____ in tally.
- F7
 - Alt + F7
 - F10
 - None of these
- 7) What is the full form of TCS ?
- Tax collected by staff
 - Tax collected at source
 - Tax consumption at source
 - Tax collected on sales
- 8) To declare a voucher as post dated press.
- Ctrl + T
 - Ctrl + P
 - Alt + T
 - Alt + D

B) Fill in the blanks :

4

- _____ command is used to print voucher.
- The function key to activate contra voucher is _____
- Service Tax rate as per Budget 2015 is _____
- Tally is a _____ software.

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

4

- Alt + f10 is used for physical stock.
- Ctrl + V is used to delete a file.
- Voucher types are located in account Info menu.
- Tally software provide creation of multiple ledgers.

2. a) Explain various advantage of computerized accounting system.

6

b) Explain the concept Service Tax and treatment in tally.

6

c) Explain any 4 voucher types in Tally.

4



3. a) Describe different types of reports that we can produce through Tally. **6**
b) Explain the term TDS, what is the result of unpaid amount of TDS ? **6**
c) Explain the details of VAT invoice. **4**
 4. a) What are the concepts of accounting ? **6**
b) What is meant by debit note and credit note ? **6**
c) Explain display menu in Tally. **4**
 5. Explain the ledger create screen and classify the following accounts into various ledgers group **16**
 - 1) Ram's Capital A/c
 - 2) Bank loan A/c
 - 3) Building
 - 4) Furniture
 - 5) Wages
 - 6) Salary
 - 7) Mr. Shekar goods supplier on credit
 - 8) Sale of old news paper
 6. What is the term Ratio Analysis and explain any four ratios ? **16**
 7. Write short notes on (**any four**) : **16**
 - a) Data import and export in tally.
 - b) MIS Report
 - c) Inventory voucher creation
 - d) F11
 - e) Multi Accounting Printing.
-



Seat No.	
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**B.C.A. – I (Semester – II) (Old) Examination, 2015
DEVELOPMENT OF HUMAN SKILLS**

Day and Date : Tuesday, 24-11-2015

Max. Marks : 80

Time : 10.30 a.m. to 1.30 p.m.

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

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

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

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

1. A) Fill in the blanks with correct alternatives.

12

1) A skill is known as

- a) Expertise b) Perception c) Cognitive d) Acquisition

2) Conceptual skill is the ability to

- a) increase acquisition ability
b) implement idea in an organization
c) create concept of an organization
d) action for benefit of an organization as a whole

3) Exhibit affirmative head nods and appropriate facial expression is an example of

- a) positive attitude b) effective listening
c) showing interest d) critical listening

4) Vision, hearing, taste, smell and touch are example of

- a) sensible ability b) sensory ability
c) cognitive ability d) conceptual ability

5) Two factor model of Intelligence is proposed by

- a) Mr. Thurstan b) Mr. Hardnav c) Mr. Sparman d) Mr. Stenberg

P.T.O.



- 6) Self-Esteem stands for
- a) self execution of an action
 - b) a confidence and satisfaction in oneself
 - c) the mental image one has of oneself
 - d) the body of self-knowledge
- 7) Both children and adults learn a great deal through
- a) cognitive and conceptual
 - b) observation and imitation
 - c) partition and skills
 - d) self and mutual understanding
- 8) Creative thinking is
- a) product of new imagination
 - b) imagination power
 - c) mental capability
 - d) ability of reconstruction
- 9) An attitude stands for
- a) readiness of part
 - b) readiness of powerful approach
 - c) readiness of psyche to act
 - d) readiness of critical thinking
- 10) Which of the following is not the universal value ?
- a) truth
 - b) righteous conduct
 - c) politics
 - d) non-violence
- 11) Emotional intelligence
- a) creative imagination
 - b) emotional ability
 - c) missing element in an explanation
 - d) none of above
- 12) Which of the following is not related to computer field ?
- a) Software engineer
 - b) Software developer
 - c) Human resource management
 - d) Designing and formatting websites
- B) Say whether the following statements are **true** or **false**.
- 1) Behavior is a kind of communication which helps to us to discover the self
 - 2) Leadership is not an important aspect of managing organization.
 - 3) Writing, reading, listening and learning are the types of basic abilities.
 - 4) Values generally influence attitude and behavior.



2. Answer the following questions :
- 1) Importance of Goal setting. 6
 - 2) How to build self-confidence ? 6
 - 3) What is the importance of listening skill ? 4
3. Answer the following questions :
- 1) Important aspect of reading skill. 6
 - 2) Explain attitude formation process. 6
 - 3) Explain computing skills. 4
4. Answer the following questions :
- 1) State the importance of presentation. 6
 - 2) Describe presentation plan. 6
 - 3) What do you mean by Extempore Speech ? 4
5. a) What is an interview ? Explain the various types of interview. 16
- b) State the importance of Team Building Skill.
6. a) Which are the various opportunities in computer field ? 16
- b) What are the expectations of employers ?
7. Write **any two** short notes on from the followings : 16
- 1) Basic Human Abilities
 - 2) Reading and Writing Skills
 - 3) General Etiquettes
 - 4) Guidelines for Group Discussion.
-



Seat No.	
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**B.C.A. (Part – I) (Semester – II) Examination, 2015
(Business Statistics) (Old)**

Day and Date : Friday, 27-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

- 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) If population units are destroyed at the time of study, it can be studied by _____ method only.
a) sampling b) SRS c) census d) none of these
- 2) Qualitative characteristic is known as
a) attributes b) variable c) constant d) none of these
- 3) The measure of central tendency that depends upon maximum frequency is
a) mean b) median c) mode d) none of these
- 4) If all observations are increased by 10, then range will be
a) increased by 10 b) as it is
c) decreased by 10 d) none of these
- 5) The correlation between a variable and a constant is _____ always.
a) perfect b) +ve c) -ve d) zero
- 6) The equations of line of regression Y on X and X on Y are $8X - 10Y + 66 = 0$ and $40X - 10Y - 214 = 0$ respectively. The estimated value of Y for X = 20 is
a) 14.6 b) 18.6 c) 10 d) none of these



- 7) If $\sum p_1q_1 = x$, $\sum p_1q_0 = y$, $\sum p_0q_0 = z$, $\sum p_0q_1 = w$, then Laspeyre's quantity index number is
 a) $(x/y)100$ b) $(y/x)100$ c) $(w/z)100$ d) $(z/w)100$
- 8) If $P(A) = 1$, then A is _____ event.
 a) impossible b) null c) sure d) none of these

B) Fill in the blanks. 4

- 1) If c.v. = 50, mean = 20, then s.d. = _____
- 2) If correlation between X and Y is 0.25, then correlation between 2X and 2Y is _____
- 3) Mode can be determined graphically using _____
- 4) A number showing how many items belongs to a class is called _____

C) State whether following statements are **True** or **False**. 4

- 1) Constant is qualitative characteristic.
- 2) Selection of weights is one of the problems in construction of index number .
- 3) The sub-set of population is called event.
- 4) Range is relative measure of dispersion.

2. A) Define-Attribute, discrete variable, continuous variable. 6

B) Find median for the data given below. 5

Class	15 – 20	20 – 25	25 – 30	30 – 35	35 – 40
Freq.	9	12	19	16	10

C) A card is drawn from a pack of 52 playing card at random. Find probability of getting an ace or a picture card. 5



- 3. A) Define mode and state its merits and demerits . 6
- B) Find S.D. for the data given below. 5

x	5	6	7	8	9
f	7	11	17	13	9

- C) Find price index number for the following data by
 - i) simple aggregate method
 - ii) weighted aggregate method.

Commodity	A	B	C	D
Weight	2	2.5	3	4
Price in base period	17	24	33	42
Price in current period	22	25	40	48

5

- 4. A) Define population, sample. State advantages of sampling. 6
- B) The A.M. of 50 observations is 75. Later on it was found that an observation 87 was wrongly taken as 78. find correct A.M. 5
- C) Find correlation coefficient between X and Y. 5

X	20	27	18	25	30
Y	10	11	9	13	18

- 5. A) Define-correlation and explain types of correlation. 8
- B) From the data given below find Laspeyre's, Paasche's and Fisher's price index number. 8

Commodity	Base Year		Current Year	
	price	quantity	price	quantity
A	38	3	40	4
B	42	5	45	4
C	12	2.5	14	4



6. A) Define 8
- i) Probability
 - ii) Event
 - iii) Sample space
 - iv) Independent events

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

class	13 – 23	23 – 33	33 – 43	43 – 53	53 – 63
frequency	18	27	35	32	14

7. Attempt **any four** : 16

- a) Explain how to determine median graphically.
 - b) Define-range ,standard deviation.
 - c) Given : $\bar{X} = 15$, $\bar{Y} = 20$, $b_{yx} = .75$ obtain equation of line of regression Y on X, hence estimate Y for X = 35.
 - d) Let P (A) = 0.6, P(B) = 0.7, if A and B are independent events, find P(AUB).
 - e) If n = 10, $\sum X = 189$, $\sum (X - \bar{X})^2 = 2214$ find c.v.
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Seat No.	
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B.C.A. – II (Semester – III) (CGPA Pattern) Examination, 2015
DATA STRUCTURE USING ‘C’ (New)

Day and Date : Monday, 16-11-2015
Time : 2.30 p.m. to 5.00 p.m.

Total Marks : 70

- 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 :

14

- 1) The memory address of the first element of an array is called
 - a) floor address
 - b) foundation address
 - c) first address
 - d) base address
- 2) Adding data to the stack called
 - a) push
 - b) pop
 - c) both a) and b)
 - d) none of these
- 3) Items can be removed from the both end of
 - a) stack
 - b) queue
 - c) tree
 - d) dequeue
- 4) One can determine whether an infix expression has balanced parenthesis or not by using
 - a) array
 - b) queue
 - c) stack
 - d) tree
- 5) In doubly linked list
 - a) only in forward direction
 - b) only in reversion direction
 - c) in both directions
 - d) none of these
- 6) In a circular linked list
 - a) Components are all linked together in some sequential manner
 - b) There is no beginning and no end
 - c) Components are arranged hierarchically
 - d) Forward and backward traversal within the list is permitted



- 7) If a node having two children is to be deleted from binary search tree, it is replaced by its
- a) In-order predecessor
 - b) In-order successor
 - c) Pre-order predecessor
 - d) None of these
- 8) In _____, the difference between the height of the left sub tree, for each node, is almost one.
- a) Binary search tree
 - b) AVL tree
 - c) Complete tree
 - d) Threaded binary tree
- 9) A complete binary tree with 15 nodes contains _____ edges.
- a) 15
 - b) 30
 - c) 14
 - d) None of these
- 10) Tree is not a linear data structure.
- a) True
 - b) False
- 11) The running time of the following sorting algorithm depends on whether the partitioning is balanced or unbalanced.
- a) Insertion sort
 - b) Selection sort
 - c) Quick sort
 - d) Merge sort
- 12) Bubble sort method is faster than other types of sorting methods.
- a) True
 - b) False
- 13) When a binary tree is converted in to an extended binary tree, all the nodes of a binary tree in the external node becomes
- a) Internal nodes
 - b) External nodes
 - c) Root nodes
 - d) None of these
- 14) FIFO is used
- a) queue
 - b) stack
 - c) linked list
 - d) tree
2. A) What is stack ? Explain push and pop operations. **5**
- B) Explain dequeue. **5**
- C) Differentiate between stack and queue. **4**
3. A) Explain in brief linked list. **5**
- B) Describe the steps to insert data into a singly linked list. **5**
- C) Write a program to insert element in an array at given position. **4**



4. Write short notes on the following (**any two**) : **14**
- 1) Threaded binary tree
 - 2) ADT
 - 3) Linear Search
 - 4) Bubble Sort.
5. A) Explain binary search. **7**
B) What is sorting ? Explain insertion sort. **7**
6. A) What are the three traversal techniques for binary trees ? **7**
B) Write a 'c' program for creation of Circular linked list. **7**
7. A) Convert the infix expression $(a + b) * (c - d)$ into postfix form. **7**
B) What is queue ? Write an algorithm to insert and delete data from a queue. **7**
-



Seat No.	
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**B.C.A. – II (Semester – III) (New) (CGPA Pattern) Examination, 2015
NETWORKING AND DATA COMMUNICATION**

Day and Date : Wednesday, 18-11-2015
Time : 2.30 p.m. to 5.00 p.m.

Max. Marks : 70

Instructions : 1) **All questions are compulsory.**
2) **Figures to the right indicates full marks.**

1. Multiple choice questions :

14

- 1) The communication medium that supports data in both directions one at a time as _____
 - a) simplex
 - b) multiplex
 - c) half duplex
 - d) full duplex
- 2) A network configuration in which all data must pass through a central computer is _____
 - a) Bus
 - b) Ring
 - c) Point-to-Point
 - d) Star
- 3) If a code has odd parity, the number of zero's in each valid code word is _____
 - a) odd
 - b) even
 - c) a) and b) both
 - d) can not be said
- 4) To connect two LANs _____ is used.
 - a) router
 - b) bridge
 - c) hub
 - d) server
- 5) The current version of IP is _____
 - a) IP
 - b) IPv₄
 - c) IPv₆
 - d) None of these
- 6) _____ protocol transfers mail, messages and attachments.
 - a) SMTP
 - b) HTTP
 - c) UDP
 - d) FTP



- 7) In the IP header, length of the header is given by _____ field.
- a) Total length
 - b) Ver
 - c) Flag
 - d) HLEN
- 8) Which sub layer of the data link layer communicates directly with the network interface card ?
- a) Data Access Control
 - b) Logical Link Control
 - c) Logical Access Control
 - d) Media Access Control
- 9) Modulation is the process of _____
- a) Connecting via computers
 - b) Checking for errors
 - c) Converting digital signals to analog
 - d) Converting analog signals to digital
- 10) Which of the following cable type supports the highest bandwidth ?
- a) Coaxial
 - b) Fiber-optic
 - c) STP
 - d) UTP
- 11) Which of the following topology is the fastest and highly reliable ?
- a) Ring
 - b) Star
 - c) Bus
 - d) Completely connected
- 12) Congestion occurs when _____
- a) There is excess traffic in a part of the network
 - b) Packets arrive at node at a faster rate than the rate of processing
 - c) Both a) and b)
 - d) none of these
- 13) The range of useful frequencies that can be carried on a communication channel is called _____
- a) Modulation
 - b) Baud
 - c) Carrier
 - d) Bandwidth
- 14) Which of the following is not a transmission media for data communication ?
- a) Convection
 - b) Coaxial cable
 - c) Optical fiber
 - d) Microwave



2. Answer the following :
- A) What is data communication system ? Give the components and characteristics of data communication system. 7
 - B) Discuss peer-to-peer process in network model. 7
3. Answer the following :
- A) Compare virtual circuit subnet and datagram subnet. 7
 - B) Explain TCP segment header in detail. 7
4. Answer **any one** : 14
- A) Explain stop-and-wait automatic repeat request with the following terms :
 - i) Sequence numbers.
 - ii) Acknowledge numbers.
 - iii) Design.
 - B) Explain and compare different switching techniques with example.
5. Answer **any one** : 14
- A) Explain the concept of framing and its methods with example.
 - B) Discuss the four protocol scenarios for releasing a connection with example.
-



- B) Fill in the blanks : 4
- 1) An _____ is things or objects in real word that is distinguishable from other objects.
 - 2) A _____ is an association among several entities.
 - 3) The _____ does not allow NULL values.
 - 4) Collections of operations that form a single logical unit of work are called _____
- C) State whether **true** or **false** : 3
- 1) Application programmer work at logical level of data abstraction.
 - 2) Time stamp protocol ensures serializability.
 - 3) In aborted transaction state transaction has been rolled back and the database has been restored to its prior to the start of the transaction.
2. Write answers of the following questions (**any two**) : 14
- a) What is database ? Explain database users in detail.
 - b) Explain three tier architecture in detail.
 - c) What is join ? Explain select, project and Cartesian operations with example.
3. Write answers of the following questions (**any two**) : 14
- a) Explain Codd's rule in detail.
 - b) Explain database languages in detail.
 - c) What is transaction ? Explain ACID properties in detail.
4. Write answers of the following questions (**any two**) : 14
- a) Explain components of DBMS in detail.
 - b) What is concurrency ? Explain why there is need of concurrency in detail.
 - c) What is dead lock ? Explain dead lock prevention in detail.
5. a) What is ER model ? Explain in detail with suitable example. 7
- b) Why there is need of locking ? Explain locking modes and protocols. 7
6. a) What is normalization ? Explain normalization up to third normal form. 7
- b) Why there is need of serializability ? Explain in detail. 7
7. Write short note on (**any two**) : 14
- a) Transaction states
 - b) Shadow paging
 - c) Check points.
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Seat No.	
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**B.C.A. (Part – II) (Semester – III) (New-CGPA Pattern)
Examination, 2015
CORE JAVA**

Day and Date : Monday, 23-11-2015

Total Marks : 70

Time : 2.30 p.m. to 5.00 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. 7
- 1) What can you tell about the method `calme()` in the code below ?
`int c;`
`c = calme();`
- a) It has no parameters but has a return value
 - b) It has one parameter but no return value
 - c) It has no parameter but no return value
 - d) It has one return value and an unknown number of parameter
- 2) A data item that can only be used within a method is called
- a) local variable
 - b) an instance variable
 - c) a global variable
 - d) a primitive variable
- 3) Which provides the mechanism to handle the runtime errors so that normal flow of the application can be maintained ?
- a) Exception handling
 - b) String handling
 - c) Event handling
 - d) None of the above
- 4) In which state thread is still alive but is currently not eligible to run ?
- a) Terminated
 - b) Runnable
 - c) Non runnable
 - d) Running



- 5) Which inheritance is not supported in java ?
- a) Single inheritance
 - b) Hybrid inheritance
 - c) Multilevel inheritance
 - d) Java supports all of the above
- 6) Which is a perfect example of runtime polymorphism ?
- a) Method overloading
 - b) Method overriding
 - c) Constructor overloading
 - d) None of the above
- 7) Window, panel are the subclasses of
- a) container class
 - b) component class
 - c) frame class
 - d) none of the above

B) Fill in the blanks.

4

- 1) A _____ variable is a data item that belongs to an object.
- 2) _____ is a word used to say that there are no restrictions on the use of a method.
- 3) A _____ method is a method that can be invoked using the class name instead of an object name.
- 4) An array can be initialized by enclosing a list of values in _____.

C) State **true** or **false**.

3

- 1) Encapsulation is the process of defining a class that has no public methods.
- 2) Private methods are part of the interface of a class.
- 3) Constructors have return type void.

2. A) Explain features of Java.

5

B) Write advantages of Object Oriented Programming in Java.

5

C) Write a note on JDK tools in java.

4



- 3. A) Explain do while and while looping statements with syntax in java. 5
 - B) Explain the structure of the java program with suitable example. 5
 - C) Write a note on types of arrays in java. 4

 - 4. A) Write an Object Oriented Program to find I to n Armstrong numbers. 7
 - B) Write an Object Oriented Program to find I to n perfect numbers. 7

 - 5. A) Explain try catch finally block with suitable example. 7
 - B) Explain thread life cycle in java with suitable diagram. 7

 - 6. A) What is Stream ? Explain Byte Stream with suitable example. 7
 - B) What is layoutmanager ? Explain border layout with suitable example. 7

 - 7. Write short notes :
 - 1) This key word in java 4
 - 2) Inheritance 4
 - 3) Listeners and adapters 4
 - 4) Private key word. 2
-



Seat No.	
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**B.C.A. (Semester – III) (New – CGPA Pattern) Examination, 2015
FINANCIAL MANAGEMENT**

Day and Date : Thursday, 26-11-2015
Time : 2.30 p.m. to 5.00 p.m.

Max. Marks : 70

- 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) _____ enhance the market value of shares and therefore equity capital is not free of cost.
 - a) Face value
 - b) Dividends
 - c) Redemption value
 - d) Book value
 - 2) When _____ is greater than zero the project should be accepted.
 - a) Internal rate of return
 - b) Profitability index
 - c) Net present value
 - d) Modified internal rate of return
 - 3) _____ refers to the amount invested in various components of current assets.
 - a) Temporary working capital
 - b) Net working capital
 - c) Gross working capital
 - d) Permanent working capital
 - 4) Amount due from customers when goods are sold on credit are called _____
 - a) trade balance
 - b) trade debits
 - c) trade discount
 - d) trade off
 - 5) Bank generally prefer Debt Equity Ratio at _____
 - a) 1 : 1
 - b) 1 : 3
 - c) 2 : 1
 - d) 3 : 1



5. A) What are the determinant of capital structure of a company ? 7
B) Define the scope of Financial Management. 7

6. The boards of Directors of XYZ engineering Co. Pvt. Ltd. requests you to prepare a statement showing the working capital requirements for a level of activity of 1,56,000 units of production. The following information is available for your consideration. 14

Raw materials	90
Direct labour	40
Overheads	<u>75</u>
Total cost	205
Profit	<u>60</u>
Selling price per unit	265

Add. Information :

- i) Raw material are in stock one month.
- ii) Material are in process 50% complete on an average two weeks.
- iii) Finished goods are in stock one month.
- iv) Credit allowed by suppliers one month.
- v) Time lag in payment from debtors two months.
- vi) Lag in payment of wages 1.5 weeks.
- vii) Lag in payment of overheads one month 20% of the output sold against cash. Cash in hand and bank expected Rs. 60,000.

Assume that production is carried on evenly throughout the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month.

7. Write short notes on **(any two)** : 14
- a) Types of Leverage
 - b) Theories of capitalization
 - c) Banking Committee Computation of working capital.
-



Seat No.	
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B.C.A. – II (Semester – III) (Old) Examination, 2015
DATA STRUCTURE USING ‘C’

Day and Date : Monday, 16-11-2015

Total Marks : 80

Time : 2.30 p.m. to 5.30 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.

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

1. A) Choose the single correct alternative. 12

1) The number of interchanges required to sort 5, 1, 6, 2, 4 in ascending order using Bubble Sort is

- a) 6 b) 5 c) 7 d) 8

2) If the address of A[1][1] and A [2][1] are 1000 and 1010 respectively and each element occupies 2 bytes then the array has been stored in _____ order.

- a) Row major b) Column major
c) Matrix major d) None of these

3) A queue is a

- a) FIFO (First In First Out) list b) LIFO (Last In First Out) list
c) Ordered way d) Linear tree

4) Recursion is application of queue

- a) True b) False

5) A linear list of elements in which deletion can be done from one end (front) and insertion can take place only at the other end (rear) is know n as a

- a) Queue b) Stack c) Tree d) Linked list

6) What is the postfix from of the following prefix $*+ ab - cd$?

- a) $ab + cd -^*$ b) $abc + ^*-$
c) $ab +^* cd -$ d) $ab + ^*cd -$



- 7) How many nodes in a tree have no ancestors ?
 a) 0 b) 1 c) 2 d) n
- 8) In order to get the contents of a Binary search tree in ascending order, one has to traverse it in
 a) Pre-order b) In-order c) Post-order d) Not possible
- 9) If a node having two children is deleted from a binary tree, it is replaced by its
 a) Inorder predecessor b) Preorder predecessor
 c) Inorder successor d) None of the above
- 10) An ADT is defined to be a mathematical model of a user-defined type along with the collection of all _____ operations on that model.
 a) Cardinality b) Assignment
 c) Primitive d) Structured
- 11) In which notation operator comes after operand ?
 a) Infix b) Prefix c) Postfix d) None of these
- 12) Which of the following sorting procedure is the slowest ?
 a) Quick sort b) Heap sort c) Shell sort d) Bubble sort

B) Fill in the blanks.

4

- 1) ADT stands for
- 2) In queue _____ end is used for adding the elements.
- 3) _____ is a collection of similar data type elements.
- 4) A linear collection of data elements where the linear node is given by means of pointer is called

2. A) What is a linear array ? Explain how tow dimensional arrays are represented in memory.

6

B) Convert $(a + b) * c$ into prefix and postfix expression.

6

C) Write a short note on Abstract Data Type.

4

3. A) Explain binary search with algorithm.

6

B) Differentiate between Stack and Queue.

6

C) Write on "Deque".

4



4. Write short notes on the following.
- 1) Applications of queue **4**
 - 2) Complete binary tree **4**
 - 3) Binary search **4**
 - 4) Recursion. **4**
5. A) Implement a stack using linked list. Show both the PUSH and POP operations. **8**
B) What are the advantages of circular linked list over singly linked list ? **8**
6. A) What is sorting ? List out different types of sorting methods and explain bubble sort method in detail. **8**
B) Define binary tree. Explain different tree traversal methods. **8**
7. A) Differentiate between linear and non-linear data structure. **8**
B) Explain indexed sequential search. **8**
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Seat No.	
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B.C.A. II (Semester – III) (Old) Examination, 2015
COMPUTER SCIENCE
Networking and Data Communication

Day and Date : Wednesday, 18-11-2015

Max. Marks : 80

Time : 2.30 p.m. to 5.30 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) Data information is sent onto the network cable using which of the following ?
a) Communication protocol b) Data packet
c) Media access method d) Packages
- 2) To which TCP/IP architecture layer do the media access methods belong ?
a) Application b) Internet
c) Network interface d) Transport
- 3) Which protocol is used to convert logical IP addresses to physical MAC addresses ?
a) ARP b) DNS c) IMAP d) RIP
- 4) Which protocol is responsible for the logical addressing of each packet created by the transport layer ?
a) IP b) RIP c) TCP d) UDP
- 5) An IPv4 packet sent to all workstations on the network is called a
a) Directed packet b) Unicast
c) Multicast d) Broadcast
- 6) A walkie-talkie link uses
a) Simplex transmission b) Half duplex transmission
c) Full duplex transmission d) Triplex transmission
- 7) Data is transmitted from one computer to another in the _____ layer.
a) Top b) Data c) Physical d) Transmission
- 8) A predominant method of transferring information in data communication is
a) Parallel b) Serial
c) Broad based d) Monospaced

P.T.O.



- b) Fill in the blanks : 4
- 1) The interfaces are specified and established through _____
 - 2) Infrared waves are widely used for _____ communication.
 - 3) Unreliable connectionless services is called _____ services.
 - 4) When too many packets are present in a subnet which degrade the performance such situation is called _____.
- c) State **true/false** : 4
- 1) Servers provides resources.
 - 2) Modem are called nervous system of the LAN.
 - 3) The number of changes per second is measured in baud.
 - 4) Digital data are encoded using a modem to produce analog signal.
2. a) Explain the components of network. 6
- b) What is modulation ? Explain its significance. Explain frequency and phase modulation. 6
- c) What is ALOHA ? Explain its types. 4
3. a) Define network topology. Explain the different types of network topologies. 6
- b) What are the error detection techniques used at data link layer ? Explain in brief. 6
- c) Differentiate between serial and parallel modes of data transmission. 4
4. a) Explain the types of network based on transmission technology. 4
- b) Give brief information about different types of wires used in computer network. 6
- c) Explain different functions of data link layer in detail. 6
5. a) Explain OSI reference model in detail. 8
- b) Explain distance vector routing with example. 8
6. a) Explain the TCP/IP protocol suite in detail. 8
- b) What are the different design issues for layers ? 8
7. Write a short note on (**any four**) : 16
- 1) Modem
 - 2) WWW
 - 3) Optimality principle
 - 4) Analog and Digital signal
 - 5) Uses of computer network.
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Seat No.	
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B.C.A. – II (Sem. – III) (Old) Examination, 2015
COMPUTER SCIENCE
Database Management System

Day and Date : Friday, 20-11-2015
Time : 2.30 p.m. to 5.30 p.m.

Max. Marks : 80

- 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. Choose the correct alternatives :

16

- 1) Cartesian product in relational algebra is _____
 - a) Unary operator
 - b) Binary operator
 - c) Ternary operator
 - d) None of these
- 2) Architecture of the database can be viewed as _____
 - a) two levels
 - b) three levels
 - c) four levels
 - d) five levels
- 3) The database schema is written in _____
 - a) DDL
 - b) DCL
 - c) DML
 - d) DQL
- 4) The concept of locking can be used to solve the problem of _____
 - a) deadlock
 - b) lost update
 - c) inconsistent data
 - d) All of these
- 5) The _____ defines the way of connecting two or more entities together.
 - a) connectivity
 - b) binding
 - c) relationship
 - d) None of these
- 6) Collection of related records is known as a tuple.
 - a) True
 - b) False
- 7) In relational algebra _____ operation is useful for select those records that satisfy the given predicate.
 - a) Select
 - b) Project
 - c) Rename
 - d) Assignment
- 8) _____ attributes which are actually not stored in the database.
 - a) Stored
 - b) Multivalued
 - c) Composite
 - d) Derived

P.T.O.



- 3. a) Explain the terms :
 - i) Relation
 - ii) Domain
 - iii) Tuple. 6
 - b) Explain the concept of file organization. 6
 - c) Give the differences between exclusive lock and shared lock. 4

 - 4. a) Explain shadow paging in detail. 6
 - b) Explain various symbols used to draw an ER-diagram. 6
 - c) Write note on aggregation. 4

 - 5. a) What is normalization ? Explain with its advantages. 8
 - b) Describe the responsibilities of DBA. 8

 - 6. a) What is transaction ? Explain different transaction states. 8
 - b) Explain different relational algebra operators with suitable examples. 8

 - 7. Write short notes on (**any four**) : 16
 - i) Data independence
 - ii) Differentiate between two-tier and three-tier architecture
 - iii) Operations on files
 - iv) Deadlock
 - v) Types of keys.
-



Seat No.	
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**B.C.A. (Part – II) (Sem. – III) Examination, 2015
CORE JAVA (Old)**

Day and Date : Monday, 23-11-2015
Time : 2.30 p.m. to 5.30 p.m.

Max. Marks : 80

- 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) JVM is platform independent
a) True b) False
 - 2) JAR stands for
a) Java Archive b) Java Application Run Time
c) Java Application Runner d) None of the above
 - 3) Is the following way of commenting correct in Java
/* My comment 1
/* My comment 2 */
*/
a) True b) False
 - 4) _____ is a name given to a class, method or variable.
a) Constant b) Identifier c) Reference d) Object
 - 5) What is the extension of java bytecodes ?
a) .class b) .java c) .byte d) None of the above
 - 6) What is the range of data types byte in Java ?
a) – 128 to 127
b) – 32768 to 32767
c) – 21474831 to 2147483647
d) None of the mentioned



- 7) Which of these can not be used for a variable name in Java ?
- a) identifier
 - b) keyword
 - c) both a) and b)
 - d) None of the mentioned
- 8) Which of the following loops will execute the body of loop even when condition controlling the loop is initially false ?
- a) do-while
 - b) while
 - c) for
 - d) None of the mentioned

1. B) State **true** or **false** : **8**
- 1) Every statement with if must also include else.
 - 2) Java is not a Pure OOP Language.
 - 3) The == operator can be used to see if two strings have the same characters.
 - 4) A multibranch if-else statement is one kind of nested if-else statement.
 - 5) The controlling expression of a switch statement must have a value that is an integer or a character.
 - 6) The body of any while loop will be executed at least once.
 - 7) Encapsulation is the process of defining a class that has no public methods.
 - 8) Private methods are part of the interface of a class.
2. a) What is java ? Explain features of Java. **6**
- b) What is variable ? Explain naming conventions. **6**
- c) Write a structure of Java program. **4**
3. a) What is OOP ? Explain class, members and objects. **6**
- b) Explain static keyword in java with suitable example. **6**
- c) Explain this keyword in java. **4**



- 4. a) Explain Inheritance in java with suitable example. **6**
 - b) Explain exception handling in java with suitable example. **6**
 - c) Write a program to find given value is prime or not. **4**

 - 5. a) What is thread ? Explain thread life cycle in java. **6**
 - b) Explain method overriding in java with suitable example. **6**
 - c) Write a note on Layout Manager in Applet. **4**

 - 6. a) Write an OOP program to find given number is palindrome or not. **8**
 - b) Write an OOP program to print 0, 1, 1, 2, 3, 5, 8 series in java. **8**

 - 7. Write short notes on the following : **16**
 - a) Byte and character stream in java
 - b) Arrays in java
 - c) Event programming in java
 - d) Public, private and protected data members in java.
-



Seat No.	
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B.C.A. – II (Semester – III) (Old) Examination, 2015
FINANCIAL MANAGEMENT

Day and Date : Thursday, 26-11-2015
Time : 2.30 p.m.to 5.30 p.m.

Max. Marks : 80

Instructions : 1) Q.No. 1 Q. No. 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.

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 a kind of investment decision.
 - 3) Presence of debt in the capital structure leads operating leverage.
 - 4) Financial leverage is also known as trading on equity.
 - 5) Profit maximization is one of the financial decision making criteria.
 - 6) Financial management has no concern to non-profit making organisation.
 - 7) Investment decisions are outside the preview of financial decision.
 - 8) Total of current assets is termed as net working capital.
- B) Select correct alternative : **8**
- 1) Determination of proportion of debt in the capital structure is _____
 - A) Working capital decision
 - B) Dividend policy decision
 - C) Financing decision
 - D) Capital budgeting decision
 - 2) Gross working capital represents _____
 - A) Total Current Assets
 - B) Total Current Liabilities
 - C) Fixed current Assets
 - D) None of these



- 3) Working capital is also called _____
- A) Net Working Capital B) Gross Working Capital
C) Circulating Capital D) None of these
- 4) Operating leverage is ratio of contribution to _____
- A) % change in EPS B) % change in EBIT
C) Operating Profit D) EBT
- 5) Presence of debt in the capital structure leads to _____ leverage.
- A) Financial leverage B) Operating leverage
C) Combined leverage D) None of these
- 6) Traditional approach of financial management dealt with _____
- A) Corporate enterprise B) Episodic events
C) Working capital D) Only A) and B) above
- 7) When a corporation is earning an extra-ordinary large return on its outstanding stocks it is said to be _____
- A) Working Capital Management B) Over Capitalised
C) Under Capitalized D) None of these
- 8) Temporary working capital also known as
- A) Variable Working Capital B) Gross Working Capital
C) Net Working Capital D) Fixed Working Capital

2. Write short notes (**any two**) : **16**

- 1) Equity shares
- 2) Financial leverage
- 3) Types of working capital

3. Write short notes (**any two**) : **16**

- 1) Over capitalization
- 2) Importance of working capital
- 3) Functions of Financial Manager.



4. Estimate the working capital requirement from the data given below : **16**

Projected Annual sales – 75,000, Units, Rs. 100 Cost price per unit – Raw material Rs. 40, Labour Rs. 10, Overheads Rs. 30.

Debtors Pay after 10 weeks

Creditors are paid after 4 weeks

Raw material in stock 6 weeks

Finished stock 8 weeks

Production time 4 week

Wages are paid once in 4 week

Assume :

1) Contingency – 10% of the estimated working capital

2) Average cash and bank balance Rs. 1,87,500.

5. Define Business Finance. Explain steps in financial planning. **16**

6. Define Financial Management. Explain merits and demerits of profit maximization. **16**

7. Define capitalization concept. Explain the theories of capitalization. **16**



Seat No.	
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**B.C.A. – II (Semester – IV) Examination, 2015
SOFTWARE ENGINEERING**

Day and Date : Tuesday, 17-11-2015

Total Marks : 80

Time : 2.30 p.m. to 5.30 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 to Q. No. 6.
4) **All** questions carry **equal** marks.

1. Choose the correct alternatives. **16**
- 1) During the maintenance phase
a) Programs are tested b) System analysis is carried out
c) Both a and b d) None of these
- 2) _____ is the main source of external elements.
a) Control b) Feedback c) Environment d) Boundaries
- 3) DFD stands for Data Format Dictionary.
a) True b) False
- 4) In 2NF
a) Removes repeating groups b) To check functional dependency
c) To avoid transitive dependency d) None of these
- 5) Primary goal of software engineering is to improve the
a) Technique b) Quality c) Both a and b d) None of these
- 6) Cost-Benefit analysis is performed during
a) Analysis phase b) Design phase
c) Feasibility study phase d) Implementation phase



- 7) Actual programming of software code is done during the _____ step in the SDLC.
- a) Maintenance and Evaluation
 - b) Design
 - c) Analysis
 - d) Development
- 8) Prototyping is appropriate for
- a) Data-oriented applications
 - b) Applications with emphasis on the user interface
 - c) Applications which are highly interactive
 - d) All of the above
- 9) In a DFD external entities are represented by a
- a) Rectangle
 - b) Ellipse
 - c) Diamond shaped box
 - d) Circle
- 10) Alternatives are shown side by side is one of the advantages of
- a) Decision Tables
 - b) Decision tree
 - c) Structured English
 - d) Pseudo codes
- 11) SDLC stands for
- a) System Development Life Cycle
 - b) Structure Design Life Cycle
 - c) System Design Life Cycle
 - d) Structure Development Life Cycle
- 12) A context diagram is used
- a) as the first step in developing a detailed DFD of a system
 - b) as an aid to system design
 - c) as an aid to programmer
 - d) all of the above
- 13) The process in which existing data is loaded into a new system is referred to as
- a) data conversion
 - b) data addition
 - c) data direction
 - d) data exchange



- 14) To run the old system and the new system at the same time for a specified period, the system implementation approach used is
a) Pilot b) Phase c) Parallel d) Direct
- 15) _____ feasibility refers to the technical resources needed to develop, purchase, install or operate a system.
a) Operational b) Technical c) Economic d) All of these
- 16) Interaction and interconnection between the subsystems is called interface.
a) True b) False
2. a) What is data capture ? State its objective. **6**
b) Explain the role of system analyst. **6**
c) What do you mean by 'configuring the system' ? **4**
3. a) Explain the components of data dictionary. **6**
b) Explain white box testing. **6**
c) Give the advantages of normalization. **4**
4. a) Explain different symbols used in DFD. **6**
b) Explain different qualities of software. **6**
c) Write note on need of testing. **4**
5. a) What is system ? Explain different types of system. **8**
b) Draw CLD and 1st level DFD for College Admission System. **8**
6. a) Explain decision table with suitable example. **8**
b) Explain different fact finding techniques. **8**
7. Write short note on. **16**
a) Requirement specification.
b) Spiral model.
c) HIPO chart.
d) Software maintenance.
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Seat No.	
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**B.C.A. -II (Semester – IV) Examination, 2015
RDBMS WITH ORACLE**

Day and Date : Thursday, 19-11-2015

Total Marks : 80

Time : 2.30 p.m. to 5.30 p.m.

- Instructions :** 1) Question 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) Figures to the **right** place indicate **full** marks.

1. A) Choose correct alternatives :

8

- 1) Which one of the following is not true for a view ?
 - a) View is derived from other tables
 - b) View is a virtual table
 - c) A view definition is permanently stored as part of the database
 - d) View never contains derived column
- 2) A primary key is combined with a foreign key creates
 - a) Parent-child relationship between the tables that connect them
 - b) Many to many relationship between the tables that connect them
 - c) Network model between the tables that connect them
 - d) None of the above
- 3) A data dictionary is a special file that contains
 - a) The name of all fields in all files
 - b) The width of all fields in all files
 - c) The data type of all fields in all files
 - d) All of the above
- 4) Null is
 - a) The same as 0 for integer
 - b) The same as blank for character
 - c) The same as 0 for integer and blank for character
 - d) Not a value

P.T.O.



- 5) A set of possible data value is called
- a) Attribute
 - b) Degree
 - c) Tuple
 - d) Domain
- 6) Which of the following is a comparison operator in SQL ?
- a) =
 - b) Like
 - c) Between
 - d) All of the above
- 7) Key to represent relationship between table is called
- a) Primary key
 - b) Secondary key
 - c) Foreign key
 - d) None of these
- 8) The statement in SQL which allows to change the definition of a table is
- a) Alter
 - b) Update
 - c) Create
 - d) Select

B) Fill in the blanks :

4

- 1) A _____ key is combination of columns with values based on the primary key values from another table.
- 2) The attributes on which an _____ is created are termed indexing attributes.
- 3) In order to select data that is within a range of values, the _____ operator is used.
- 4) The set of rows returned by a explicit _____ is called a result set.

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

4

- 1) A unique constraint is not a substitute for a primary key.
- 2) A table can have only one primary key, but it can have many unique constraints.
- 3) ALTER TABLE statement changes the structure of table, and its contents.
- 4) Cursors are opened with the OPEN_CURSOR statement.

2. A) What is RDBMS and DBMS ? Write the difference between RDBMS and DBMS.

8

B) What is DDL and DML ? Explain Insert, Update and Delete commands with suitable example.

8



- 3. A) Explain Aggregate functions with suitable example. **8**
- B) Explain PL/SQL and If Else, For Loop and While Loop with suitable example. **8**
- 4. A) Write a PL/SQL code block to accept a number from user and print number in reverse order. **8**
- B) Write a PL/SQL code block to find greatest of three numbers. **8**
- 5. A) Create 2 tables customer and depositor with following fields set relation between the 2 tables. **8**

Customer	Depositor
Customer_id,	Customer_id,
Customer_name	Account_number,
Customer_street,	Balance
Customer_city	

- B) Write a PL/SQL block with exception to accept empno and check whether it is present in emp table or not. **8**
 - 6. A) What is cursor ? Explain types of cursor with suitable example. **8**
 - B) What is Trigger ? Explain Before Update statement level and Before Update Row Level Trigger with suitable example. **8**
 - 7. Write short notes : **16**
 - a) Sub Queries and Nesting Queries.
 - b) Having Clause.
 - c) Like Operator.
 - d) Cartesian Join.
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Seat No.	
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**B.C.A. – II (Semester – IV) Examination, 2015
OPERATING SYSTEM**

Day and Date : Saturday, 21-11-2015
Time : 2.30 p.m. to 5.30 p.m.

Total Marks : 80

- 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) Operating system is _____
 - a) Hardware
 - b) Software
 - c) Input device
 - d) Output device
- 2) The process of moving the program from disk into main memory is called _____
 - a) Swapping-in
 - b) Swapping-out
 - c) Loading-in
 - d) Loading-out
- 3) _____ is an example of distributed system.
 - a) Clustered System
 - b) Multiprocessing System
 - c) Client Server System
 - d) None of these
- 4) The ready queue is a queue for _____
 - a) Processes ready to execute
 - b) Processes waiting for I/O
 - c) Processes waiting for resources
 - d) Completed processes
- 5) Long-term scheduler executes more frequently than short-term scheduler.
 - a) True
 - b) False



- 6) A page table is used for _____
- a) Converting logical address to physical address
 - b) Converting physical address to logical address
 - c) Searching a file
 - d) Looking at contents of a file
- 7) Termination of a process is done by _____
- a) Memory management
 - b) Device driver
 - c) Device management
 - d) Process management
- 8) One process can have _____ threads of execution.
- a) Only one
 - b) Multiple
 - c) Two
 - d) None of these
- 9) The operating system manages _____
- a) Memory
 - b) Processor
 - c) I/O devices
 - d) All of these
- 10) Which of the following is a preemptive scheduling algorithm ?
- a) Shortest-job first
 - b) Priority based
 - c) Round-robin
 - d) FCFS
- 11) In simple paging system, more memory space is wasted.
- a) True
 - b) False
- 12) _____ is a process of transferring a block data from main memory to secondary storage.
- a) Throughput
 - b) Loading
 - c) Linking
 - d) Swapping
- 13) Resources are allocated to the process on non-sharable basis in _____
- a) Mutual Exclusion
 - b) Hold and wait
 - c) No preemption
 - d) Circular wait
- 14) A translator is best described as _____
- a) Application Software
 - b) System Software
 - c) Application and System Software
 - d) None of these



- 15) Paging is a technique to solve the problem of external fragmentation.
a) True b) False
- 16) _____ solve the problem of contiguous allocation.
a) Sequential allocation b) Logical allocation
c) Linked allocation d) None of these
2. a) What is process ? Explain different process states. **6**
b) What is deadlock ? Explain with suitable example. **6**
c) Write note on threads. **4**
3. a) What are the differences between preemptive and non-preemptive scheduling algorithms ? **6**
b) What is file ? Give the operations of file. **6**
c) Write note single user multitasking operating system. **4**
4. a) Explain the concept of contiguous memory allocation. **6**
b) Explain deadlock avoidance algorithm. **6**
c) Write note on FCFS algorithm. **4**
5. a) Explain different file types. **8**
b) Explain in detail page replacement algorithms. **8**
6. a) What is scheduling ? Describe differences among short-term, medium-term and long-term schedulers. **8**
b) What is operating system ? Explain real-time and distributed system. **8**
7. Write short note on the following : **16**
a) Functions of operating system
b) Virtual machine
c) Semaphore
d) Turnaround time and waiting time.
-



Seat No.	
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B.C.A. – II (Semester – IV) Examination, 2015
WEB TECHNOLOGY – II

Day and Date : Tuesday, 24-11-2015
Time : 2.30 p.m. to 5.30 p.m.

Total Marks : 80

- 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) Destruct explicitly used to destroy an object when object goes to the out of scope.
a) True b) False
- 2) _____ loop is designed to handle collections.
a) for b) do....while c) foreach d) while
- 3) Which of the following is the advantage of PHP ?
a) Open source software b) Support cross platform
c) Both a) and b) d) None of these
- 4) _____ function is used to sort arrays in reverse order.
a) asort() b) rsort() c) dsort() d) ksort()
- 5) _____ keyword is used to implement an interface.
a) extends b) inherits c) interfaces d) implements
- 6) In PHP a variable needs to be declare before assign.
a) True b) False
- 7) Which of the following function return 1 when output is successful ?
a) echo() b) print() c) display() d) show()
- 8) Which of the following is not the keyword of PHP ?
a) Function b) Global c) Extends d) Forend
- 9) _____ is used to collect data after submitting an HTML form.
a) \$_REQUEST b) \$_SERVER
c) Both a) and b) d) None of these



- 10) Which of the following variable names are invalid ?
 a) \$var_1 b) \$var1 c) \$var/1 d) \$var
- 11) The _____ function checks if the "end-of-file" (EOF) has been reached.
 a) f_eof() b) f_of() c) feofs() d) feof()
- 12) _____ keyword is used to make variable persist across function.
 a) Super b) Global c) Static d) Parent
- 13) String constants enclosed with
 a) Single quotes b) Double quotes
 c) Both a) and b) d) None of these
- 14) _____ keyword is used to avoid method overriding.
 a) Super b) Final c) Abstract d) Construct
- 15) _____ is used to access static methods that do not require object initialization.
 a) :: b) : c) ? d) &
- 16) \$_SERVER is an array including information created by the web server.
 a) True b) False
2. a) What is PHP ? Give the benefits of PHP. **6**
 b) Explain static and global variables. **6**
 c) Differentiate between session and cookies. **4**
3. a) Explain use of cookie variables in state management with example. **6**
 b) List and explain MySQL data types. **6**
 c) Write a note on hidden field. **4**
4. a) Explain echo() and print() function. **6**
 b) Explain check boxes and radio buttons with suitable example. **6**
 c) Write note on PHP variables. **4**
5. a) Explain the steps of establish the connection from PHP to MySQL with code. **8**
 b) Explain the use of abstract classes and interfaces with suitable example. **8**
6. a) What is data validations ? Explain server-side data validations. **8**
 b) Explain different types of arrays with proper examples. **8**
7. Write short note on the following : **16**
 a) fopen() function b) Features of PHP
 c) Destroying session d) Class constants.
-



Seat No.	
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**B.C.A. – II (Semester – IV) Examination, 2015
E-COMMERCE**

Day and Date : Friday, 27-11-2015

Max. Marks : 80

Time : 2.30 p.m. to 5.30 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 : 4
- 1) A _____ program provides access to web resources.
a) Web b) ISP c) Browser d) URL
 - 2) An Internet standard for transferring files is known as _____
a) IRC b) Telnet c) FTP d) WAIS
 - 3) This type of electronic commerce involves the sale of a product or service to the general public.
a) B2C b) B2P c) C2C d) B2B
 - 4) Unwanted and unsolicited e-mails are called _____
a) Spam b) Junk c) Flame d) Lurk
- B) Fill in the blanks : 4
- 1) The _____ is the actual physical network made up of wires, cables and satellites.
 - 2) The most common way for individuals to access the internet is through a provider or a _____ computer.
 - 3) _____ are programs that provide access to web resources.
 - 4) _____ are rules for exchanging data between computers.
- C) State **true** or **false** : 8
- 1) The most popular Internet activity is shopping.
 - 2) Web is another name of Internet.
 - 3) Commercial Internet service providers include national, regional and wireless service providers.

P.T.O.



- 4) The connections from one page of information on the World Wide Web to another are called hyperlinks.
 - 5) A programme language used to write animation for the World Wide Web is called JAVA.
 - 6) Unwelcome e-mail is called spam.
 - 7) One popular chat service is called Internet Relational Chat.
 - 8) The use of electronic commerce is growing rapidly.
2. A) Define E-commerce. Explain scope of electronic commerce. **6**
 B) Write the benefits of EDI. **5**
 C) Explain the factors of business environment. **5**
 3. A) Explain the advantages and disadvantages of electronic. **6**
 B) Define E-Commerce perspectives. **5**
 C) Explain pens and things. **5**
 4. A) What do you mean by Modern Payment System ? **6**
 B) Explain web site evaluation model. **5**
 C) Define E-visibility in e-commerce. **5**
 5. A) Write the types of Electronic Payment System. **8**
 B) Write a case study on booking system in e-commerce. **8**
 6. A) Explain difference between traditional payment system and modern payment system. **8**
 B) Explain Porter's value chain model. **8**
 7. Explain trade cycle and electronic markets also write the types of e-commerce. **16**
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Seat No.	
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B.C.A. – III (Sem. – V) Examination, 2015
COMPUTER SCIENCE
Advanced Java – I

Day and Date : Monday, 16-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

- Instructions :** 1) Figures to the **right** indicates **full** marks.
2) Question No. **1** and question No. **7** are **compulsory**.
3) From Q. **2**, Q. **3**, Q. **4** solve **any two** and from Q. **5** and Q. **6** solve **any one**.

1. A) Choose the correct alternative. **16**
- I) Any XML must have
a) closing tag b) root element c) nested child d) both a) and b)
- II) Which is/are the JDBC components
a) The JDBC-API b) JDBC-driver manager
c) JDBC test suit d) All of these
- III) Appletviewer tool is available in which of the folder of JDK
a) Bin b) Lib c) Source d) Class
- IV) Comment in XML documents is given by
a) `< ? _ _ _ _ >` b) `< ! _ _ _ _ ! >`
c) `< ! _ _ _ _ >` d) `< / _ _ _ _ >`
- V) Request Dispatcher object is used to
a) include other resources b) include on image
c) include XML object d) include emailing response
- VI) In a URL query string parameter pairs are separated using symbol
a) ? b) = c) @ d) &
- VII) The JDBC-ODBC bridge
a) Three tire b) Multithreaded
c) Best for any platform d) All of these



Seat No.	
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B.C.A. – III (Semester – V) Examination, 2015
COMPUTER SCIENCE
Visual Programming

Day and Date : Wednesday, 18-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

- 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 the correct alternative :

16

- 1) Which of the following is characteristic of the Base Class Library (BCL) ?
 - a) Object oriented
 - b) Language independent
 - c) Enhances the productivity
 - d) All of these
- 2) Namespaces contains _____
 - a) Classes
 - b) Interfaces
 - c) Both a) and b)
 - d) None of these
- 3) Value types have fixed length and are stored on the stack of memory.
 - a) True
 - b) False
- 4) Which of the following is predefined reference type ?
 - a) Object
 - b) String
 - c) Both a) and b)
 - d) None of these
- 5) All the predefined exception classes inherit from the _____ base class.
 - a) Exception
 - b) IO Exception
 - c) I Exception
 - d) O Exception
- 6) Abstract classes contains only abstract methods.
 - a) True
 - b) False

P.T.O.



- 7) _____ are default parameters.
- a) Output parameters b) Reference parameters
c) Address parameters d) Value parameters
- 8) Which of the following member does not operate on a specific instance of the class ?
- a) Static b) Constants c) Final d) All of these
- 9) Method overriding is supported at _____
- a) Compile-time b) Run-time
c) Both a) and b) d) None of these
- 10) In Array List _____ property is used to get or set the number of elements in the list.
- a) Total b) Length c) Capacity d) Count
- 11) Defining two methods with the same name but with different parameters is called _____
- a) Overriding b) Overloading c) Duplexing d) Multiplexing
- 12) Which of the following control is always read-only ?
- a) Label b) Text Box
c) Both a) and b) d) None of these
- 13) _____ is used to implement the event handling mechanism.
- a) Properties b) Indexers
c) Delegates d) Interfaces
- 14) A shared assembly is deployed into the _____
- a) GAC b) SGA c) CGA d) GSA
- 15) The load event occurs before object instantiation.
- a) True b) False
- 16) _____ property allows the Text Box control to display text in more than one line.
- a) Many b) More c) Multiline d) Many line



- 2. a) Explain different parameter passing techniques with suitable example. **6**
 - b) What is exception ? Explain the importance of finally block. **6**
 - c) Explain the characteristics of C#. **4**
 - 3. a) Explain different types of assemblies. **6**
 - b) What is visibility control ? List out visibility controls in C#. **6**
 - c) Differentiate class and structure. **4**
 - 4. a) What is indexer ? Give one example. **6**
 - b) What is Windows services ? Give its advantages. **6**
 - c) Differentiate between SDI and MDI. **4**
 - 5. a) Write a program to overload any two binary operators. **8**
 - b) What is interface ? Explain with suitable example. **8**
 - 6. a) Create a windows application for adding new record using stored procedure. **8**
 - b) What is multicast delegate ? Explain in detail. **8**
 - 7. Write short notes on **(any four)** : **16**
 - i) CLR
 - ii) Enum
 - iii) Custom exception
 - iv) For each loop
 - v) Advantages of generic classes.
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Seat No.	
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B.C.A. – III (Semester – V) Examination, 2015
COMPUTER SCIENCE
LINUX and Shell Programming

Day and Date : Friday, 20-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

- 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 the correct alternatives :

16

- 1) The character separating fields is called as _____
a) Separator b) Delimiter c) Blank d) Semicolon
- 2) New users are added into this files
a) /passwd b) /user c) /etc/passwd d) /etc/shadow
- 3) Dividing a disk into a number of logical smaller disks is called _____
a) Dividing b) Partitioning c) Fragmenting d) None of these
- 4) Redirecting background process output to a file is good way to avoid interference with foreground output.
a) True b) False
- 5) To find out a file's inode number, use this option on the 'IS' command
a) -i b) -inode c) -num d) -in
- 6) Which of the following symbols represent redirection ?
a) - b) < c) & d) |
- 7) What command do you use to create Linux File System ?
a) Fdisk b) mKFS c) FSCK d) mount
- 8) Which of the following changes permission to remove write permission to group and others ?
a) chmod go - W FileX b) chmod go + W FileX
c) chmod go = W FileX d) none of these

P.T.O.



- 9) LDAP stands for _____
- a) Light weight Directory Access Protocol
 - b) Logical Data Access Protocol
 - c) Large Directory Access Protocol
 - d) None of these
- 10) The utility can be used to determine the network path between remote system and local system is called as _____ command.
- a) Route
 - b) Host
 - c) Traceroute
 - d) Finger
- 11) The _____ command executes a commands on another system and displays results on your own system.
- a) rsh
 - b) rcp
 - c) scp
 - d) sh
- 12) In vi editor, to scroll half page forward
- a) ctrl + f
 - b) ctrl + d
 - c) ctrl + h
 - d) ctrl + hp
- 13) Examples of repetitive tasks performed by system administrators.
- a) Disk space inventories
 - b) Security audits
 - c) System backups
 - d) All of these
- 14) Faster search is achieved through _____
- a) egrep
 - b) grep
 - c) fgrep
 - d) vgrep
- 15) Jobs can be moved between foreground and background with the “fg” and “bg” command.
- a) True
 - b) False
- 16) Multiple Linux commands can be put into a file to a program. This is called as _____
- a) Pipe
 - b) Script
 - c) Link
 - d) Shell
2. A) What is a shell ? How does it work with the Kernel and user ? **6**
- B) Explain network tools commands. **6**
- C) Describe X-window system. **4**



- 3. A) Explain security enhanced Linux. 6
 - B) Differentiate LILO and GRUB. 6
 - C) Explain o/p of following command. 4
 - 1) Sed '39' student
 - 2) Cat emp|cut_ d "|" _ f3 | WC – 1
 - 3) head_ n 5 bca| Sort_ t "|" _ r_ K2
 - 4) chmod ugo = rx bca

 - 4. A) What is the purpose of chmod command ? Explain with example. 6
 - B) How to run processes in background and to remove processes from background ? 6
 - C) Explain File system parts – super block and Inode block. 4

 - 5. A) Explain management tools commands. 8
 - B) Write a menu driven shell script. 8
 - 1) To print unique lines from emp file.
 - 2) To cut field 3 and sort reversely.
 - 3) Create a soft link file bca to mca.
 - 4) Find Files from current directory by inode number.

 - 6. A) What are the three mode of vi editor ? Explain input mode with all command. 8
 - B) Write a shell script to check entered number is palindrome no. or not. 8

 - 7. Write short notes on (**any four**) : 16
 - 1) LS command
 - 2) NFS
 - 3) Sort
 - 4) File compression
 - 5) Role of system administrator.
-



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B.C.A. III (Semester – V) Examination, 2015
COMPUTER SCIENCE
Introduction to Data Mining and Warehousing

Day and Date : Monday, 23-11-2015
Time : 10.30 a.m. to 1.30 p.m.

Max. 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) If T consist of 500000 transactions, 20000 transactions contains bread, 30000 transactions contain jam, 10000 transactions contains both bread and jam. Then support a bread and jam is
 - a) 2%
 - b) 20%
 - c) 3%
 - d) 30%
- 2) _____ refers to the process of deriving high quality information from text.
 - a) Multimedia mining
 - b) Text mining
 - c) Web mining
 - d) Image mining
- 3) _____ approach, of filling missing value is not feasible and time consuming.
 - a) Ignore tuple
 - b) By manually
 - c) Use global constant
 - d) Use attribute mean
- 4) Operation roll up is also known as
 - a) Roll pit
 - b) Drill pit
 - c) Drill up
 - d) Top up
- 5) Data mining often requires _____ that is merging of data from multiple data stores.
 - a) Data aggregation
 - b) Data integration
 - c) Data merging
 - d) Data combining



- 6) Set of all items whose support is greater than uses specified minimum support are called as
- a) Border set
 - b) Maximal set
 - c) Lattice set
 - d) Frequent set
- 7) The synonym for data mining is
- a) Knowledge discovery in databases
 - b) Data warehouse
 - c) Business intelligence
 - d) OLAP
- 8) A data warehouse is
- a) Updated by end uses
 - b) Contains numerous naming conventions and formats
 - c) Organized around important subject areas
 - d) Contains only current data

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

4

- 1) The cuboid that holds lowest level of summarization is called as Apex. cuboid.
- 2) Real world data tend to noisy and inconsistent.
- 3) Data warehouse focuses on the modelling and analysis of data for decision makers.
- 4) OLTP covers historical data.

C) Fill in the blanks :

4

- 1) DSS in data warehouse is _____
- 2) Database which are owned by particular departments or business groups are _____ database.
- 3) Incorrect or invalid data is known as _____ data.
- 4) OLTP stands for _____

2. a) Explain active data warehousing in detail.

6

b) What is data transformation ? Explain different transformation technique in detail.

6

c) Explain market basket analysis in detail.

4



- 3. a) What are applications related to multimedia data mining ? Explain in detail. **6**
- b) Explain how mapping from data warehouse to data mining takes place. **6**
- c) Explain data warehouse administration and management in detail. **4**

- 4. a) Explain classification of data mining. **6**
- b) Explain different applications of data mining related to science and engineering. **6**
- c) Explain slice, dice and pivot operations with example. **4**

- 5. a) Explain Apriori algorithm with example. **8**
- b) What is Knowledge Discovery in Databases (KDD) ? Explain each step in detail. **8**

- 6. a) Find association rule using Apriori algorithm min-support = 2 and minimum confidence = 70%. **8**

TID	Items
10	A, B,E
20	B,E
30	B,C
40	A, B, D
50	A, C
60	B, C
70	A, C
80	A ,B, C, E
90	A ,B, C

- b) Why data is dirty ? Explain how to solve this problem. **8**

 - 7. Write short note on **(any 4)** : **16**
 - 1) Architecture of data mining
 - 2) Advantages of data warehouse
 - 3) Fact constellation schema
 - 4) Multidimensional data model
 - 5) Text mining
 - 6) Data reduction.
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SLR-P – 141

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B.C.A. – III (Semester – V) Examination, 2015
MANAGEMENT INFORMATION SYSTEM

Day and Date : Thursday, 26-11-2015

Max. Marks : 80

Time : 10.30 a.m. to 1.30 p.m.

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

1. A) Choose correct alternate :

8

- 1) The view of total database content is _____
 - a) Conceptual View
 - b) Internal View
 - c) External View
 - d) Physical View
- 2) Tracking employee training, skills and performance appraisals is an examples of a human resource information system operating at the _____
 - a) Operational level
 - b) Management level
 - c) Knowledge level
 - d) Strategic level
- 3) Information systems can facilitate supply chain management by
 - a) Tracking the status
 - b) Rapidly communicating orders
 - c) Providing product specifications
 - d) All of the above
- 4) Enterprise systems support _____
 - a) Manufacturing processes
 - b) Financial and accounting processes
 - c) Human resource processes
 - d) All of the above



- 5) The quality of your _____ is a large part of the quality of your information system.
 a) Computer b) Thinking c) Time d) Challenges
- 6) Knowledge based system supports _____
 a) Knowledge of creation b) Knowledge of support
 c) Knowledge of Dissemination d) All of the above
- 7) The _____ can help you choose a product.
 a) Office automation system b) Management Information System
 c) Transaction processing d) Decision support system
- 8) ESS stands for _____
 a) Executive Support System b) Experts Service System
 c) Ensure Support System d) Easy Support System

B) Answer **one** sentence :

8

- 1) CRM stands for _____.
- 2) ERP stands for _____.
- 3) What is meant by decision ?
- 4) What is meant by System ?
- 5) What is meant by Business ?
- 6) What is meant by knowledge ?
- 7) Long form of KMS.
- 8) What is meant by Service ?

2. a) Explain the features of Organization. **6**
- b) Explain the role and importance of Information System. **6**
- c) Short note on “Feedback Control”. **4**
3. a) Write down characteristics of Decision Support System. **6**
- b) Explain the need and scope of MIS. **6**
- c) Write short note on “Knowledge Management”. **4**



- 4. a) Write down advantages of SCM. 6
 - b) Explain the security of an Information System. 6
 - c) Difference between Data and Information. 4
 - 5. a) Define MIS. Explain the characteristic of MIS. 8
 - b) Explain Application of MIS in the Service Industry. 8
 - 6. a) What is ERP ? Explain advantages and disadvantages of ERP. 8
 - b) Explain application of MIS in the manufacturing. 8
 - 7. Write short note on (**any 4**) : 16
 - a) Business Intelligence System
 - b) Types of Decision
 - c) Benefits of DSS
 - d) Accounting System
 - e) System Vulnerability.
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Seat No.	
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**B.C.A. (Part – III) (Semester – VI) Examination, 2015
ADVANCED JAVA AND WAP (Old)**

Day and Date : Tuesday, 17-11-2015

Total Marks : 80

Time : 10.30 a.m. to 1.30 p.m.

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

1. A) Choose the correct alternative :

8

- 1) Which one of the following is the abstract method in the HttpServlet abstract class ?
a) service () b) doGet () c) doPost () d) None of these
- 2) Which of the following element specify the development descriptor specifies the name of the servlet class file ?
a) <servlet> b) <servlet-class>
c) <servlet-name> d) <display-name>
- 3) RMI stands for
a) Response Method Invocation b) Repeat Method Invocation
c) Remote Method Invocation d) None of these
- 4) _____ method is used to call stored-procedure.
a) Preparecall () b) CallableStatement ()
c) Preparestatement () d) None of the above
- 5) _____ is a statement that gives the JSP engine information about the JSP page.
a) JSP implicate object b) JSP scriptlet
c) JSP expression d) JSP directive
- 6) _____ attribute sets a Boolean value either true or false.
a) info b) errorPage c) isErrorPage d) session
- 7) HTTP is a communication _____ used to transfer information on the Internet
a) Protocol b) Component c) Resource d) Request
- 8) _____ component creates space for single line text.
a) Text Area b) Text Field c) Text Space d) All of these



- B) Fill in the blank : 4
- 1) JDBC stands for _____
 - 2) Cookies are stored _____
 - 3) GPRS stands for _____
 - 4) _____ class implements an event listener interface and defines all methods with empty body.
- C) State **true** or **false** : 4
- 1) A remote object must be an instance of java.rmi.RemoteObject.
 - 2) All jsp pages are translated into a servlet.
 - 3) The archives file name must have .zip extension.
 - 4) Window is the immediate super class of Applet class.
2. A) What is RMI ? Explain the steps involved in developing an RMI object. 6
- B) Explain the implicit object in jsp. 6
- C) What is the difference between a GenericServlet and a HttpServlet ? 4
3. A) Write a program to use cookies in jsp. 6
- B) Describe the architecture of WAP. 6
- C) Explain JDBC component. 4
4. A) Write a program to demonstrate prepared statement. 6
- B) What is JSP Action ? Explain the list of JSP Action. 6
- C) List out advantages of Servlet over CGI. 4
5. A) What is EJB and write advantages and disadvantages of EJB. 8
- B) Write a program to create simple servlet for handling HTTP GET request. 8
6. A) What is Layout Manager and explain different types of Layout Managers. 8
- B) Write a program to create an applet which display current date and time. 8
7. Write a short note on (**any four**) : 16
- a) HTML applet tag.
 - b) Directive tags in jsp.
 - c) Advantages of WAP.
 - d) Applet life cycle.
 - e) Menu Component.
-



2. a) Define E-commerce. Explain advantages and disadvantages of E-commerce. **6**
b) Explain EDI in detail. **6**
c) Write a note on data protection. **4**
 3. a) Explain digital signature in detail. **6**
b) Explain digital certificate in detail. **6**
c) Write a note on IT Act 2000. **4**
 4. a) What is security ? Explain different types of security in detail. **6**
b) Explain different types of backup. **6**
c) Write a note on cyber law. **4**
 5. a) Explain Authentication and Authorization in detail. **8**
b) Explain encryption in detail. **8**
 6. a) Explain different authentication protocol in detail. **8**
b) Explain contract aspect and intellectual property aspect. **8**
 7. Write short note on **any 4** : **16**
 - 1) Copy Right
 - 2) Duties of subscriber
 - 3) Security audit
 - 4) Logical security
 - 5) Intranet.
-



- 7) DSDM stands for _____
- a) Dynamic Systems Development Method
 - b) Dual System Development Method
 - c) Dynamic Software Development Method
 - d) Dynamic System Dual Method
- 8) COCOMO stands for _____
- a) Constructive Cost Model
 - b) Critical Cost Model
 - c) Cost Open Critical Object Model
 - d) None of these
- 9) _____ has overall responsibility for setting, monitoring and modifying objects of project.
- a) Project Steering Committee
 - b) Process Steering Committee
 - c) Project Stand Committee
 - d) Project Setting Committee
- 10) PERT stands for _____
- a) Program Evaluation Review Technique
 - b) Program Entity Review Technique
 - c) Program Entity Remark Technique
 - d) Program Evaluation Remark Technique
- 11) Booch suggests that there are two levels of development : the macro process and micro process.
- a) True
 - b) False
- 12) The collection of projects that an organization undertakes within a particular planning cycle is sometime referred to as a Portfolio.
- a) True
 - b) False
- 13) V-process model is not an elaboration of the waterfall model.
- a) True
 - b) False
- 14) The Timeline chart is a method of recording and displaying the way in which targets have changed throughout the duration of project.
- a) True
 - b) False
- 15) The Return On Investment (ROI), also known as Accounting Return Rate (ARR).
- a) True
 - b) False
- 16) A plan for an activity must be based on some idea of a method of work.
- a) True
 - b) False



- 2. a) Explain setting objectives of project. **6**
 - b) Explain the Oldham-Hackman Job characteristics. **6**
 - c) Explain function points Mark II. **4**

 - 3. a) Explain plan, methods and methodologies. **6**
 - b) Explain the V-process model in detail. **6**
 - c) Write note on Stakeholder. **4**

 - 4. a) Explain the activities covered by software project management. **6**
 - b) What is cost benefit evaluation technique ? **6**
 - c) What is the Forward Pass ? **4**

 - 5. a) Explain the COCOMO Model in detail. **8**
 - b) What is risk management ? Explain in details. **8**

 - 6. a) What is project planning ? Explain step wise planning in detail. **8**
 - b) Explain the increment delivery approach with advantages and disadvantages. **8**

 - 7. Write note on : **16**
 - a) Dynamic System Development Method
 - b) Requirement specification
 - c) Waterfall model
 - d) Leadership.
-



- 6) At the time of ERP implementation team selection select those people who have
- | | |
|---------------------|----------------------|
| a) Right attitude | b) Willing to change |
| c) Learn new things | d) All of the above |
- 7) During the _____ session the reengineering must also consider new technologies.
- | | |
|------------------|-----------------|
| a) Planning | b) Implementing |
| c) Brainstorming | d) Training |
- 8) People Soft is strong in
- | | |
|--------------------------|------------|
| a) Manufacturing | b) HR |
| c) Plant and maintenance | d) Finance |

b) Answer **one** sentences :

8

- 1) Long form of OLAP
- 2) Define layer
- 3) Long form of EIS
- 4) Define Enterprise.
- 5) What is meant by Resource ?
- 6) What is meant by Data ?
- 7) Long form of MRP.
- 8) Write down name of two ERP company.

- | | |
|--|----------|
| 2. a) Explain the evolution of ERP. | 6 |
| b) Write down opportunities of ERP selection. | 6 |
| c) Write short note on Re-engineering. | 4 |
| 3. a) Explain the types of ERP Markets. | 6 |
| b) Write down features of ERP. | 6 |
| c) Write short note on SAP Ag. | 4 |
| 4. a) What is Enterprise ? Explain the role of enterprise. | 6 |
| b) Explain the future of ERP package. | 6 |
| c) Write down difference between ERP vs BPR. | 4 |



- 5. a) Explain the modules of Quality Management and Human Resource. **8**
 - b) Explain the benefits of ERP. **8**
 - 6. a) Write down concept of Re-engineering and Business Process. **8**
 - b) Write down Careers of ERP. **8**
 - 7. Write short notes on (**any 4**) : **16**
 - a) Plant maintenance
 - b) Oracle corporation
 - c) Sales and distribution module
 - d) Rethinking process
 - e) Problems of ERP selection.
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Seat No.	
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B.C.A. – III (Semester – VI) Examination, 2015
ADVANCED JAVA – II (New)

Day and Date : Tuesday, 17-11-2015

Max. Marks : 80

Time : 10.30 a.m. to 1.30 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) The _____ object provides a single point of access to many of the page attribute and is convenient place to put shared data within a page.
a) pageConfig b) pageContext c) info d) request
 - 2) A JSP page consists of which tags ?
a) HTML tags b) JSP tags
c) Both a) and b) d) None of the above
 - 3) Which tag is used to execute java source code in JSP ?
a) Declaration tag b) Scriptlet tag
c) Expression tag d) None of the above
 - 4) In JSP page directive which attribute defines the MIME type of the HTTP response.
a) Import b) Content Type c) Extends d) Info
 - 5) Which of the following is not a spring module ?
a) spring MVC
b) O/R Integration
c) AOP
d) HTML/JSP



- 6) Controller in spring is _____
- a) concrete class
 - b) abstract class
 - c) final class
 - d) an interface
- 7) The most common method of hibernate configuration _____
- a) XML configuration in hibernate.cfg.xml
 - b) XML configuration in hibernate.config.xml
 - c) Both a) and b)
 - d) None of these
- 8) Hibernate is _____
- a) Open source
 - b) Light weight
 - c) ORM
 - d) All of these

B) Fill in the blanks : 4

- 1) _____ object writes the output stream to the client.
- 2) MVC stands for _____
- 3) Spring is an _____ and _____ framework.
- 4) How many layers are available in hibernate architecture _____

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

- 1) JSP often serves the same purpose as programs implemented using the Common Gateway Interface.
- 2) Action tags facilitate the developer to write their own tags.
- 3) Hibernate framework simplifies the development of java application to interact with the database.
- 4) ORM stands for object request mapping.

2. A) Explain the life cycle of JSP. 6

B) Explain the architecture of hibernate. 6

C) What are the benefits of using spring ? 4

3. A) State and explain the implicit objects in JSP. 6

B) Which are the various types of collection mapping ? Explain mapping by list. 6

C) Explain the types of dependency injection. 4



- 4. A) Explain the architecture of WAP. 6
 - B) Explain the elements in hibernate mapping file. 6
 - C) What are the advantages of JSP over servlet ? 4

 - 5. A) Write a program to demonstrate the forward and include action elements in JSP. 8
 - B) Write a program to store employee records in table using hibernate. 8

 - 6. A) Write a program to update the salary of employee having designation as “supervisor” by incrementing 1000 to the current salary using Prepared Statement interface in JDBC template class. 8
 - B) Write a program to demonstrate the <jsp:useBean> action element. 8

 - 7. Write short notes on (**any four**) : 16
 - 1) Session tracking.
 - 2) WAP application with JSP.
 - 3) Table per Hierarchy.
 - 4) RowMapper.
 - 5) JSTL SQL tags.
-



- | | |
|--|----|
| 4. a) Explain the Cyber Law in India. | 6 |
| b) What is digital Signature Certificates ? What is required ? | 6 |
| c) Write short note on Security. | 4 |
| 5. a) Write down Information Technology Act – 2000. | 8 |
| b) Explain the scope of E-Commerce. | 8 |
| 6. a) Explain the Intellectual Property Law. | 8 |
| b) Write down Authentication and Security Audit. | 8 |
| 7. Write down short note (any 4) : | 16 |
| a) Data Protection | |
| b) Electronic Record | |
| c) Software Security | |
| d) Information Society | |
| e) Contract Aspects. | |
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Seat No.	
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B.C.A. III (Semester – VI) (New) Examination, 2015
Software Project Management

Day and Date : Saturday, 21-11-2015

Total Marks : 80

Time : 10.30 a.m. to 1.30 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 to Q. No. 6.
4) **All** questions carry **equal** marks.

1. Choose the correct alternatives :

16

- 1) Groups of methods or techniques often referred as objectives.
a) True b) False
- 2) Customer in sales management system is _____ type of stakeholder.
a) Internal b) External c) Both a and b d) None of these
- 3) Which of the following requirement must be consistent with business case ?
a) Functional b) Quality c) Resource d) All of these
- 4) _____ is also known as ARR.
a) Net profit b) Pay back period
c) Return on investment d) NPV
- 5) The relationship between the products can be documented in _____ structure.
a) Work breakdown b) Product hierarchy
c) Product breakdown d) System flow
- 6) Lack of guidance about making organizational decisions is the problem faced by the
a) Customer b) Team members
c) Project managers d) Project board
- 7) NPV stands for
a) Net Present Value b) Net Profile Value
c) Net Profit Value d) Net Production Value



- 8) The waterfall model puts the emphasis on quickly producing prototypes of the software for users to evaluate.
a) True b) False
- 9) The work content of the application to be implemented is measured using
a) SLOC b) BLOC c) MLOC d) CLOC
- 10) Which of the system type is not related to the COCOMO model ?
a) Organic mode b) Semi-detached mode
c) Embedded mode d) Product mode
- 11) The critical path is the _____ path through the network.
a) Shortest b) Nearest
c) Interference float d) Longest
- 12) The _____ chart is a method of recording and displaying the way in which targets have changed throughout the duration of the project.
a) Ball b) Slip c) Timeline d) Gantt
- 13) Availability of the staff of the right ability and experience is the example for _____ uncertainty.
a) Product b) Process c) Resource d) Project
- 14) The reliability is related to capability of the software to maintain the level of performance.
a) True b) False
- 15) Which of the following is project scheduling technique model ?
a) PERT b) CPM c) Both a and b d) None of these
- 16) _____ effort required to locate and fix an error in an operational program.
a) Testability b) Maintainability
c) Flexibility d) Usability
2. a) Explain different activities of Software Project Management. **6**
b) Explain V-process model. **6**
c) Write a note on cash flow forecasting. **4**
3. a) Explain net profit and IRR in detail. **6**
b) Explain procedure code oriented approach in detail. **6**
c) Write note on nature of resources. **4**



- | | |
|--|-----------|
| 4. a) Explain terms of contract. | 6 |
| b) Explain CMM in detail. | 6 |
| c) Write short note on risk management. | 4 |
| 5. a) Explain COCOMO parametric model in detail. | 8 |
| b) Explain the different types of contract in detail. | 8 |
| 6. a) Explain forward pass, backward pass and CPM of activity network. | 8 |
| b) Explain Overview of project planning in detail. | 8 |
| 7. Write short note on : | 16 |
| a) Gantt chart | |
| b) Oldham-Hackman job characteristic model | |
| c) Prototyping | |
| d) Importance of software quality. | |
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Seat No.	
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**B.C.A. – III (Semester – VI) (New) Examination, 2015
WEB TECHNOLOGY III**

Day and Date : Tuesday, 24-11-2015

Total Marks : 80

Time : 10.30 a.m. to 1.30 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 to Q. 6.
4) Figures to the **right** place indicates **full** marks.

1. a) Choose the correct alternative :

10

- 1) Which language is used to create an ASP.NET code file ?
 - a) Visual Basic
 - b) C#
 - c) C++
 - d) All of the above
- 2) Which property is used to name a web control ?
 - a) Control name
 - b) Designation
 - c) ID
 - d) Name
- 3) Which user action will not generate server side event ?
 - a) Mouse move
 - b) Text change
 - c) Button click
 - d) All of the above
- 4) Which is the file extension used for an ASP.Net file ?
 - a) asn
 - b) asx
 - c) aspx
 - d) all of the above
- 5) In ASP.NET what does the following return
<%Response.Write(System.Environment.WorkingSet.ToString())%>
 - a) Gives error
 - b) Give the memory working set
 - c) Return Null Value
 - d) None of the above
- 6) In ASP.NET if one wants to set the focus on a particular control
 - a) Call SETFOCUS
 - b) Call SETCONTROL
 - c) Call FOCUS method
 - d) None of the above



- 4. a) Explain the text box web server control. List and explain any four text box attributes. **8**
 - b) Explain menu and treeview site navigation control in ASP.NET. **8**
 - 5. a) What is Silverlight ? What are the tools required to develop silverlight applications ? **8**
 - b) How to configure ASP.NET form based authentication ? Explain. **8**
 - 6. a) Explain XML serialization. **8**
 - b) What is list control ? Explain rows and selectionmode properties with suitable example. **8**
 - 7. Write short note on followings : **16**
 - a) Personalization in ASP.NET.
 - b) ASP.NET web hosting.
 - c) Page directive.
 - d) AJAX.
-