



- 5) LAN communication speed ranges from
- a) 100 mbps to 200 mbps b) 10 mbps to 20 mbps
 c) 10 mbps to 100 mbps d) none of these
- 6) _____ is most popular and effective pointing devices for GuF application.
- a) Mouse b) Touch screen
 c) Plotter d) Keyboard
- 7) ASCII value of 'A' is
- a) 62 b) 26
 c) 65 d) 56

b) Fill in the blanks :

7

- 1) The fourth generation of computers was characterized by _____
- 2) The communication take place between objects called _____
- 3) The access method used for magnetic disk is _____
- 4) 1 GB (Gigabytes) means _____
- 5) EPROM stands for _____
- 6) Execution of two or more programs by a single CPU is known as _____
- 7) The speed of a dot matrix printer is measured in _____

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

- 1) What is computer ? Explain characteristics and limitation of computer. 7
- 2) What is output device ? Explain the printing mechanism of dot matrix printer. 7
- 3) Define the term memory. Explain semiconductor memory in details. 7

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

- 1) What is software ? Explain different types of software. 7
- 2) Carry out the following conversion (**any two**) : 7
- a) $(1110101.10110)_2 = (?)_8$
- b) $(85.25)_{10} = (?)_2$
- c) $(502)_8 = (?)_{10}$
- 3) What is operating system ? Explain the time sharing and multiprogramming system. 7



4. Write answer of the following questions (**any two**) :
- 1) What is input device ? List out different input devices. Explain keyboard as a input device. 7
 - 2) What is computer language ? Explain machine language with their advantages and disadvantages. 7
 - 3) Define internet. Explain uses and benefits of internet. 7
5. 1) Draw the block diagram of computer. Explain in details all its units. 7
- 2) Discuss the factors which should consider while purchasing the computer. 7
6. 1) Define the term network topology. Explain the different types of network topology. 7
- 2) What is computer viruses ? Explain the different types and characteristics of viruses. 7
7. Write short notes on (**any two**) : 14
- 1) Compiler and interpreter.
 - 2) BCP and EBCDIC.
 - 3) Magnetic disk.
-



- B) State whether **true** or **false** : **4**
- 1) 'C' language is Portable language.
 - 2) Execution of 'C' program ends from getch() function.
 - 3) Array of character is called 'Stream'.
 - 4) Local variables are accessible everywhere in program.
- C) Fill in the blanks. **3**
- 1) _____ is multi-way decision making statement.
 - 2) _____ function is used to reverse the string.
 - 3) Identifier should not starts with _____
2. Attempt **any two** of the following : **14**
- A) What is algorithm ? List out its characteristics and write an algorithm to find minimum number between three numbers.
 - B) Write a program that checks entered number is Palindrome or not using function with argument without return value.
 - C) Explain 'if' statement with its different forms.
3. Attempt **any two** of the following : **14**
- A) Write a program which accepts any 10 numbers and write only even numbers into file.
 - B) What is string ? Explain strcat() and strcpy() functions with example.
 - C) Write a program that checks entered number is perfect or not.
4. Attempt **any two** of the following : **14**
- A) Write a program that calculates addition of two matrices having order 4×3 .
 - B) What is pointer ? List out application of pointer and explain 'Chain of pointer' concept.
 - C) Write a program that prints following pattern : (Use 'for' loop)
- ```

E D C B A
E D C B
E D C
E D
E

```



5. A) What is Array of Structure ? Explain it with suitable example. **7**
- B) Write a program which calculates total marks and percentage obtained in six subjects and also display grade of student according to following table : **7**

| <b>Percentage</b> | <b>Grade</b> |
|-------------------|--------------|
| 0 to 39.99        | Fail         |
| 40 to 49.99       | Third        |
| 50 to 59.99       | Second       |
| 60 to 69.99       | First        |
| 70 to 100         | Distinction  |

6. A) Write a program that swaps two integer values using pass by address or pass by pointer concept. **7**
- B) What is operator ? Explain types of operator in detail. **7**
7. Write short note on following (**any two**) : **14**
- 1) Structure of 'C' program
  - 2) Flow chart
  - 3) Dynamic memory allocation.
-



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**B.C.A. – I (Semester – I) Examination, 2016  
FUNDAMENTALS OF FINANCIAL ACCOUNTING  
(CGPA Pattern)**

Day and Date : Tuesday, 12-4-2016  
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** 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.  
5) Use of calculator is **allowed**.

1. A) Select the correct alternative.

7

- 1) Amount not recovered by debtors is called as  
a) Bad debts  
b) Profits  
c) Discounts  
d) None of the above
- 2) State Bank of India account is \_\_\_\_\_ account.  
a) Personal  
b) Nominal  
c) Real  
d) None of the above
- 3) The rent paid to landlord is credited to  
a) Landlord's Account  
b) Rent Account  
c) Cash Account  
d) None of the above
- 4) The process of transferring the debit and credit items from a journal to their respective accounts in the ledger is called as  
a) Purchase  
b) Posting  
c) Balancing of an account  
d) Arithmetical accuracy test
- 5) Which of the following are fundamental accounting assumptions ?  
a) Consistency  
b) Accrual  
c) Going concern  
d) All of the above

P.T.O.



- 6) In \_\_\_\_\_ method of depreciation amount of depreciation remains constant.
- a) Fixed installment method                      b) Diminishing balance method  
c) LIFO                                                      d) FIFO
- 7) Only those transaction which can be expressed in \_\_\_\_\_ terms are recorded in the books of account.
- a) Monetary                      b) Credit                      c) Expenditure                      d) None

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

- 1) Financial statements do not consider the assets and liabilities expressed in non-monetary terms.
- 2) Purchase of machinery for cash increases total assets.
- 3) Prepaid expenses are the liabilities of the business.
- 4) Stock is always valued at cost price.
- 5) Machinery account is nominal account.
- 6) Cash discount is recorded in the books of account.
- 7) Profit and loss A/C shows gross profit earned by the business.

2. Write short notes (**any two**) : **14**

- a) Objectives of accounting.
- b) Meaning and importance of Bank Reconciliation Statement.
- c) Kinds of subsidiary book.

3. Journalize the following transactions. **14**

**2013**

- June 1 Kartik commenced business with Rs. 20,000
- June 2 Paid into bank Rs. 5,000
- June 3 Purchased plant worth Rs. 10,000 from Modi and Co.
- June 4 Purchased goods worth Rs. 5,000 from Anwar
- June 6 Goods worth Rs. 4,000 sold to Anbu
- June 8 Sold goods worth Rs. 2,000 for cash





- June 10 Goods returned by Anbu Rs. 50
- June 15 Paid rent Rs. 250
- June 18 Withdrawn from bank for office use Rs. 2,500
- June 20 Paid salaries Rs. 1,800
- June 25 Withdrawn for personal use Rs. 250
- June 26 Goods returned to Anwar Rs. 100
- June 27 Paid for office furniture Rs. 1,500 by cheque
- June 28 Received Rs. 3,900 cash from Anbu and discount allowed Rs. 50

4. A) Write short notes (**any one**) : **7**
- 1) Advantages of depreciation
  - 2) Accounting concepts.
- B) Jain Bros. acquired a machine on 1<sup>st</sup> July, 2010 at a cost of ₹ 14,000 and spent ₹ 1,000 on its installation. The firm writes off depreciation at 10% p.a. of the original cost every year. The books are closed on 31<sup>st</sup> December every year. Show the Machinery Account and Depreciation Account for the year 2010 and 2011. **7**
5. A) Methods of valuation of inventory. **7**
- B) Internal and external users of accounting. **7**
6. Following are the details of a spare part of Shruti Mills Limited. **14**
- |           |                        |                         |
|-----------|------------------------|-------------------------|
| 1-1-2014  | Opening inventory      | Nil                     |
| 1-1-2014  | Purchases              | 200 units @ 30 per unit |
| 15-1-2014 | Issued for consumption | 100 units               |
| 1-2-2014  | Purchases              | 400 units @ 40 per unit |
| 15-2-2014 | Issued for consumption | 200 units               |
| 20-2-2014 | Issued for consumption | 200 units               |
- Find out the value of inventory as on 31-3-2014 if the company follows first in first out basis.



7. Shri Mittal gives you the following Trial Balance and some other information : **14**

**Trial Balances as on 31<sup>st</sup> March, 2011**

|                                      | <b>Dr.</b>       | <b>Cr.</b>       |
|--------------------------------------|------------------|------------------|
|                                      | ₹                | ₹                |
| Capital                              |                  | 8,70,000         |
| Purchases and sales                  | 6,05,000         | 12,10,000        |
| Opening inventory                    | 72,000           |                  |
| Trade receivables and trade payables | 90,000           | 1,70,000         |
| 14% Bank loan                        |                  | 2,00,000         |
| Overdrafts                           |                  | 1,12,000         |
| Salaries                             | 2,70,000         |                  |
| Advertisements                       | 1,10,000         |                  |
| Other expenses                       | 60,000           |                  |
| Returns                              | 40,000           | 30,000           |
| Furniture                            | 4,50,000         |                  |
| Building                             | 8,90,000         |                  |
| Cash in Hand                         | 5,000            |                  |
|                                      | <b>25,92,000</b> | <b>25,92,000</b> |

Closing Inventory on 31<sup>st</sup> March, 2011 was valued at ₹ 1,00,000.

Prepare his Final Accounts.

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**B.C.A. – I (Semester – I) (CGPA Pattern) Examination, 2016**  
**BUSINESS COMMUNICATION**

Day and Date : Saturday, 16-4-2016

Max. Marks : 70

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

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

1. A) Rewrite the following questions by choosing the correct alternative : **10**
- 1) Television and cinemas are example of \_\_\_\_\_ communication.  
a) Audio                      b) Visual                      c) Audio-Visual      d) None of these
  - 2) A closed mind in communication shows \_\_\_\_\_ barrier.  
a) Physical                                              b) Mental  
c) Socio-Psychological                                              d) Semantic
  - 3) Order and Warning are forms of \_\_\_\_\_ communication.  
a) Upward                                              b) Downward  
c) Horizontal                                              d) Diagonal
  - 4) The receiver's response is called \_\_\_\_\_  
a) Message                      b) Media                      c) Feedback                      d) Encoding
  - 5) \_\_\_\_\_ communication means communication with other business houses.  
a) Internal                      b) External                      c) Formal                      d) a) and b)
  - 6) Letters sent to introduce new product are called \_\_\_\_\_ letters.  
a) Sales                      b) Collection                      c) Credit                      d) Application
  - 7) If the information flows from bottom to top level in the organization is called \_\_\_\_\_ communication.  
a) Upward                      b) Downward                      c) Horizontal                      d) Consensus





5. Write the answer of the following question : 14
- a) Write the letter with reference to an advertisement in 'the times of India' a letter to Indraini Metal Fitting Ltd., Enquiring the price, terms of sale etc. about their production.
  - b) What is communication ? Explain the process of communication with help of neat diagram.
6. Write the answer of the following question : 14
- a) Explain the modern office communication.
  - b) Write a letter of complaint to the NOKIA Centre, Appa Balwant Chowk, Pune. About the mobile you have purchased is not working properly.
7. Write short notes of the following question (**any two**) : 14
- a) Downward communication.
  - b) Education and Training.
  - c) Write the parts of business letter.
  - d) Write formal written communication.
-



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## B.C.A. – I (Sem. – I) (CGPA Pattern) Examination, 2016

## MATHEMATICS

## Discrete Mathematics

Day and Date : Wednesday, 20-4-2016

Max. Marks : 70

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

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

1. A) Choose the correct alternative.

7

- i) Which of the following is a statement ?  
a) Sun rises in the West                      b)  $x + 4 = 5$   
c) What is your name ?                      d) How beautiful rainfall is !
- ii) Let  $A = \{ x \mid x \text{ is an even number less than } 12, \text{ which is not divisible by } 2 \}$   
then cardinality of set A is  
a) 6                      b) 5                      c)  $\phi$                       d) 0
- iii) If  $xRy$  and  $yRx$  implies that  $x = y$  then relation R is called as \_\_\_\_\_  
relation.  
a) symmetric              b) antisymmetric      c) asymmetric      d) void
- iv) Let  $f : A \rightarrow B$  be a function. Let  $y = f(x)$ , for  $x \in A$  then y is called as  
a) image of x                      b) pre-image of x  
c) co-domain of x                      d) range of x
- v) If a set A contains 5 elements then it's powerset will contains \_\_\_\_\_ elements.  
a) 5                      b) 25                      c) 32                      d) 64
- vi) G.C.D. of the integers 3 and 5 is  
a) 3                      b) 5                      c) 15                      d) 1
- vii) If  $(a * b) * c = a * (b * c)$  then the binary operation \* is said to be  
a) distributive              b) associative      c) commutative      d) invertible

P.T.O.



B) Fill in the blanks. 4

i) If  $|A| = 5$ ,  $|B| = 18$  and  $|A \cap B| = 4$  then  $|A \cup B| =$  \_\_\_\_\_

ii) If  $f(x) = x^2 - 3x + 2$  then  $f(3) =$  \_\_\_\_\_

iii) The converse of the statement  $p \rightarrow q$  is \_\_\_\_\_

iv) If  $P = \{1, 2, 3\}$  and  $Q = \{2, 4, 6\}$  then  $P \times Q =$  \_\_\_\_\_

C) State whether **true** or **false**. 3

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

ii) Any set  $A$  and its complement  $A^c$  are always disjoint sets.

iii) A relation  $R$  defined on a set  $A$  is called as equivalence relation if  $R$  is reflexive, antisymmetric and transitive.

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

A) Define Cartesian product. If  $A = \{p, q, r, s\}$  and  $B = \{a, b, c, d\}$  then find  $A \times B$  and  $B \times A$ . Hence state whether Cartesian product is commutative or not.

B) Define converse, inverse and contra positive form of the conditional statement  $p \rightarrow q$ . Also prepare the truth table for  $p \rightarrow q$ , its converse, its inverse and its contrapositive form.

C) Let  $a|b$  and  $a|c$  then prove that  $a | (bx + cy)$  where  $a, b, c, x, y \in \mathbb{Z}$ .

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

A) Define tautology and contradiction. Hence determine whether the following statement is tautology or contradiction or neither.

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

B) Construct the switching circuit for following expression

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

ii)  $(x \vee y \vee z) \wedge (x' \vee y')$  .

C) Define injective function, surjective function, bijective function and domain of a function.



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

A) Let  $A = \{x \mid x \in \mathbb{N} \text{ and } 2 \leq x < 12\}$  and  $B = \{x \mid x \text{ is a positive odd number less than } 15\}$  then write the following sets and their cardinalities

- i)  $A$     ii)  $B$     iii)  $A - B$     iv)  $A \cap B$     v)  $A \oplus B$

B) Let  $A, B$  and  $C$  be any sets then prove that

$$|A \cup B \cup C| = |A| + |B| + |C| - |A \cap B| - |A \cap C| - |B \cap C| + |A \cap B \cap C|.$$

C) Define : universal relation, equivalence relation, relatively prime integers, disjoint sets.

5. A) Find g.c.d. of integers 3997 and 2947 by using Euclidean algorithm. Also find their L.C.M. 7

B) State DeMorgan's laws for sets. Prove one of them for the following sets.

$$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}.$$

Let  $A = \{2, 3, 6, 8, 9, 10\}$  and  $B = \{1, 2, 4, 5, 6, 9\}$  be subsets of  $U$ . 7

6. A) Let  $A = \{a, b, c\}$ . Let  $R = \{(a, a), (a, c), (b, a), (c, b), (c, c)\}$  be the relation defined on the set  $A$ . Find transitive closure  $R^*$  by using Warshall's algorithm. Also draw digraph for  $R^*$ . 7

B) Translate into symbolic form and test the validity of the following argument.

If 8 is even then 2 does not divides 7. Either 5 is not prime or 2 divides 7. 5 is prime if and only if 8 is even. Therefore 8 is not even. 7

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

A) Let  $f(x) = x^2 - 3x + 7$  then find  $f(2x)$ ,  $f(x^2)$  and  $f(x - 2)$ .

B) Prove by using mathematical induction

$$1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}, \text{ for all } n \geq 1.$$

C) Let  $A = \{1, 2, 3, 4\}$ . Let  $R$  be the relation defined on the set  $A$  by  $xRy$  if and only if  $x$  divides  $y$ ,  $x, y \in A$ . Then write relation  $R$ . Also write matrix of relation  $R$ . Also draw digraph of relation  $R$ .

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**B.C.A. – I (Semester – II) Examination, 2016  
(CGPA Pattern)  
OOP WITH C++**

Day and Date : Thursday, 7-4-2016  
Time : 10.30 a.m. to 1.00 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. 10
- 1) Choosing a function at compile time is called
    - a) early binding
    - b) late binding
    - c) dynamic binding
    - d) none
  - 2) The function which are only declared but not defined in the base class are called as \_\_\_\_\_ function.
    - a) friend
    - b) inline
    - c) virtual
    - d) pure virtual
  - 3) The friend function will have only one argument for overloading \_\_\_\_\_ operator.
    - a) unary
    - b) binary
    - c) ternary
    - d) none
  - 4) \_\_\_\_\_ process of creating a new class which is derived from more than one base classes.
    - a) multilevel
    - b) multipath
    - c) multiple
    - d) single
  - 5) \_\_\_\_\_ operator is used to destroy a memory space.
    - a) new
    - b) delete
    - c) constructor
    - d) destructor
  - 6) A \_\_\_\_\_ constructor is used to initialize the class object, to the value of another class object of same class.
    - a) copy
    - b) parameterized
    - c) default
    - d) dynamic



- 7) The members declared in the \_\_\_\_\_ section can be accessed by any function from the outside world.  
a) private                      b) protected                      c) public                      d) none
- 8) \_\_\_\_\_ is a combination of operators, constants and variables arranged as per the rules of language.  
a) expression                      b) constant                      c) statement                      d) none
- 9) Elements of structure are by default  
a) private                      b) public                      c) protected                      d) none
- 10) Which stream is used to display output ?  
a) cin                      b) cout                      c) in                      d) out

b) State **True** or **False**.

4

- 1) Destructor function can not be overloaded.
- 2) Constructors can be virtual or static.
- 3) A non member function can access the private data members of class.
- 4) A pure virtual function in a class will make the class abstract.

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

14

- a) What is the application of scope resolution operator in C++ ?
- b) What do you mean by overloading of a function ? When do we use this concept ?
- c) How does a C++ structure differ from a C++ class ?

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

14

- a) What is operator overloading ? Why is it necessary to overload an operator ?
- b) What is virtual function ? Why do we need virtual functions ?
- c) Describe the memory management operators in C++.



4. Write the answer of the following questions (**any two**). 14
- a) What is constructor ? How do we invoke constructor function ?
  - b) Describe with examples the uses of enumeration data types.
  - c) Write a program to read a matrix of size  $m \times n$  from the keyboard and display the same on the screen using functions.
5. a) What is object oriented programming ? How is it different from procedural oriented programming ? 7
- b) What are the different forms of inheritance ? Give an example for each. 7
6. a) What is file mode ? Describe the various file mode options available. 7
- b) What is friend function ? What are the merits and demerits of using friend function ? 7
7. Write short note on (**any two**) : 14
- a) **this** pointer
  - b) Abstract class and virtual base class
  - c) Reference variable.
-





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**B.C.A. (Part – I) (Semester – II) (CGPA) Examination, 2016**  
**COMPUTER SCIENCE**  
**Web Technology**

Day and Date : Monday, 11-4-2016  
Time : 10.30 a.m. to 1.00 p.m.

Max. Marks : 70

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

1. A) Choose correct alternative. 7
- 1) \_\_\_\_\_ is the keywords that affects the tag behavior.  
a) tab                      b) attribute              c) select                      d) readonly
  - 2) The specific area in image is called as \_\_\_\_\_  
a) hotspot                  b) area                      c) map                          d) servermap
  - 3) IIS is developed by \_\_\_\_\_  
a) Netscape              b) Adobe                      c) Microsoft                  d) Corel
  - 4) ID attribute is preceded by \_\_\_\_\_ sign.  
a) @                          b) &                          c) #                              d) ^
  - 5) \_\_\_\_\_ event take place when the focus is removed from an element or window.  
a) click                      b) load                          c) focus                          d) blur
  - 6) \_\_\_\_\_ is cross platform scripting language developed by Netscape.  
a) HTML                      b) DHTML                      c) JavaScript                  d) vbscript
  - 7) \_\_\_\_\_ function is used in vbscript to find out number of days between two given dates.  
a) Month()                  b) Datediff()                  c) Minute                          d) Dateadd()
- B) State whether **true** or **false** : 4
- 1) Vbscript is case sensitive language.
  - 2) Unknown tags ignore the browser.
  - 3) Vlink is the attribute of body tag.
  - 4) JavaScript cannot handle form fields.



- C) Fill in the blanks : **3**
- 1) \_\_\_\_\_ tells the browser how to display the contents of document.
  - 2) In JavaScript NaN stands for \_\_\_\_\_
  - 3) W3C stands for \_\_\_\_\_
2. Write short essay type question (**any 2**) : **14**
- A) Explain cross browser testing and give importance of cross browser testing with example.
  - B) Explain how to declare and use array in vbscript with all its methods.
  - C) Write a program in JavaScript and vbscript to calculate factorial of any number.
3. Write short essay type question (**any 2**) : **14**
- A) Explain classes and ids in DHTML with example.
  - B) Explain user defined procedure in vbscript with example.
  - C) Explain dialog boxes in a JavaScript and vbscripts.
4. Write short essay type question (**any 2**) : **14**
- A) Explain lists in HTML with its type and give example.
  - B) Explain iteration statements in vbscript with example.
  - C) How to access value of form in JavaScript ? Explain with example.
5. A) What is form ? Explain form tag with its attributes and example. **7**
- B) Write a vbscript program to find out given number is Armstrong or not. **7**
6. A) What is CSS ? Explain CSS with its type and example. **7**
- B) Write a JavaScript program to find out given number is perfect or not. **7**
7. Write a short notes on (**any 2**) : **14**
- a) Internal and external Hyperlink in HTML
  - b) TCP/IP
  - c) Working with form in vbscript with example.
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**B.C.A. – I (Semester – II) (CGPA Pattern) Examination, 2016**  
**FINANCIAL ACCOUNTING WITH TALLY**

Day and Date : Wednesday, 13-4-2016  
Time : 10.30 a.m. to 1.00 p.m.

Max. Marks : 70

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

1. A) Choose the correct alternative :

7

1) What is TAN ?

- |                          |                          |
|--------------------------|--------------------------|
| a) Tax Account Number    | b) Tax Assessment Number |
| c) Tax Assignment Number | d) None of these         |

2) What is full form of TCS ?

- |                             |                               |
|-----------------------------|-------------------------------|
| a) Tax Collected at Sources | b) Tax Consumption at Sources |
| c) Tax Collected from Sales | d) None of the above          |

3) The shortcut key is used to activate calculator is

- |             |             |
|-------------|-------------|
| a) Ctrl + N | b) Ctrl + M |
| c) Ctrl + A | d) Ctrl + B |

4) Which shortcut key is pressed for voucher entry or deleting a ledger ?

- |            |            |
|------------|------------|
| a) Alt + A | b) Alt + C |
| c) Alt + X | d) Alt + D |

5) Where do we record cash sales in tally ?

- |             |             |
|-------------|-------------|
| a) Contra   | b) Receipts |
| c) Payments | d) Journal  |



- 6) Value of machinery comes under the primary group of
- a) Current Assets
  - b) Fixed Assets
  - c) Investment
  - d) Capital Account
- 7) In Tally, for memo voucher \_\_\_\_\_ key is used.
- a) F8
  - b) F10
  - c) F9
  - d) F12

B) Answer in **one** sentence :

**7**

- 1) MRP stands for.
- 2) Long form of E-TCS.
- 3) BOM stands for.
- 4) VAT stands for.
- 5) What is meant by voucher ?
- 6) MIS stands for.
- 7) TDS stands for.

2. Attempt **any two** from the followings :

**14**

- a) Define VAT and explain different VAT rates, classification.
- b) Explain the features of tally.
- c) Discuss the different reasons for difference in balance shown in cash book and balance shown in pass book.

3. Attempt **any two** from the followings :

**14**

- a) Explain the special key in Tally.
- b) What is E-TDS ? How to create TDS ledger ?
- c) Explain service tax features in Tally.

4. Attempt **any two** from the followings :

**14**

- a) Write a note on Budget management.
- b) Explain import and export data in Tally.
- c) Explain different types of MIS reports in Tally.





5. State groups for ledger and create the ledger : **14**
- 1) Mr. Mukesh starts business with Rs. 1,00,000.
  - 2) Purchase machinery for Rs. 50,000 and furniture for Rs. 10,000.
  - 3) Withdraws Rs. 1,000 for office use.
  - 4) Sold goods to Mr. Rakesh for Rs. 10,000.
  - 5) Received cash from Mr. Rakesh.
  - 6) Deposit Rs. 10,000 in bank.
  - 7) Rs. 5,000 withdraws from bank for personal use.
6. a) Write short note on cost center. **7**
- b) What is meant by sales order ? How can create, alter and delete sales order ? **7**
7. Write short note on the following : **14**
- 1) Software maintenance and upgradation in tally.
  - 2) Scenario Management in Tally.
-



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**B.C.A. – I (Semester – II) (CGPA Pattern) Examination, 2016  
DEVELOPMENT OF HUMAN SKILLS**

Day and Date : Monday, 18-4-2016  
Time : 10.30 a.m. to 1.00 p.m.

Max. 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) The speech is given without any preparation is
  - a) Seminar
  - b) Conference
  - c) Prepared speech
  - d) Extempore speech
- 2) Human skills are also called as \_\_\_\_\_ skills.
  - a) people
  - b) ability
  - c) reading
  - d) learning
- 3) Good part of personality can be termed as \_\_\_\_\_ of the personality.
  - a) weakness
  - b) semi skill
  - c) strength
  - d) a and b
- 4) Mr. Milton Rokeach has classified the
  - a) Learning
  - b) Motivation
  - c) Values
  - d) Attitude
- 5) There are \_\_\_\_\_ Universal values.
  - a) Three
  - b) Four
  - c) Six
  - d) Five
- 6) Goal setting is essential
  - a) To under come weakness
  - b) To over down weakness
  - c) To overcome weakness
  - d) To outcome weakness
- 7) Positive and negative reinforcement are the types of
  - a) values
  - b) interview
  - c) presentation
  - d) learning



- B) State **true** or **false** : **7**
- 1) Memory is function of vision.
  - 2) Clarity is the characteristic of good speech.
  - 3) Goal setting is essential to overcome skills.
  - 4) Interview is a form of Oral Communication.
  - 5) The word 'Reinforcement' is related to demand.
  - 6) Muscular ability plays an important role in manual and Semi-skilled job.
  - 7) The act of reading is essentially a process of attitude.
2. Write short notes on (**any 2**) : **14**
- 1) SWOT analysis.
  - 2) Team role skill.
  - 3) Importance of goal setting to overcome weakness.
3. Write short notes on (**any 2**) : **14**
- 1) Human skills.
  - 2) Leadership skills.
  - 3) Postures and gesture.
4. Write short notes on (**any 2**) : **14**
- 1) Stress management.
  - 2) Extempore speech.
  - 3) Benefits of Emotional intelligence.
5. A) What is meant by learning ? Explain types of learning. **14**  
B) What is meant by interview ? Explain the types of interviews.
6. A) What do you mean by Conference ? Explain the objectives and types of conference. **14**  
B) What is leadership ? Explain different leadership skills.
7. Write short notes (**any 2**) : **14**
- 1) Types of Interview.
  - 2) How self-esteem is different from self-concept and self efficacy ?
  - 3) Explain different types of learning.
  - 4) Five universal values.
-



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**B.C.A. (Part – I) (Semester – II) (CGPA Pattern) Examination, 2016  
BUSINESS STATISTICS**

Day and Date : Thursday, 21-4-2016

Max. Marks : 70

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

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

1. A) Select most correct alternative :

10

- 1) If the population is heterogeneous, then \_\_\_\_\_ method of sampling provides representative sample.
  - a) SRSWR
  - b) SRSWOR
  - c) Stratified
  - d) Systematic
- 2) A number showing how many times a particular value repeated in the data is known as \_\_\_\_\_ of that value.
  - a) Frequency
  - b) I.c.f.
  - c) g.c.f.
  - d) All of these
- 3) The measure of central tendency that can not be determined graphically is \_\_\_\_\_.
  - a) Median
  - b) Mode
  - c) A.M.
  - d) All of these
- 4) The measure of dispersion that depends upon extreme observations is \_\_\_\_\_.
  - a) S.D.
  - b) C.V.
  - c) Range
  - d) None of these



- 5) If the correlation coefficient between X and Y is 0.4, then correlation coefficient between X and  $-Y$  is \_\_\_\_\_
- a) 0.4                                      b)  $-0.4$   
 c) 0.6                                      d) None of these
- 6) If the regression coefficients are  $b_{YX} = -\frac{4}{3}$  and  $b_{XY} = -\frac{1}{3}$ , then  $r_{XY} =$  \_\_\_\_\_
- a)  $-2/3$                       b)  $2/3$                       c)  $4/9$                       d)  $-4/9$
- 7) The Laspeyre's and Paasche's price index numbers are 'x' and 'y' respectively, then Fisher's price index number is \_\_\_\_\_
- a)  $\sqrt{x \cdot y}$                                       b)  $\sqrt{x \cdot y \cdot 100}$   
 c)  $x \cdot y$                                           d)  $100 \cdot x \cdot y$
- 8) Probability of any event is always \_\_\_\_\_
- a) Less than 1  
 b) Greater than 1  
 c) Less than or equal to 1  
 d) None of these
- 9) In construction of histogram, width of rectangle is taken equal to \_\_\_\_\_
- a) Class frequency                              b) Class width  
 c) Frequency density                              d) None of these
- 10) If each observation is increased by 5 then their median is \_\_\_\_\_
- a) Increased by 5                              b) Decreased by 5  
 c) As it is                                          d) None of these

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

4

- 1) It is capable of further algebraic treatments is the merit of A.M.
- 2) If correlation is perfect, we get only one line of regression.
- 3) If  $P(A \cap B) = P(A) \cdot P(B)$ , then events A and B are independent.
- 4) Selection of current period is one of the problem in construction of index number.



2. Attempt **any two** : 14

- 1) Define – Population, sample and state advantages of sampling.
- 2) Calculate price index number for the following data by :
  - i) Simple aggregate method
  - ii) Simple average of relative method.

|                           |    |    |    |    |    |
|---------------------------|----|----|----|----|----|
| <b>Commodity</b>          | A  | B  | C  | D  | E  |
| <b>Base year price</b>    | 10 | 35 | 65 | 80 | 90 |
| <b>Current year price</b> | 12 | 38 | 70 | 67 | 95 |

3) Find A.M. for the data given below :

|                  |         |         |         |         |         |
|------------------|---------|---------|---------|---------|---------|
| <b>Class</b>     | 10 – 15 | 15 – 20 | 20 – 25 | 25 – 30 | 30 – 35 |
| <b>Frequency</b> | 5       | 12      | 19      | 16      | 5       |

3. Attempt **any two** : 14

- 1) Define – A.M. State merits and demerits of it.
- 2) Find Karl Pearson’s coefficient of correlation between X and Y :

|          |    |    |    |    |    |    |
|----------|----|----|----|----|----|----|
| <b>X</b> | 40 | 47 | 35 | 50 | 67 | 58 |
| <b>Y</b> | 60 | 58 | 72 | 55 | 48 | 62 |

3) The equations of line of regression are  $X + 2Y = 80$  and  $3X + Y = 115$ . Find A.M. of X and Y also obtain correlation coefficient between X and Y.

4. Attempt **any two** : 14

- 1) Explain construction of histogram.
- 2) Given :  $P(A) = \frac{3}{4}$ ,  $P(B) = \frac{3}{5}$ ,  $P(A \cap B) = \frac{3}{6}$  find  $P(A \cup B)$ ,  $P(A \cap \bar{B})$ ,  $P(\bar{A} \cap B)$ .
- 3) Find C.V. for the data given below :

|                  |        |        |        |        |        |
|------------------|--------|--------|--------|--------|--------|
| <b>Class</b>     | 10 –20 | 20 –30 | 30 –40 | 40 –50 | 50 –60 |
| <b>Frequency</b> | 6      | 9      | 14     | 11     | 7      |



5. A) Explain scatter diagram method of studying correlation between two variables. **7**  
 B) Draw histogram to represent the following data and hence obtain mode : **7**

| <b>Class</b>     | 25 – 35 | 35 – 45 | 45 – 55 | 55 – 65 | 65 – 75 | 75 – 85 | 85 – 95 |
|------------------|---------|---------|---------|---------|---------|---------|---------|
| <b>Frequency</b> | 9       | 12      | 18      | 23      | 20      | 14      | 8       |

6. A) Define classification and state objectives of it. **7**  
 B) The mean height of 100 students in a certain college is 165 cm. The mean height of 40 of them is 172 cm. Find mean height of remaining students. **7**
7. Attempt **any two** : **14**

- 1) Define – Index number and state problems in construction of it.
- 2) Define – Mutually exclusive events, equally likely events, event, probability.
- 3) The following data is the information about workers and their wages in two factories A and B. Find which factory has consistency in wages.

|                  | <b>No. of workers</b> | <b>A.M. of wages</b> | <b>S.D. Wages</b> |
|------------------|-----------------------|----------------------|-------------------|
| <b>Factory-A</b> | 80                    | 60                   | 9                 |
| <b>Factory-B</b> | 100                   | 70                   | 7                 |



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**B.C.A. – II (Semester – III) (New) (CGPA Pattern) Examination, 2016**  
**DATA STRUCTURE USING 'C'**

Day and Date : Wednesday, 6-4-2016

Total Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

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

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

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

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

1. Choose the single correct alternative :

**14**

- 1) Which of the following data structure is not linear data structure ?  
a) Arrays                      b) Linked lists      c) Both a) and b)      d) None of these
- 2) Finding the location of the element with a given value is known as  
a) Traversal      b) Searching      c) Sorting                      d) None of these
- 3) If the elements “A”, “B”, “C” and “D” are placed in a queue and are deleted one at a time, in what order will they be removed ?  
a) ABCD                      b) DCBA                      c) DCAB                      d) None of these
- 4) What is meaning of FIFO ?  
a) First In Fast Out                                              b) Fast In First Out  
c) First In Fist Out                                              d) None of these
- 5) In linked list each entry contains \_\_\_\_\_  
a) Data                      b) Link                      c) Data and link      d) None of these
- 6) Which of the following operation is performed more efficiently by doubly linked list than by singly linked list ?  
a) Deleting a node whose location is given  
b) Searching of an unsorted list for a given time  
c) Inserting a new node after node whose location is given  
d) Traversing the list to process each node





- 7) One can determine whether a binary tree is a binary search tree by traversing it in \_\_\_\_\_
  - a) Preorder
  - b) Inorder
  - c) Postorder
  - d) Any of the three orders
  
- 8) A sorted file contains 16 items. Using binary search, the maximum number of comparisons to search for an item in this file is \_\_\_\_\_
  - a) 15
  - b) 8
  - c) 1
  - d) 4
  
- 9) Linked lists are not suitable data structures for which one of the following problems \_\_\_\_\_
  - a) Insertion sort
  - b) Binary search
  - c) Radix sort
  - d) Polynomial manipulation
  
- 10) Recursive procedures are implemented by using \_\_\_\_\_ data structure.
  - a) Queues
  - b) Stacks
  - c) Linked lists
  - d) Strings
  
- 11) The result of evaluating the following postfix expression is \_\_\_\_\_
  - a) 50
  - b) 65
  - c) 61
  - d) 5
  
- 12) Out of the following, the slowest sorting procedure is \_\_\_\_\_
  - a) Quick sort
  - b) Heap sort
  - c) Shell sort
  - d) Bubble sort
  
- 13) Which of the following is not a logical data structure ?
  - a) Tree
  - b) List
  - c) Stack
  - d) Chain
  
- 14) An infix expression can be converted to a postfix expression using a \_\_\_\_\_
  - a) Stack
  - b) Queue
  - c) Dequeue
  - d) None of these

- 2. A) What is array ? Explain types of array. 5
- B) Explain circular queue with suitable example. 5
- C) Write a program to find out maximum and minimum number between array. 4



- 3. A) What is linked list ? Explain singly linked list with suitable example. 5
  - B) What is binary tree ? Explain complete binary tree. 5
  - C) Write an algorithm for push and pop operations in a stack. 4
  
  - 4. Write short notes on the following (**any two**) : 14
    - 1) AVL tree
    - 2) Indexed Sequential Search
    - 3) Applications of queue
    - 4) Dequeue.
  
  - 5. A) Write an algorithm for quick sort. 7
  - B) Explain different tree traversal methods. 7
  
  - 6. A) What are the advantages and disadvantages of doubly linked lists ? 7
  - B) Explain stack in recursion with suitable example. 7
  
  - 7. A) Convert the infix expression  $a - b / (c + d * e)$  into postfix form. 7
  - B) Explain radix sort method. 7
-



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**B.C.A. – II (Semester – III) (New) (CGPA Pattern) Examination, 2016  
NETWORKING AND DATA COMMUNICATION**

Day and Date : Saturday, 9-4-2016

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. 2, Q. 3 and Q. 4.  
3) Attempt **any one** question from Q. 5 and Q. 6.

1. Choose the correct alternative : **14**
- 1) Decryption and encryption of data are the responsibilities of the \_\_\_\_\_ layer.  
a) Physical b) Data link  
c) Presentation d) Application
  - 2) As the data packets move from the upper layers to the lower layers, headers are  
a) Added b) Removed  
c) Rearranged d) Modified
  - 3) The application layer of a network  
a) Establishes, maintains and terminates virtual circuits  
b) Consists of software being run on the computer connected to the network  
c) Defines the user's port into the network  
d) All of these
  - 4) Which layer is international standard organization's OSI model responsible for creating and recognizing frame boundaries ?  
a) Physical layer b) Data link layer  
c) Transport layer d) Network layer
  - 5) A network is a communication system that links computers and computer resources in the same way that a telephone system links telephones.  
a) True b) False



- 6) Baud means
  - a) The number of bits transmitted per unit time
  - b) The number of bytes transmitted per unit time
  - c) The rate at which signal changes
  - d) None of these
- 7) Pure ALOHA
  - a) Does not require global time synchronization
  - b) Does required global time synchronization
  - c) Both a) and b)
  - d) None of these
- 8) In the carrier sense network, if the prevailing condition is a 'channel busy', then if the technique used is
  - a) Non-persistent, then it results in randomized wait and sense
  - b) 1-persistent, then the channel is continually sensed
  - c) P-persistent, then randomized retransmission is done
  - d) Both a) and b)
- 9) Which is the commonly used unit for measuring the speed of data transmission ?
  - a) Bit per second
  - b) Baud
  - c) Byte per second
  - d) None of the above
- 10) Which of the following can be shared in a peer-to-peer network ?
  - a) Information
  - b) Software
  - c) Hardware devices
  - d) All of these
- 11) Demodulation is the process of
  - a) Converting digital signals to analog signals
  - b) Converting analog signals to digital signals
  - c) Dividing the high-speed signals into frequency bands
  - d) Combining many low speed channels into one high speed channels
- 12) In fibre optics, the signal source is \_\_\_\_\_ waves.
  - a) Light
  - b) Infrared
  - c) Radio
  - d) Very low frequency
- 13) In distance vector routing, flooding allows changes to be recorded by
  - a) Every router in the network
  - b) Every router less than two units away
  - c) A table sorted by the software
  - d) Its neighbors only



- 14) The shortest path in routing can refer to
    - a) The least expensive path
    - b) The least distance path
    - c) The path with the smallest number of hops
    - d) Any or a combination of the above
  
  2. Answer the following questions (**any two**) : **14**
    - 1) Explain CSMA protocol with the 1-persistent, P-persistent and non-persistent.
    - 2) Discuss peer-to-peer process in network model.
    - 3) Define network. Explain the types of network.
  
  3. Answer the following questions (**any two**) : **14**
    - 1) What are the responsibilities of data link layer and network layer in the ISO-OSI model ? Explain.
    - 2) Explain the unguided media in detail.
    - 3) Explain ARP and RARP.
  
  4. Answer the following questions (**any two**) : **14**
    - 1) What is multiplexing ? Explain different multiplexing techniques.
    - 2) Explain the types of data flow. Also give the different forms of data representation.
    - 3) Which services provided to the network layer by data link layer ? Explain.
  
  5. a) Discuss Stop-and-Wait ARQ protocol. **7**  
b) How to control the congestion in VC subnet ? Explain with example. **7**
  
  6. a) Discuss three protocol scenarios for establishing a connection. **7**  
b) What is error correction ? Explain the Hamming Code technique with example. **7**
  
  7. Write a short note on the following (**any two**) : **14**
    - 1) Applications of Internet.
    - 2) Frame format of TCP.
    - 3) Types of errors.
-



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**B.C.A. – II (Semester – III) (New CGPA) Examination, 2016**  
**COMPUTER SCIENCE**  
**Database Management System**

Day and Date : Tuesday, 12-4-2016  
Time : 2.30 p.m. to 5.00 p.m.

Max. Marks : 70

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

1. A) Choose correct alternatives : 7
- 1) The point of synchronisation between the database and the transaction log file is called as
    - a) Checkpoint
    - b) Fuzzy checkpoint
    - c) UNDO AND REDO
    - d) None of these
  - 2) Timestamps can be implemented by using a
    - a) System clock
    - b) Logical counter
    - c) Both a and b
    - d) None of the above
  - 3) \_\_\_\_\_ manages the allocation of space on disk storage and data structures used to represent information stored on disk.
    - a) Transaction Manager
    - b) File Manager
    - c) Integrity Manager
    - d) None of these
  - 4) Disk and tapes are the example of
    - a) Volatile storage
    - b) Non-volatile storage
    - c) Both a) and b)
    - d) None of the above
  - 5) In E-R diagram ellipses represent
    - a) Entity sets
    - b) Relationship among entity sets
    - c) Attributes
    - d) Link between attributes and entity sets



- 6) A schedule that will always produce identical results
- a) Equivalent schedule
  - b) Complete schedule
  - c) Serial schedule
  - d) Non-serial schedule
- 7) The column in the child table that references a primary key of the parent table is called as
- a) Candidate key
  - b) Foreign key
  - c) Composite key
  - d) None of the above

B) Fill in the blanks : 4

- 1) A \_\_\_\_\_ is a collection of inter-related data and a set of programs to access those data.
- 2) The set of permitted values for each attribute is called its \_\_\_\_\_
- 3) The overall design of the database is called the database \_\_\_\_\_
- 4) When a transaction never progresses then we say that it is \_\_\_\_\_

C) State whether **true** or **false** : 3

- 1) Shadow paging maintains 2 tables.
- 2) A file organization is a way of arranging the records in a file when the file is stored on the disk.
- 3) DDL stands for Data Domain Language.

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

- a) What is attribute ? Explain different types of attribute.
- b) Define Transaction. Explain transaction state diagram.
- c) Explain different functions of Database Administrator.

3. Attempt **any two** of the followings : 14

- a) Explain different limitations of traditional file system.
- b) Explain sparse and dense index.
- c) Explain timestamp based concurrency control protocol.

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

- a) Explain 2 tier and 3 tier architecture.
- b) What is key ? Explain Primary key and Foreign key.
- c) Define Normalization. Explain different normal forms.



- 5. a) Explain following relational algebra operations with example. 7
    - a) Select
    - b) Project
    - c) Cartesian product.
  - b) Explain different notations in E-R model. 7
  - 6. a) What is Deadlock ? Explain deadlock prevention mechanism. 7
    - b) What is concurrency control ? Which are the problems of concurrency control ? 7
  - 7. Write short notes on (**any two**) : 14
    - a) Shadow paging
    - b) Log-based recovery technique.
    - c) Storage manager.
-







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**B.C.A. – II (Semester – III) Examination, 2016**  
**COMPUTER SCIENCE**  
**Core Java (New CGPA)**

Day and Date : Saturday, 16-4-2016  
Time : 2.30 p.m. to 5.00 p.m.

Max. Marks : 70

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

1. Multiple choice questions :

14

- 1) What is the range of data type byte in Java ?
  - a) – 128 to 127
  - b) – 32768 to 32767
  - c) – 2147483648 to 2147483647
  - d) None of the mentioned
- 2) Which of the following is a valid declaration of an object of class box ?
  - a) Box obj = new Box();
  - b) Box obj = new Box;
  - c) obj = new Box();
  - d) new Box obj;
- 3) Which of these is correct way of inheriting class A by class B ?
  - a) class B + class A {}
  - b) class B inherits class A {}
  - c) class B extends A {}
  - d) class B extends class A {}
- 4) Which of these keywords is used to manually throw an exception ?
  - a) try
  - b) finally
  - c) throw
  - d) catch
- 5) What is multithreaded programming ?
  - a) It's a process in which two different processes run simultaneously
  - b) It's a process in which two or more parts of same process run simultaneously
  - c) Its a process in which many different process are able to access same information
  - d) Its a process in which a single process can access information from many sources

P.T.O.



- 6) Which of these classes is not a member class of java.io package ?
- a) String
  - b) StringReader
  - c) Writer
  - d) File
- 7) Which of these methods are used to register a keyboard event listener ?
- a) KeyListener()
  - b) addKistener()
  - c) addKeyListener()
  - d) eventKeyListener ()
- 8) Which of these can be overloaded ?
- a) Methods
  - b) Constructors
  - c) Both a) and b)
  - d) None of the mentioned
- 9) Which of these events is generated when the component is added or removed ?
- a) ComponentEvent
  - b) ContainerEvent
  - c) FocusEvent
  - d) InputEvent
- 10) Which method can be defined only once in a program ?
- a) main method
  - b) finalize method
  - c) static method
  - d) private method
- 11) Delete operator is used by Java run time implementations to free the memory of an object when it is no longer needed.
- a) True
  - b) False
- 12) 'if' is a selection statement in Java.
- a) True
  - b) False
- 13) Constructor has int return type.
- a) True
  - b) False
- 14) Encapsulation is the process by which we can control what parts of a program can access the members of a class.
- a) True
  - b) False
2. A) Explain byte stream classes. Write a program to copy file to file using byte stream. 7
- B) Discuss various features of Java programming in detail. 7



3. A) Explain the structure of Java program with example. 7
- B) Write a program to print the following format. 7
- ```
9
77
555
3333
11111
```
4. A) Describe thread life cycle and explain following methods with example. 7
- i) wait() ii) notify()
- B) Differentiate between abstract class and interface with example. 7
5. A) Describe event model and explain event handling listeners for mouse with example. 7
- B) Describe exception handling techniques in Java with example of each. 7
6. A) Explain final keyword as variable, class and methods with example. 7
- B) How many ways we can create the thread ? Explain any one of them with example. 7
7. Write a short note on :
- 1) Usage of this keyword. 4
 - 2) Differentiate between break and continue. 4
 - 3) Text Components. 4
 - 4) Naming Conventions. 2
-



Seat No.	
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**B.C.A. – II (Semester – III) (New) (CGPA Pattern) Examination, 2016
FINANCIAL MANAGEMENT**

Day and Date : Wednesday, 20-4-2016

Max. Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

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

1. a) Select the correct alternatives :

7

- 1) _____ of a firm refers to the composition of its long term funds and its capital structure.
 - a) Capitalisation
 - b) Over capitalisation
 - c) Under capitalisation
 - d) Market capitalization
- 2) _____ is the price at which the bond is traded in the stock exchange.
 - a) Redemption value
 - b) Face value
 - c) Market value
 - d) Maturity value
- 3) In _____ approach, the capital structure decision is relevant to the valuation of the firm.
 - a) Net operating income
 - b) Net income
 - c) Traditional
 - d) Miller and Modigliani
- 4) _____ is defined as the length of time required to recover the initial cash outlay.
 - a) Payback period
 - b) Inventory conversion period
 - c) Discounted payback period
 - d) Budget period
- 5) _____ is the length of time between the firm's actual cash expenditure and its own cash receipt.
 - a) Net operating cycle
 - b) Cash conversion cycle
 - c) Working capital cycle
 - d) Gross operating cycle

P.T.O.



- 6) Reserve and surplus are _____ form of financing.
- | | |
|-----------------------|----------------------------|
| a) Security financing | b) Internal financing |
| c) Loan financing | d) International financing |
- 7) In Walter Model formula D stands for _____
- | | |
|-----------------------|--------------------|
| a) Divident per share | b) Direct dividend |
| c) Dividend earning | d) None of these |

b) Fill in the blanks :

7

- 1) Maximization of _____ is the main goal of financial management.
- 2) Profit and wealth maximizations are the goals of _____
- 3) Sale of shares and bonds are not the daily activities of _____ management.
- 4) Dividends in arrears occur only on _____ preference stock.
- 5) _____ shares also called hybrid security.
- 6) _____ loan has a specific amount that has a specified repayment schedule.
- 7) Investment is usually made in small and medium scale enterprises as well as in high risk but high growth potential projects by _____

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

14

- a) Write the types of finance.
- b) Explain functions of financial manager.
- c) Write the demerits of profit maximization.

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

14

- a) Define steps of financial planning.
- b) Write the merits of over capitalization.
- c) Define objectives of financial planning.

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

14

- a) Define operating leverage.
- b) Write the importance of working capital.
- c) Explain importance of financial management.

5. A) Explain the difference between operating leverage and financial leverage.

7

B) Explain Banking Committee computation of working capital.

7



6. A) While preparing a project report on behalf of a client you have collected the following facts. Estimate the net working capital required for that project. Add 10% to your computed figure to allow contingencies. 14

Particulars	Unit
Raw material	80
Direct labour	30
Overheads	60
Total cash cost	170

Additional Information :

- 1) Selling price Rs. 200 per unit.
- 2) Level of activity 1,04,000 units of production per annum.
- 3) Raw material in stock, average 4 weeks.
- 4) Work-in-progress (assume 50 percent completion stage in respect of conversion costs and 100% completion in respect of materials) average 2 weeks.
- 5) Finished goods in stock, average 4 weeks.
- 6) Credit allowed by suppliers, average 4 weeks.
- 7) Credit allowed to debtors, average 8 weeks.
- 8) Lag in payment of wages average 1.5 weeks.
- 9) Cash at bank is expected to be Rs. 25,000.

You may assume that production is carried on evenly throughout the year (52 weeks) and wages and overheads accrue similarly. All sales are on credit basis only.

7. Write short note on (**any two**) : 14
- a) Types of working capital.
 - b) Uses of financial leverage.
 - c) Favorable points of profit maximization.
-



Seat No.	
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B.C.A. – II (Semester – III) (Old) Examination, 2016
COMPUTER SCIENCE
Data Structure Using ‘C’

Day and Date : Wednesday, 6-4-2016

Max. Marks : 80

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

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

1. Choose correct alternatives :

16

- 1) AVL trees have faster
 - a) Insertion
 - b) Deletion
 - c) Updation
 - d) Retrieval
- 2) Queue can be used to implement
 - a) Quick sort
 - b) Recursion
 - c) Bubble sort
 - d) None of these
- 3) A mathematical model with collection of operations defined on that model is
 - a) Data Structure
 - b) Abstract Data type
 - c) Primitive Data type
 - d) Algorithm
- 4) We have to sort a list ‘L’ consisting of a sorted list followed by a few ‘random’ elements.

Which of the following sorting method would be especially suitable for such task ?

- a) Bubble
 - b) Selection
 - c) Quick
 - d) Insertion
- 5) If inorder traversal a tree resulted EACKFHDBG. Then preorder traversal would return
- a) FAEKCHDGB
 - b) FAEKCDHGB
 - c) FAEKCDHGB
 - d) FAECKDHGB



2. A) Write a program to implement insertion sort method. 6
B) What is Array ? Write an algorithm for deletion of K'th element of an array. 6
C) Draw the binary expression tree for expression : $A * B - (C - D) * (M/N)$. After drawing expression tree, traverse it using inorder traversal method. 4

 3. A) Write an algorithm to concatenate two linked lists with each other. 6
B) What is internal and external sort ? Explain 'Partition exchange sort' in details. 6
C) What is ADT ? Explain ADT for queue. 4

 4. A) Explain following operations of singly circular linked list : 6
 I) insert_first()
 II) find_max()
 III) display_odd()
B) Implement function to add new node in binary search tree. 6
C) Implement frequency () function that finds frequency of entered node in singly linked list. 4

 5. A) Write a program that prompts for 10 integers, each of which is inserted into binary search tree. The program then performs postorder traversal and prints all nodes in postorder. 8
B) How circular queue overcomes the drawback of linear queue ? 8

 6. A) What is Recursion ? Implement recursive function that returns face value of entered number. 8
B) Write a program to implement binary search method to search entered element. 8

 7. Write short note on followings (**any four**) 16
 - 1) Application of tree data structure.
 - 2) Indexed sequential search.
 - 3) LIFO system Vs. FIFO system.
 - 4) Array Vs. Linked list.
 - 5) Straight selection sort.
-



Seat No.	
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**B.C.A. – II (Semester – III) (Old) Examination, 2016
NETWORKING AND DATA COMMUNICATION**

Day and Date : Saturday, 9-4-2016

Max. Marks : 80

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

- N.B. :** 1) Q.No. 1 and Q.No. 7 are **compulsory**.
2) Solve **any two** questions from Q.2 to Q.4.
3) Solve **any one** question from Q.5 to Q.6.
4) Figures to the **right** indicate **full** marks.

1. A) Multiple choice questions.

8

- 1) _____ are different forms of information.
 - a) Text, numbers and images
 - b) Syntax, semantics and timing
 - c) Message, sender and receiver
 - d) Mesh, bus and star
- 2) The _____ layer links the network support layers and the user support layers.
 - a) Physical
 - b) Data-link
 - c) Session
 - d) Transport
- 3) _____ is the rate of change with respect to time.
 - a) Phase
 - b) Frequency
 - c) Bit-rate
 - d) Bandwidth
- 4) In _____ transmission, the frequency of the carrier signal is modulated to follow the changing voltage level of the modulating signal.
 - a) AM
 - b) PM
 - c) FM
 - d) All of above
- 5) In _____, slots are dynamically allocated to improve bandwidth efficiency.
 - a) Synchronous TDM
 - b) Statistical TDM
 - c) FDM
 - d) WDM
- 6) _____ carry data signals in the form of light.
 - a) Twisted-pair cables
 - b) Co-axial cables
 - c) Fiber-optic cables
 - d) All of above

P.T.O.



- 7) In a _____ network, each packet is treated independently of all others.
- a) datagram
 - b) virtual-circuit
 - c) both (a) and (b)
 - d) none of the above
- 8) The telephone network is made up of three major components
- a) local loops, trunks, and switching offices
 - b) while loops, trunks and switching offices
 - c) infinite loops, circuits and circuit offices
 - d) none of above

B) State true/false :

4

- 1) Telephone companies provide two types of services: analog and digital.
- 2) To detect or correct errors, we don't need to send redundant bits with data.
- 3) There are two main methods of error correction : forward error correction and correction by retransmission.
- 4) In variable size framing, there is no need for defining the boundaries of frames.

C) Fill in the blanks :

4

- 1) In _____ protocol, the sender sends one frame, stop until it receives confirmation from the receiver and then sends the next frame.
- 2) _____ can be fixed or variable size.
- 3) _____ is connecting device that operates in the physical layer of the internet model.
- 4) _____ can forward and filter frames and automatically build its forwarding table.

2. a) Explain some hierarchical switching levels of a Telephone network. **6**
- b) What is congestion ? Explain congestion control algorithms. **6**
- c) What are the characteristics of data communication system ? **4**
3. a) Give the principal difference between connectionless communication and connection -oriented communication. **6**
- b) Discuss slotted Aloha and Pure Aloha. **6**
- c) Explain ARP and RARP. **4**



- 4. a) Define Network Topology. Explain any two with advantages and disadvantages. **6**
 - b) What are the responsibilities of transport layer and presentation layer ? Explain. **6**
 - c) Give the types of errors. **4**
 - 5. a) Explain CSMA protocol with 1- persistent, non-persistent and p-persistent. **8**
 - b) Discuss Modulation Techniques. **8**
 - 6. a) What is the difference between port address, logical address and physical address ? **8**
 - b) Explain the types of unguided media. **8**
 - 7. Write a short note on **any four** : **16**
 - 1) Uses of computer network.
 - 2) Period and frequency.
 - 3) HTTP and WWW.
 - 4) Error control and flow control.
 - 5) Multicast routing.
-



Seat No.	
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B.C.A. – II (Semester – III) (Old) Examination, 2016
COMPUTER SCIENCE
Database Management System

Day and Date : Tuesday, 12-4-2016
Time : 2.30 p.m. to 5.30 p.m.

Max. Marks : 80

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

1. Choose the correct alternatives :

16

- 1) A schedule in which the operations from a set of concurrent transactions are interleaved is called as _____
 - a) Non-serial schedule
 - b) Serial schedule
 - c) Complete schedule
 - d) None of the above
- 2) A phase during which all locks are requested is known as _____
 - a) Growing phase
 - b) Shrinking phase
 - c) Aborted phase
 - d) None of the above
- 3) A sequence of log record is called as a _____
 - a) File
 - b) Database
 - c) Log-file
 - d) None of the above
- 4) _____ manages the allocation of space on disk storage and data structures used to represent information stored on disk.
 - a) Transaction manager
 - b) File manager
 - c) Integrity manager
 - d) None of the above
- 5) DDL stands for _____
 - a) Data Domain Language
 - b) Data Definition Law
 - c) Data Definition Language
 - d) None of the above



- 16) The physical storage structures or devices could be changed without affecting conceptual schema. This is known as _____
- a) Physical data independence
 - b) Logical data independence
 - c) External data independence
 - d) None of the above
2. a) Explain different types of attribute. 6
- b) Explain the concept of shadow paging. 6
- c) Give the different operations on file. 4
3. a) Explain role of DBA. 6
- b) What is transaction ? Explain states of transaction. 6
- c) Write note on two phase locking (2PL) protocol. 4
4. a) Explain sparse index and dense index. 6
- b) Explain different normal forms. 6
- c) Write note on specialization. 4
5. a) Explain two tier and three tier architecture. 8
- b) Explain advantages of DBMS. 8
6. a) Explain following relational algebra operators : 8
- i) Select
 - ii) Project
 - iii) Cartesian product
 - iv) Union.
- b) Explain ACID properties with suitable example. 8
7. Write short notes on (**any four**) : 16
- i) Primary key and foreign key
 - ii) Cardinality
 - iii) Database users
 - iv) Schema and Instances
 - v) Deadlock handling.
-



Seat No.	
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**B.C.A. (Part – II) (Semester – III) (Old) Examination, 2016
CORE JAVA**

Day and Date : Saturday, 16-4-2016

Max. Marks : 80

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

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

1. A) Choose the single correct alternative : 8
- 1) Which of the following is not an integer type ?
 - a) double
 - b) short
 - c) byte
 - d) int
 - 2) Println is a method used with
 - a) object of the string
 - b) the system.in object
 - c) the system.out object
 - d) all of the above
 - 3) What is the output of the following ?
System.out.println (1 + 2 + " abc");
 - a) 3abc
 - b) 12abc
 - c) abc12
 - d) None of the above
 - 4) The character// in a line
 - a) are part of an expression
 - b) meant that the rest of the line is a comment
 - c) are an escape sequence
 - d) none of the above
 - 5) From these which one is the compulsory section in a Java program ?
 - a) package statement
 - b) import statement
 - c) documentation section
 - d) class declaration section



6) To create an array of 5 integer which statement is correct

- a) `int a[] = int[5]` b) `int a[5] = new a[]`
c) `int a[] = new int[5]` d) `int a[] = new a[5]`

7) Which of the following loop is exit controlled loop ?

- a) while b) do while
c) for d) none of the above

8) `for(i=1, j = 0; i<10;j++)`

`j + = i;`

`System.out.println(i);`

- a) 10 b) 11
c) 55 d) None of the above

B) Fill in the blanks :

4

- 1) Every variable in Java must be _____.
- 2) Single quotes are used with constants of the _____ type.
- 3) An assignment statement always has a single _____ on the left side of the assignment operator.
- 4) The value of `82% 9` is _____

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

4

- 1) An upper case letter is considered to be the same character as a lower case letter in Java.
- 2) The boolean type has only one value.
- 3) The value of `5/2` and the value of `5.0/2` are the same.
- 4) Earlier name of the Java programming language was Eclipse.

2. A) What is mean by data type ? Explain different data type in Java.

8

B) Explain relational operators in Java with suitable example.

8

3. A) Explain in detail structure of Java program with suitable example.

8

B) Explain looping statement with syntax and example.

8



- 4. A) Write an object oriented program to print given number is palindrome or not. **8**
B) Write a program that show `ArrayIndexOutOfBoundsException` and `ArithmeticException` in array. **8**
 - 5. A) Explain about inheritance in Java. **8**
B) What is constructor ? Explain with suitable examples. **8**
 - 6. A) Write a program to input values of 3*3 two matrices and print addition and subtraction of these values. **8**
B) Write a program to make addition of two number with applet and event handling. **8**
 - 7. Write short notes on the following : **16**
 - 1) Member access controls
 - 2) Methods in Java
 - 3) Threading in Java
 - 4) JVM.
-



Seat No.	
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B.C.A. – II (Semester – III) (Old) Examination, 2016
FINANCIAL MANAGEMENT

Day and Date : Wednesday, 20-4-2016
Time : 2.30 p.m. to 5.30 p.m.

Max. Marks : 80

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

1. A) State **True** or **False** : **8**
- 1) The investment decision relates to the selection of assets which funds will be invested by a firm.
 - 2) Cash management is an important task of financial manager.
 - 3) Working capital is mainly used for purchase of fixed assets.
 - 4) Combined leverage indicates the risk in valued in business.
 - 5) Operating leverage \times financial leverage = combined leverage.
 - 6) Trading on equity means issue of equity shares to maximise earning per equity shares.
 - 7) Working capital is considered to be the life blood of business.
 - 8) Total current assets is termed as net working capital.
- B) Select correct alternatives : **8**
- 1) A decision to increase the installed capacity of plant 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) All above
 - 3) Operating cycle start with cash and end with
A) Cash B) Creditors C) Debtors D) None of these



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

Projected Annual sales – 75,000 units Rs.100

Cost price perunit – Raw material Rs.40

Labour Rs.10 and overheads Rs.30

Debtors pay after 10 weeks

Creditors are paid after 4 weeks

Raw material in stock 6 weeks

Financial stock 8 weeks

Production time 4 weeks

Wages are paid once in 4 weeks

Assume–

1) Contingency – 10% of the estimated working capital.

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

5. Define business finance. Explain the importance and types of finance. **16**

6. Define financial planning. What are the objectives of financial planning and also explain steps in financial planning. **16**

7. Explain meaning of leverage and uses of operating leverage and financial leverage. **16**



Seat No.	
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**B.C.A. – II (Semester – IV) (New) (CGPA) Examination, 2016
SOFTWARE ENGINEERING**

Day and Date : Thursday, 7-4-2016
Time : 2.30 p.m. to 5.00 p.m

Total Marks : 70

- 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 :

14

- 1) In the spiral model 'risk analysis' is performed
 - a) In the first loop
 - b) In the first and second loop
 - c) In every loop
 - d) Before using spiral model
- 2) The first step in the Systems Development Life Cycle (SDLC) is development and documentation.
 - a) True
 - b) False
- 3) Modifying the software to match changes in the ever changing environment is called
 - a) adaptive maintenance
 - b) corrective maintenance
 - c) perfective maintenance
 - d) preventive maintenance
- 4) _____ is not the role of system analyst.
 - a) Programmer
 - b) An intelligent salesperson
 - c) An agent of change
 - d) An architect
- 5) RAD stands for Ready Application Development.
 - a) True
 - b) False
- 6) Which of the following is the least expensive installation method ?
 - a) Direct cutover
 - b) Pilot operation
 - c) Parallel operation
 - d) Phased operation



- 7) Which of the following is the characteristic of a system ?
 - a) Organization
 - b) Interaction
 - c) Interdependence
 - d) All of the these
- 8) In 3 NF removes the transitive dependency.
 - a) True
 - b) False
- 9) Software feasibility is based on technology, finance, time, resources.
 - a) True
 - b) False
- 10) _____ is a tabular method for describing the logic of the decisions to be taken.
 - a) Decision Tree
 - b) Decision Tables
 - c) Decision Method
 - d) Decision Data
- 11) The inter-connection and interaction between the subsystems are called as
 - a) Control
 - b) Boundaries
 - c) Interfaces
 - d) Environment
- 12) In decision trees branches represent
 - a) name of process
 - b) conditions
 - c) actions to be performed
 - d) rules
- 13) Operator is the intermediary between user and programmer in system development.
 - a) True
 - b) False
- 14) Which of the following activity is carried out under implementation ?
 - a) User training
 - b) System conversions
 - c) Both a) and b)
 - d) None of these
- 2. a) What is 2NF ? Explain with suitable example. 5
- b) What is system ? Explain with suitable example. 5
- c) Write note on Requirement Anticipation. 4
- 3. a) Define ER Diagram. Explain entity and entity set. 5
- b) Discuss the importance of drawing the implementation boundary while configuring the system. 5
- c) Write not on merits and demerits of decision table. 4



- 4. a) Explain decision tree with suitable example. 5
 - b) Explain black box testing with example. 5
 - c) Give the different advantages of HIPO. 4

 - 5. a) Explain in brief by giving appropriate examples. 7
 - i) External Entities
 - ii) Data Store
 - iii) Data flow
 - iv) Process.

 - b) Explain spiral model and prototyping model in detail with advantages and disadvantages of each model. 7

 - 6. a) What is data dictionary ? Prepare data dictionary for College Admission System. 7
 - b) Explain various fact-finding methods. 7

 - 7. Write short note on (**any two**) : 14
 - a) Structured English
 - b) Principles of output design.
 - c) Open and closed systems.
-



Seat No.	
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B.C.A. – II (Semester – IV) (New) (CGPA) Examination, 2016
COMPUTER SCIENCE
RDBMS with Oracle

Day and Date : Monday, 11-4-2016

Max.Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

- Instructions :** 1) **Q1 and Q7 are compulsory.**
2) From **Q2, Q3 and Q4** solve **any two** questions.
3) From **Q5 and Q6** solve **any one** question.
4) Figure to the **right** indicates **full** marks.

1. A) Choose the correct alternatives :

7

- 1) DML is provided for
 - A) Description of logical structure of database
 - B) Addition of new structures in the database system
 - C) Manipulation and processing of database
 - D) Definition of physical structure of database system
- 2) A relational database developer refers to a record as
 - A) a criteria
 - B) a relation
 - C) a tuple
 - D) an attribute
- 3) Key to represent relationship between tables is called
 - A) Primary key
 - B) Secondary key
 - C) Foreign key
 - D) None of these
- 4) _____ is the powerful language for working with RDBMS.
 - A) Embedded Programs
 - B) Dynamic Programs
 - C) Query Language
 - D) Static Language Programs
- 5) Which of the following is a valid SQL type ?
 - A) CHARACTER
 - B) NUMERIC
 - C) FLOAT
 - D) All of the above



- 6) The full form of DDL is
- A) Dynamic Data Language B) Detailed Data Language
C) Data Definition Language D) Data Derivation Language
- 7) Which of the following is a comparison operator in SQL ?
- A) = B) LIKE
C) BETWEEN D) All of the above

B) Fill in the blanks :

3

- 1) The relational model was designed by the IBM research scientist and mathematician.
- 2) The condition in group by clause is given by _____ clause.
- 3) SQL statements are written in _____ section.

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

4

- 1) Most RDBMS use SQL as database query language.
- 2) A trigger is executed by an event.
- 3) Relational database design makes data retrieval difficult.
- 4) Query within query is called as sub query.

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

14

- A) Define RDBMS. Explain difference between DBMS and RDBMS.
- B) Explain the group by clause and having clause with example.
- C) What is function ? Explain the different aggregate function with example.

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

14

- A) Explain the different data types in SQL.
- B) Write a PL/SQL block to check whether given number is odd or even.
- C) What is join ? Explain different types of join.

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

14

- A) What are constraints ? Explain different types of constraints.
- B) Differentiate between SQL and PL/SQL.
- C) Write a PL/SQL program to find the sum of digit.



5. Write answer of following question : 14
- A) What is Cursor ? Explain different types of cursors.
 - B) What is sub query ? Explain the different types of sub query.
6. Write answer of following question : 14
- A) Write a PL/SQL block of code to calculate face value.
 - B) What is exception handling ? Explain different types of exception handling.
7. Write answer of following question (**any two**) : 14
- A) Explain the different looping statement in PL/SQL.
 - B) What is trigger ? Explain the types of trigger.
 - C) Write a short note on views and package.
-



Seat No.	
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**B.C.A. – II (Semester – IV) (New CGPA) Examination, 2016
OPERATING SYSTEM**

Day and Date : Wednesday, 13-4-2016

Total Marks : 70

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. 2 to Q. 4.*
3) *Attempt any one question from Q. 5 to Q. 6.*

1. A) Choose correct alternatives. 7
- 1) The _____ system is logical expansion of multiprogramming system.
a) Batch b) Parallel c) Time sharing d) None
 - 2) The banker's algorithm is used for deadlock
a) Prevention b) Avoidance c) Detection d) Recovery
 - 3) Which of the following is not service provided by operating system ?
a) I/O operation b) Communication
c) Error detection-correction d) None
 - 4) The number of tasks completed in per unit time is
a) CPU utilization b) Response time
c) Waiting time d) Throughput
 - 5) The starvation problem faced in _____ scheduling algorithm.
a) FCFS b) SJF c) Priority d) RR
 - 6) Virtual memory is
a) An extremely large main memory
b) An extremely large secondary memory
c) An illusion of extremely large main memory
d) Memory used in super computers
 - 7) The page is not loaded in to main memory until it is required to process is called as
a) Demand Paging b) Page hit
c) Required Paging d) None



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

- 1) The operating system is also called as resource allocator.
a) True b) False
- 2) In the Batch system the input and output is given by using devices.
a) True b) False
- 3) The only one process can enter in critical region for execution is mutual exclusion.
a) True b) False
- 4) The system call acts as interface between user application and system.
a) True b) False

C) Fill in the blanks. **3**

- 1) The system terminates execution of child process if parent process is terminating is called as _____
- 2) _____ method allocates the largest hole of memory to process in contiguous memory allocation.
- 3) The group of files is identified by common name as _____

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

- A) What is scheduling of process ? Explain the short term and long term scheduler working.
- B) Draw and explain the address translation in paging with example.
- C) Write a note on critical region.

3. Attempt **any two** of the followings : **14**

- A) Explain with example working of FCFS and SJF scheduling algorithm.
- B) Write a note on segmentation.
- C) List the components of system and explain in detail.

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

- A) Write in detail different file operation supported by system.
- B) What is IPC ? Write the buffering mechanism used in it.
- C) Write the advantages of multitasking system over Batch system and single tasking system.



5. A) Draw and explain the process state transition diagram. 7
- B) What is page replacement ? Write the working of FIFO page replacement algorithm. 7
6. A) List the directory structures in system and explain any three directory structures. 7
- B) How deadlock detection is implemented by system for single and multiple instances of resources ? 7
7. Write short note on followings (**any two**) : 14
- 1) Swapping
 - 2) Dinning Philosopher problem
 - 3) Real time system with its applications.
-



Seat No.	
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B.C.A. – II (Semester – IV) (New CGPA) Examination, 2016
COMPUTER SCIENCE
Web Technology – II

Day and Date : Monday, 18-4-2016

Total Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

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

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

3) Attempt **any one** questions from Q. No. 5 to Q. No. 6.

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

1. Choose the correct alternatives :

14

1) _____ function return 1 when output is successful.

- a) echo b) print c) display d) show

2) Which of the following statement is used to 1 in the variable count ?

- a) incr count; b) \$count++;
c) incr \$count; d) count=count+1;

3) The _____ operator is used to concatenate two string variables together.

- a) & (ampersand) b) + (plus) c) . (dot) d) || (pipe)

4) A class may contain its own

- a) Variables b) Functions c) Constants d) All of these

5) PHP files can contain

- a) HTML code b) JavaScript code
c) PHP code d) All of these



- 6) The _____ function checks if the “end-of-file” (EOF) has been reached.
- a) f_eof() b) f_of() c) feofs() d) feof()
- 7) Which of the following function returns the number of characters in a string variable ?
- a) strlen (\$variable) b) len (\$variable)
c) strcount (\$variable) d) count (\$variable)
- 8) _____ method is suitable when you need to send larger form submissions.
- a) Get b) Post
c) Both a) and b) d) None of these
- 9) Which of the following method acts as a destructor function in a PHP class ?
- a) class_name() b) __destruct
c) destructor d) destruct_
- 10) _____ is used to collect data after submitting an HTML form.
- a) \$_REQUEST b) \$_SERVER
c) Both a) and b) d) None of these
- 11) Variable always start with a _____ in PHP.
- a) & b) @
c) \$ d) ?
- 12) Scope of local variables are destroyed when you exit the function.
- a) True b) False
- 13) Which of the following is the valid PHP data type ?
- a) Boolean b) String
c) Null d) All of these
- 14) The function using() produce a fatal error and stop the script.
- a) True b) False



- 2. a) Explain the history of PHP. 5
 - b) Explain the concept joining, splitting and comparing string. 5
 - c) Write note on switch statement. 4
 - 3. a) Explain regular expressions with suitable example. 5
 - b) Explain require() and include () in details. 5
 - c) Write note on associative array. 4
 - 4. a) Write a program to handle different type of exceptions. 5
 - b) How to read and write a text files ? Explain. 5
 - c) Write note on hidden field. 4
 - 5. a) What is data validation ? Explain server-side validations with example. 7
 - b) Explain abstract classes and interfaces with suitable example. 7
 - 6. a) Write a PHP application to add a new record in a table. 7
 - b) Explain the use of cookies in state management with example. 7
 - 7. Write short note (**any two**) : 14
 - a) Session.
 - b) Advantages of MySQL.
 - c) Query string.
-



Seat No.	
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**B.C.A. – II (Semester – IV) (New – CGPA) Examination, 2016
E-COMMERCE**

Day and Date : Thursday, 21-4-2016
Time : 2.30 p.m. to 5.00 p.m.

Total Marks : 70

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

1. a) Select the correct alternatives : 14
- 1) The most popular Internet activity is
 - a) Going shopping
 - b) Conducting research
 - c) Playing games, reading, listening to music
 - d) Communicating with others
 - 2) The _____ is the multimedia interface to resources available on the Internet.
 - a) Web
 - b) ISP
 - c) Browser
 - d) URL
 - 3) The term ISP refers to
 - a) Internal Software Protocol
 - b) International Shareware Pool
 - c) Internet Service Provider
 - d) Interface Standard Protocol
 - 4) In a client/server network, the user's computer is considered the
 - a) Server
 - b) Client
 - c) Web site
 - d) Library



- 5) Rules for exchanging data between computers are called
- a) Programs
 - b) Procedures
 - c) Protocols
 - d) Hyperlinks
- 6) In the e-mail address “justincase@usource.org”, what is the domain name ?
- a) The whole address is called the domain name
 - b) .org
 - c) usource.org
 - d) justincase
- 7) Hyperlinks in a Web document typically appear as
- a) Bolded and underlined
 - b) Italicized and underlined
 - c) Underlined and colored
 - d) Bolded and italicized
- b) 1) The most common way for individuals to access the Internet is through a provider or a _____ computer.
- 2) _____ are programs that provide access to Web resources.
- 3) _____ are connections to other documents that contain related information on the World Wide Web.
- 4) In an e-mail message, the _____ element is a one-line description, used to present the topic of the message.
- 5) _____ lists allow members to communicate by sending messages to a list address.
- 6) _____ search engines such as www.medsite.com focus on subject-specific Web sites.
- 7) This basic type of e-commerce (_____) involves individuals selling to individuals.

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

- 1) Benefits of Electronic Commerce.
- 2) Benefits to customers.
- 3) What is electronic market ?



3. Answer the following : 14
- a) Explain the types of E-commerce.
 - b) Explain the implementation of e-commerce.
4. Answer the following : 14
- a) Advantages of electronic market.
 - b) Introduction of Electronic Data Interchange.
5. Answer the following : 14
- a) Internet Commerce Security.
 - b) Explain the e-commerce website. Give one example.
6. Answer the following : 14
- a) What is business to customer electronic commerce ?
 - b) Explain the traditional payment system.
7. Short note (**any two**) : 14
- a) Advantage of internet
 - b) Online shopping
 - c) Basic concept of Internet.
-



Seat No.	
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B.C.A. – II (Sem. – IV) (Old) Examination, 2016
COMPUTER SCIENCE
Software Engineering

Day and Date : Thursday, 7-4-2016

Max. 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) The _____ model is useful to guide the risks in the project.
 - a) Prototyping
 - b) Spiral
 - c) SDLC
 - d) Waterfall
- 2) The first step in the Systems Development Life Cycle (SDLC) is
 - a) Analysis
 - b) Design
 - c) Problem Identification
 - d) Development and documentation
- 3) Software engineering is the systematic approach to the _____
 - a) Development of software
 - b) Maintenance of software
 - c) Operation of software
 - d) All of these
- 4) Programmers use _____ to organize and summarize the results of their problem analysis.
 - a) Flowcharts
 - b) Input charts
 - c) HIPO
 - d) Output charts
- 5) Feasibility study is carried out by managers of the organization.
 - a) True
 - b) False
- 6) Which of the following is the least expensive installation method ?
 - a) Direct cutover
 - b) Pilot operation
 - c) Parallel operation
 - d) Phased operation

P.T.O.



- 7) Which of the following is the characteristic of a system ?
- a) Organisation
 - b) Interaction
 - c) Interdependence
 - d) All of these
- 8) In 3NF removes the transitive dependency.
- a) True
 - b) False
- 9) A context diagram
- a) Describes the all processes of a system
 - b) Is a DFD which gives an overview of the system
 - c) Is represent the relationship of an entities
 - d) Is not used in drawing a detailed DFD
- 10) _____ is a tabular method for describing the logic of the decisions to be taken.
- a) Decision tables
 - b) Decision tree
 - c) Decision method
 - d) Decision data
- 11) A data flow can
- a) Only enter a data store
 - b) Only leave a data store
 - c) Enter or leave data store
 - d) None of these
- 12) In decision trees branches represent
- a) name of process
 - b) conditions
 - c) actions to be performed
 - d) rules
- 13) If the system is in routine in nature then it gives the positive feedback.
- a) True
 - b) False
- 14) Which of the following activity is carried out under implementation ?
- a) User training
 - b) System Conversions
 - c) Both a) and b)
 - d) None of these
- 15) Software testing is done to correct an error.
- a) True
 - b) False
- 16) The first step in a preliminary investigation is generally to
- a) evaluate feasibility
 - b) perform fact-finding
 - c) understand the problem
 - d) estimate project development time and cost



- 2. a) Explain black box testing with example. **6**
 - b) Explain the elements of the system. **6**
 - c) Write note on structured English. **4**
 - 3. a) What is software engineering ? Give the characteristics of software. **6**
 - b) Explain the skills required in a system analyst. **6**
 - c) Give the various objectives of software design. **4**
 - 4. a) Distinguish between system analysis and system design. **6**
 - b) Explain decision tree with example. **6**
 - c) Give the advantages of bottom-up incremental implementation. **4**
 - 5. a) What is system maintenance ? Explain different types of system maintenance. **8**
 - b) Explain data dictionary and its features. **8**
 - 6. a) Draw CLD and 1st level DFD for inventory control system. **8**
 - b) What is prototyping ? Describe processes and tools used for prototyping. **8**
 - 7. Write short note on. **16**
 - a) Waterfall model
 - b) Feasibility study
 - c) Requirement anticipation
 - d) Observation and record review.
-



Seat No.	
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**B.C.A. II (Semester – IV) (Old) Examination, 2016
RDBMS WITH ORACLE**

Day and Date : Monday, 11-4-2016
Time : 2.30 p.m. to 5.30 p.m.

Total Marks : 80

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

1. A) Choose the correct alternatives. 8
- 1) A _____ operator is used to compare a value to a list of literals values that have been specified.
a) Between b) Any c) In d) All
 - 2) To delete a particular column in a relation the command used is
a) Update b) Drop c) Alter d) Delete
 - 3) _____ is a virtual table that draws its data from the result of an sql select statement.
a) View b) Synonym c) Sequence d) Transaction
 - 4) The RDBMS terminology for a row is
a) Tuple b) Relation c) Attribute d) All of the above
 - 5) Which of the following is a valid SQL type ?
a) Character b) Numeric c) Float d) All of the above
 - 6) In case of entity integrity, the primary key may be
a) Not null b) Null
c) Both Null and Not Null d) Any value
 - 7) It is possible to define a schema completely using
a) VDL and DDL b) DDL and DML
c) SDL and DDL d) VDL and DML
 - 8) Count function in SQL returns the number of _____
a) values b) distinct values
c) groups d) columns



- B) Fill in the blanks. 4
- 1) Every PL/SQL statement ends with a _____
 - 2) A relation is synonymous with a _____
 - 3) In while loop the keyword _____ has to be placed before the first statement in the sequence statements to be repeated.
 - 4) A _____ trigger is a stored procedure that will be executed when an event is occurred i.e., insert, update, delete statement is issued against the associated table.

- C) State **True** or **False**. 4
- 1) The value of a derived attribute is not stored but is computed when required.
 - 2) An integrity constraint is a mechanism used by oracle to prevent invalid data entry into the table.
 - 3) A JOIN is a means of combining fields from two tables by using values not common to each.
 - 4) Column level constraints are applied only to one column, whereas table level constraints are applied to the whole table.

2. A) What is RDBMS ? Explain the terms Relation, Attribute, Domain and Tuple with suitable diagram. 8

B) Explain types of Integrity Constraints in the Oracle. 8

3. A) What is function ? Explain types of Cursor with suitable examples. 8

B) Explain Join in Oracle with suitable examples. 8

4. A) What is Cursor ? Explain with suitable examples. 8

B) What is Trigger ? Explain with suitable examples. 8

5. A) Create a sales order database of 2 tables Sales_order and Sales_order_details with the following fields. 8

Sales_order	Sales_order_detail
S_order_no	S_order_no
S_order_date	Product_no
Client_no	Qty_ordered
Salesman_no	Product_rate
Dely_date	
Order_status	



Set relationship between 2 tables

Queries :

- 1) List all the orders that are cancelled in the month of March.
- 2) Show all details of sales_order whose S_order_date is '12-Jan-96' and whose product_no is 'P00001' ?
- 3) Display all records of sales_order_detail where the salesman_no is between 'S00001' and 'S00005' ?

B) What is view ? Explain in detail with suitable example. **8**

6. A) What is stored procedure ? Explain IN OUT parameters with suitable examples. **8**

B) What is exception in Oracle ? Explain structure of exception handling with suitable example. **8**

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

- a) If else construct
 - b) Features of SQL
 - c) Sql operators
 - d) Aggregate functions.
-



Seat No.	
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B.C.A. – II (Semester – IV) (Old) Examination, 2016
COMPUTER SCIENCE
Operating System

Day and Date : Wednesday, 13-4-2016
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** question from Q. No. 5 and Q. No. 6.
4) **All** questions carry **equal** marks.

1. Choose the correct alternatives :

16

- 1) Round robin scheduling is non-preemptive.
a) True b) False
- 2) A CPU can only executive programs which are stored in _____
a) Floppy disk b) Hard disk
c) Main memory d) CD
- 3) Process control block contains _____
a) Process state b) CPU register
c) Program counter d) All of these
- 4) _____ is a process of transferring a block data from main memory to a secondary storage.
a) Swapping b) Switching
c) Both a) and b) d) None of these
- 5) Application program is an integrated set of programs that control the resources.
a) True b) False
- 6) The file management takes care of _____
a) Saving the file b) Sharing the file
c) Both a) and b) d) None of these



- 7) An operating system provides _____
- a) An environment
 - b) Uses hardware of system
 - c) Manages resources of system
 - d) All of these
- 8) When deadlock is occurs, the system has to be in _____
- a) Safe state
 - b) Unsafe state
 - c) Both a) and b)
 - d) None of these
- 9) Short-term scheduler executes more frequently than long-term scheduler.
- a) True
 - b) False
- 10) _____ provides the interface between a running program and the operating system.
- a) System programs
 - b) Process
 - c) System calls
 - d) Kernel
- 11) Dining-philosophers problem is an example of _____
- a) Critical section problem
 - b) Memory management problem
 - c) Free space allocation problem
 - d) None of these
- 12) Memory management is used for _____
- a) Allocation of memory space
 - b) De-allocation of memory space
 - c) Both a) and b)
 - d) None of these
- 13) The mechanism that bring a page into memory only when it is needed is called _____
- a) Segmentation
 - b) Demand paging
 - c) Fragmentation
 - d) Switching
- 14) In contiguous file allocation _____
- a) The blocks need not be continuous
 - b) Can be continuous or non-continuous
 - c) The blocks allocated in memory have to be continuous
 - d) None of these
- 15) DOS is a multiuser multitasking operating system.
- a) True
 - b) False
- 16) The disadvantage of single level directory is _____
- a) The confusion of files data
 - b) The confusion of file names
 - c) Both a) and b)
 - d) None of these



- 2. a) What is file ? Give the operations of file. **6**
 - b) Explain the features of Windows Operating system. **6**
 - c) Give the disadvantages of linked file allocation. **4**

 - 3. a) What is time sharing system ? Explain with its merits and demerits. **6**
 - b) Explain the concept of virtual machine. **6**
 - c) Write note on preemptive scheduling. **4**

 - 4. a) What is deadlock ? Explain different conditions for deadlock. **6**
 - b) Explain in detail process control block. **6**
 - c) Write note on two level directory structure. **4**

 - 5. a) Explain the usage and implementation of semaphore. **8**
 - b) Explain in detail deadlock detection. **8**

 - 6. a) Explain different types of files in detail. **8**
 - b) Explain in detail segmentation. **8**

 - 7. Write short note on the following : **16**
 - a) Inter-process communication
 - b) SJF algorithm
 - c) Services provided by Operating System
 - d) Multiprogramming System.
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Seat No.	
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B.C.A. – II (Semester – IV) (Old) Examination, 2016
COMPUTER SCIENCE
Web Technology – II

Day and Date : Monday, 18-4-2016

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** questions from Q. No. 5 to Q. No. 6.
4) **All** questions carry **equal** marks.

1. Choose the correct alternatives :

16

- 1) PHP is an open source general-purpose scripting language.
a) True b) False
- 2) Which of the following is not rule of PHP variable ?
a) A variable name start with a letter
b) A variable name start with a number
c) Variable names are case-sensitive
d) A variable name start with the underscore character
- 3) The _____ operator is used to concatenate two string variables together.
a) & (ampersand) b) + (plus)
c) .(dot) d) ||(pipe)
- 4) The _____ function is used to set a cookie.
a) getcookie() b) fetchcookie()
c) stecookie() d) setcokie()
- 5) Which of the following is the characteristic of PHP ?
a) PHP runs on various platforms
b) PHP is compatible with almost all servers
c) PHP supports a wide range of databases
d) All of these

P.T.O.



- 6) _____ function is used to display the output text.
a) echo() b) print() c) Both a) and b) d) None of these
- 7) Which of the following variable cannot be used inside a static method ?
a) \$this b) \$date c) \$get d) \$set
- 8) The _____ function is used to read a single character from a file.
a) fgetc() b) fgets() c) fget() d) fgetf()
- 9) Which of the following statement is used to call a constructor of a base class ?
a) parent::__construct(\$value) b) base::__construct(\$value)
c) basecall::__construct(\$value) d) super::__construct(\$value)
- 10) Which of the following is not type of an Array ?
a) Numeric Arrays b) Associative Arrays
c) Sparse Arrays d) Multidimensional Arrays
- 11) PHP files have a default extension is .xml.
a) True b) False
- 12) Which of the following function is used to calculate the sum of values in an array ?
a) array_total b) arr_total c) array_sum d) arr_sum
- 13) Which of the following is the valid PHP data type ?
a) Boolean b) String c) NULL d) All of these
- 14) _____ statement will store value 50 in variable num.
a) int \$num = 50 b) num=50 c) \$num=50 d) int num=10
- 15) When using the POST method, variables are displayed in the URL ?
a) True b) False
- 16) The function _____ cannot access to the file then it ends with a fatal error.
a) using() b) include() c) require() d) insert()
2. a) List and explain the advantages of MySQL. **6**
b) Explain different date and time functions. **6**
c) Write note on merging arrays. **4**
3. a) Explain regular expressions with suitable example. **6**
b) What is associative array ? Give one example. **6**
c) Write note on final class and final method. **4**



- 4. a) Differentiate call by values and call by reference with example. **6**
 - b) Explain different form control properties and events. **6**
 - c) Differentiate static and dynamic web pages. **4**
 - 5. a) Explain file handling functions with example. **8**
 - b) What is interface ? Differentiate abstract classes and interfaces with example. **8**
 - 6. a) Explain the following functions with syntax and purpose. **8**
 - i) `mysql_connect()`
 - ii) `mysql_query()`
 - iii) `mysql_select_db()`
 - iv) `mysql_close()`
 - b) Design a web application that uses cookies and session object. **8**
 - 7. Write short note on the following : **16**
 - a) Inheritance
 - b) Hidden field
 - c) History of PHP
 - d) Cookies.
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Seat No.	
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**B.C.A. – II (Semester – IV) (Old) Examination, 2016
E-COMMERCE**

Day and Date : Thursday, 21-4-2016
Time : 2.30 p.m. to 5.30 p.m.

Max. Marks : 80

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

1. A) Select correct alternative and rewrite statement : 4
- 1) The multimedia interface to the resources available on the Net is called
 - a) World wide web
 - b) Internet
 - c) GUI interface
 - d) Server
 - 2) The term ISP refers to
 - a) Internal Software Protocol
 - b) International Shareware Pool
 - c) Internet Service Provider
 - d) Internet Standard Protocol
 - 3) A one-line description used to present the topic of an e-mail message is referred to as the
 - a) Header
 - b) Address
 - c) Subject
 - d) Signature
 - 4) HTML is an acronym for
 - a) Hyperlink Markup Language
 - b) Hypertext Markup Language
 - c) Hypertext Markup Link
 - d) Hypertext Modern Language
- B) Fill in the blanks : 4
- 1) _____ is the actual physical network made up of wires, cables and satellites.
 - 2) _____ is the ability to copy files to your computer from the internet.
 - 3) A _____ allows an individual to block selected sites that can not be browsed.
 - 4) A programming language used to write animation for the world wide web called _____



- C) State **true** or **false** : **8**
- 1) The three parts of an e-mail message are the header, message and signature.
 - 2) B2B involves the sale of a product or service from one business to another.
 - 3) A plug-in an independent program that can be executed by the browser to add capabilities.
 - 4) FTP allows you to connect to another computer and run programs there.
 - 5) Web store fronts are virtual stores for B2C electronic commerce.
 - 6) C2C involves the sale of the product or service to the general public.
 - 7) Protocols are rules for exchanging data between computers.
 - 8) Computer viruses are destructive programs that are often attached to unsolicited e-mail.
2. A) Explain benefits of e-business strategies. **6**
 B) Define e-shops and process of online share dealing. **5**
 C) Explain scope of e-commerce. **5**
3. A) Define B2C electronic commerce. **6**
 B) Explain electronic cash and electronic markets. **5**
 C) Define E-Diversity. **5**
4. A) Define B2B electronic commerce. **6**
 B) Explain types of electronic payment system. **5**
 C) Define Internet banking. **5**
5. A) Explain the benefits of EDI with example. **8**
 B) Explain pens and things and Porter's value chain model. **8**
6. A) Explain Inter-Organizational transactions and trade cycle. **8**
 B) Write a case study on airline booking system. **8**
7. What do you mean by electronic commerce ? Explain electronic data Interchange and internet commerce. **16**
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Seat No.	
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B.C.A. – III (Semester – V) Examination, 2016
COMPUTER SCIENCE
Advanced Java – I

Day and Date : Wednesday, 6-4-2016
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

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

1. A) Choose correct alternatives :

10

- 1) Which is following statement false about XML ?
A) XML is not Case sensitive B) XML Simplifies Data Sharing
C) XML is self Descriptive D) None of the above
- 2) Which packages represent interfaces and classes for servlet API ?
A) javax.servlet.* B) javax.servlet.http.*
C) both A) and B) D) javax.servlet.api.*;
- 3) What are the Applet's life cycle methods ?
A) init(), start() and destroy()
B) init(), start() and paint()
C) init(), start(), paint().stop() and destroy()
D) init(), start() and stop()
- 4) Wild card character _____ in URL pattern matches any character and any number of characters.
A) * B) #
C) ? D) \$



- 5) RequestDispatcher object is used to _____
- A) Include other resources B) Include an img
C) Include XML D) None of these
- 6) In HTTP Request _____ method is not secured because data is
appeared in URL.
- A) GET B) POST
C) Both A) and B) D) PUT
- 7) In RequestDispatcher which method is used to sends the same request
and response objects to another servlet ?
- A) include() B) forward()
C) both A) and B) D) None of these
- 8) Which driver is called as thin driver in JDBC ?
- A) Type-4 driver B) Type-1 driver
C) Type-3 driver D) Type-2 driver
- 9) Which is the super class of an Applet class ?
- A) Window B) Panel
C) Component D) Frame
- 10) The life cycle of a servlet is managed by _____
- A) ServletContext B) ServletConfig
C) Both A) and B) D) ServletContainer

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

6

- 1) Servlets executes on servers, where as Applets executes on Browser.
- 2) The URL pattern matched by the web container is case sensitive.
- 3) HttpServlet class can handle any type of request so it is protocol-independent.
- 4) RequestDispatcher object is used to include an XML data.
- 5) MIME stands for Multilevel Internet Mail Extended.
- 6) DTD stands for Document Type Defination.



- 2. a) Explain Applet life cycle with suitable example. 6
 - b) Write a program to design an applet to check whether number is Armstrong or not. (take no. from textbox). 6
 - c) Explain XML tree. 4
 - 3. a) What is XML and explain XML Element and its rules. 6
 - b) Write a program to display student records from Student table (use oracle Database, Type-4 driver) 6
 - c) Explain ServletContext interface. 4
 - 4. a) Explain Component and features of JDBC. 6
 - b) Write a servlet to that demonstrate use of 'servletConfig object'. 6
 - c) What is JDBC explain its use. 4
 - 5. a) Explain types of JDBC drivers with suitable example. 8
 - b) Write a servlet to that demonstrate use of 'HttpSession object'. 8
 - 6. a) What is cookies and explain advantages and disadvantages of cookies in servlet ? 8
 - b) Explain difference between HttpServlet and GenericServlet. 8
 - 7. Write short note on followings (**any four**) : 16
 - a) XML Attribute.
 - b) Advantages and disadvantages URL rewritten.
 - c) Architecture of JDBC.
 - d) Explain Callable Statement.
 - e) Explain features of servlet.
-



Seat No.	
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B.C.A. – III (Semester– V) Examination, 2016
VISUAL PROGRAMMING

Day and Date : Saturday, 9-4-2016

Max. Marks : 80

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

Instructions: 1) *Que. No. 1 and Que. No. 7 are compulsory.*
2) *Solve any two questions from Q. 2 to Q. 4.*
3) *Solve any one question from Q. 5 and Q. 6.*

1. Choose the correct alternatives :

16

- 1) _____ Provides an efficient way to define a set of named integral constants that assigned to variable.
a) Enumeration b) Structure c) Class d) Value
- 2) _____ constructor is used to initialize static data fields.
a) Non-static b) Copy
c) Static d) Public
- 3) Within a class you can create only one static constructor.
a) True b) False
- 4) Return type parameter are capable carrying multiple value out of a method
a) True b) False
- 5) A method without any method body is known as _____ method.
a) Empty method b) Sealed method
c) Abstract method d) None
- 6) Delegate is a type-safe object that can point to another method in the application
a) True b) False



- 7) _____ method used to resume the execution of suspended thread.
- a) Start
 - b) Abort
 - c) Suspend
 - d) Resume
- 8) Class maths : addition { } is the correct way of implementing an interface addition by class maths ?
- a) True
 - b) False
- 9) _____ keyword used to manually throw an exception.
- a) Try
 - b) Finally
 - c) Throw
 - d) Catch
- 10) _____ method in Console enables to read individual inputs directly from the keyboard in a non-line buffered manner.
- a) Read()
 - b) ReadKey()
 - c) ReadLine()
 - d) All of the mentioned
- 11) Queue collections class is I/O based on a key
- a) True
 - b) False
- 12) The default scope for interface members is
- a) Public
 - b) Protected
 - c) Private
 - d) All of the mentioned
- 13) Sealed keyword used to restrict your class from being inherited.
- a) True
 - b) False
- 14) Service program implement the functionality of the service needs
- a) Main function
 - b) Service main function
 - c) Handler
 - d) All these
- 15) _____ operator used in the lambda expression.
- a) - >
 - b) = >
 - c) < -
 - d) + >
- 16) _____ is a view of table available in Dataset.
- a) DataView
 - b) DataAdapter
 - c) DatabaseView
 - d) DataReader



- 2. A) Explain advantages of .NET framework in detail. **6**
 - B) What is use of base keyword explain with program ? **6**
 - C) Explain Common Type System (CTS). **4**
 - 3. A) What is delegate explain with its type ? **6**
 - B) Explain static and dynamic binding in detail. **6**
 - C) Explain sealed keyword. **4**
 - 4. A) Explain Multithreading in detail. **6**
 - B) Write a difference between Abstract and Interface. **6**
 - C) Explain advantages of properties. **4**
 - 5. A) Explain properties in detail with example. **8**
 - B) Write a program to implement operator overloading. **8**
 - 6. A) Explain constructor with its type in detail. **8**
 - B) Write a program that implement indexers. **8**
 - 7. Write short note on : **16**
 - A) Assembly.
 - B) DataReader.
 - C) Common Language Runtime.
 - D) Overriding.
-



Seat No.	
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B.C.A. – III (Semester – V) Examination, 2016
COMPUTER SCIENCE
Linux and Shell Programming

Day and Date : Tuesday, 12-4-2016
Time : 10.30 a.m. to 1.30 p.m.

Total Marks : 80

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

1. Choose the correct alternative. 16
- 1) Which of the following command configures the **bca** account to expire on January 1, 2016 ?
A) chage-E 2016/01/01 bca B) usermod-e 2016 bca
C) useradd -l 2016-01-01/bca D) usermod-e 2016-01-01 bca
 - 2) The default environment of Linux is _____
A) GNOME B) KDE C) Both (a) and (b) D) None of these
 - 3) To change the priority of a job we can use the _____ command.
A) nice B) pr C) set D) priority
 - 4) Which of the following command is used to connect to the remote computers ?
A) Telnet B) Rlogin C) Remote D) Both A and B
 - 5) If you use the default partitioning scheme then which partitions gets created ?
A) boot, /, B) boot, /, swap
C) boot, /, home, var D) boot, /, var
 - 6) Which of the following command is used to check your current working shell ?
A) echo \$SHELL B) echo Shell
C) shell D) echo SHELL
 - 7) _____ command reduces the size of a file.
A) pzip B) tar C) gzip D) gzip-d



- 8) What is the purpose of the >> operator _____
- A) It is used to send the output of one command it becomes the input of a second command
 - B) It is used to send both input and output to the same file
 - C) It is used to overwrite the contents of a file
 - D) It appends data at the end of the file without overwriting it.
- 9) What command is used with vi editor to delete a single character ?
- A) x
 - B) y
 - C) a
 - D) z
- 10) The location for subdirectories for local programs and executables for user and administrative commands is _____
- A) /temp
 - B) /tmp
 - C) /opt
 - D) /usr
- 11) Which command searches pattern the string in file opened in vi editor ?
- A) /or ?
 - B) f or F
 - C) t or T
 - D) none of these
- 12) The tar command used _____
- A) To create archives of directories and files
 - B) To extract directories and files from archives
 - C) Both A and B
 - D) None of the above
- 13) If a print job is fired it is not possible to abort the printing.
- A) True
 - B) False
- 14) Remote devices are managed with a service called
- A) Network File Service
 - B) Remote Network Service
 - C) Remote Device Service
 - D) None of the above
- 15) Users directly interact with the kernel.
- A) True
 - B) False
- 16) LILO _____
- A) Stands for Linux loader
 - B) Is the Linux boot loader
 - C) Is a tool used to boot the Kernel on x86 hardware
 - D) All of the above



- 2. A) What is the difference between Linux and windows. 6
 - B) What is Redirection ? Explain I/O Redirection with suitable example. 6
 - C) What are the different features of vim editor rather than vi ? 4
 - 3. A) What are different types of block in file system ? 6
 - B) Difference between LILO and GRUB. 6
 - C) What is the use of the following metacharacter : 4
 - 1) * 2) ? 3) | 4) []
 - 4. A) Explain any three network tools commands. 6
 - B) Define user account. Give default accounts in Linux operating system. Write the steps for creating user account in Linux and also discuss the various options of user accounts. 6
 - C) Explain following commands : 4
 - a) cp b) paste
 - 5. A) Write a shell script to prepare the Mark sheet of the student. 8
 - B) How to use archive and compression tools to manage the files in Linux ? 8
 - 6. A) Write a menu driven shell Script : 8
 - 1) To Sort a file by 5 field and to find unique field.
 - 2) To assign the Write and Read permission to an owner and assign read to group.
 - 3) Cut fields 4 to 6 from a file and it redirect into another file.
 - 4) Display all files by inode number from current directory.
 - B) Give the hardware requirement for installing Linux operating system. Elaborate the steps for installing the Linux operating system. 8
 - 7. Write short note on (**any four**) : 16
 - a) Find command
 - b) Configuration of X window system
 - c) In command
 - d) LVM
 - e) Advantages of shell script.
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Seat No.	
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B.C.A. – III (Semester – V) Examination, 2016
COMPUTER SCIENCE
Introduction to Data Mining and Warehousing

Day and Date : Saturday, 16-4-2016
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. Choose the correct alternative :

16

- 1) The data Warehouse is _____
 - a) Read only
 - b) Write only
 - c) Read and Write
 - d) Can't say
- 2) The data is stored, retrieved and updated in _____
 - a) OLAP
 - b) OLTP
 - c) SMTP
 - d) FTP
- 3) _____ technique is used to predicts future trends and allowing top level managers to make useful decisions on the basis of knowledge acquire.
 - a) Data warehouse
 - b) Data Mart
 - c) Metadata
 - d) Data Mining
- 4) _____ scheme is a good alternative to the star schema.
 - a) Snowflake
 - b) Fact
 - c) Star
 - d) All of these
- 5) Query tool is useful for _____
 - a) Information exchange
 - b) Information delivery
 - c) Data acquisition
 - d) Visualization
- 6) In data reduction, dimensionality are reduces the data set size by removing _____ attributes.
 - a) Derived
 - b) Composite
 - c) Relevant
 - d) Irrelevant

P.T.O.



- 7) The long form of KDD is _____
- a) Knowledge Discovery in Database
 - b) Knowledge Database Data
 - c) Knowledge Data Discovery
 - d) Knowledge Data Definition
- 8) _____ of the following is a categorised as descriptive model.
- a) Classification
 - b) Regression
 - c) Sequence discovery
 - d) Prediction
- 9) Market-basket analysis problem was formulated by _____
- a) Rakesh Agarwal
 - b) Steve Jobs
 - c) Bill Gates
 - d) Jiawei Han
- 10) Any subset of a frequent set is a frequent set. This is known as upward closure property.
- a) True
 - b) False
- 11) The first phase of APriori algorithm is _____
- a) Pruning
 - b) Itemset generation
 - c) Large set generation
 - d) Candidate generation
- 12) EIS stands for Executive Information System.
- a) True
 - b) False
- 13) Multidimensional model requires less disk place.
- a) True
 - b) False
- 14) The process which removes duplicate records is known as data pruning.
- a) True
 - b) False
- 15) The data in Data warehouse is usually consist of historical data.
- a) True
 - b) False
- 16) The process which can convert data from different sources into a common format is called as _____
- a) Selection
 - b) Integration
 - c) Interpretation
 - d) Transformation



- 2. a) Explain Query and Browser tool in detail. 6
- b) Explain different measures used in multidimensional data. 6
- c) Explain min-max normalization with example. 4
- 3. a) Data mining is multi-disciplinary field. Discuss this concept. 6
- b) Explain different data visualization technique in data warehouse. 6
- c) Explain different types of OLAP servers. 4
- 4. a) Explain Lattice of cuboids with diagram. 6
- b) Explain Web mining technique in detail. 6
- c) What types of data used for mining ? Explain in detail. 4
- 5. a) What is KDD ? Explain different steps in KDD. 8
- b) Find association between elements by using Apriori algorithm. 8

Tid	Items
10	A, C, D
20	B, C, E
30	A, B, C, E
40	B, E

- 6. a) Which schemas are used in data mining ? Explain each in detail. 8
 - b) What is data pre-processing ? Why it is required ? Explain data cleaning in detail. 8
 - 7. Write short note on **(any 4)** : 16
 - a) Issue related with Mining methodology and user interaction.
 - b) Text Data Mining.
 - c) DataMart.
 - d) Need of data warehouse.
 - e) Single dimensional association rule.
 - f) OLTP.
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Seat No.	
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**B.C.A. – III (Semester – V) Examination, 2016
MANAGEMENT INFORMATION SYSTEM**

Day and Date : Wednesday, 20-4-2016

Max. Marks : 80

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

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

1. A) Choose the correct alternatives :

12

- 1) _____ is feature of SCM.
 - a) Individual Behaviour
 - b) Integrated Behaviour
 - c) National Behaviour
 - d) Social Behaviour
- 2) ESS Long form of
 - a) Executive Support System
 - b) Executive Standard System
 - c) Executive Short System
 - d) Executive Status System
- 3) OLAP long form of
 - a) Online Analytical Processing
 - b) Online Agreement Process
 - c) Online Any Processing
 - d) Online Automatic Processing
- 4) _____ is the component of Information System.
 - a) Hardware
 - b) Product
 - c) Customer Service
 - d) Manufacture



- 5) _____ is a types of system.
- a) SSE
 - b) TPS
 - c) SSD
 - d) SIO
- 6) BIS stands for
- a) Business Interest System
 - b) Business Intelligence System
 - c) Business Information System
 - d) Business Improvement System
- 7) Database is pivotal to
- a) ESS
 - b) MIS
 - c) GIS
 - d) TPS
- 8) KMS long form of
- a) Knowledge Measurement System
 - b) Knowledge Management System
 - c) Knowledge Message System
 - d) Knowledge Movement System
- 9) AI stands for
- a) Art Information
 - b) Artificial Intelligence
 - c) Access Information
 - d) Annual Income
- 10) ES stands for
- a) Expert System
 - b) Executive System
 - c) Easy System
 - d) Essential System
- 11) DSS for any group known as
- a) GSS
 - b) NDSS
 - c) GDSS
 - d) EIS
- 12) _____ is basic bone of any organization.
- a) Data
 - b) User
 - c) People
 - d) Information



- B) Choose **True** or **False** : 4
- i) Interaction is characteristic of a system.
 - ii) SMS stands for Security Management System.
 - iii) Content Management Service provided by Enterprise Applications.
 - iv) Banking Service is application of MIS in Manufacturing.
2. a) Explain the characteristic of DSS. 6
- b) Write down Security of an Information System. 6
- c) Write short note on knowledge management. 4
3. a) What is MIS ? Explain the concept of MIS. 6
- b) Write down steps on Decision Making. 6
- c) Write down role of manager in organization. 4
4. a) How can control the system vulnerability ? 6
- b) Explain the advantages of ERP. 6
- c) Explain the CRM. 4
5. a) Design the MIS in Personal Management. 8
- b) Explain the advantage and disadvantage of supply chain management. 8
6. a) Explain the attributes and benefits of DSS. 8
- b) Explain application of MIS in hotels. 8
7. Write short notes on (**any 4**) : 16
- a) Feed Back Control.
 - b) Benefit of BIS.
 - c) Accounting System.
 - d) Various Sources of Knowledge.
 - e) Role of MIS.
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Seat No.	
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**B.C.A. – III (Semester – VI) Examination, 2016
COMPUTER SCIENCE
Advanced Java – II**

Day and Date : Thursday, 7-4-2016
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, 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) In which technology, we mix our business logic with the presentation logic ?
 - a) Servlet
 - b) JSP
 - c) Both a) and b)
 - d) None of the above
 - 2) The javax.servlet.jsp package has two interfaces
 - a) JspPage
 - b) HttpJspPage
 - c) JspWriter
 - d) Both a and b
 - 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) How many jsp implicit objects are there and these objects are created by the web container that are available to all the jsp pages ?
 - a) 7
 - b) 8
 - c) 9
 - d) 10
 - 5) Separation of business logic from JSP this is the advantage of
 - a) Custom Tags in JSP
 - b) JSP Standard Tag Library
 - c) Both a and b
 - d) None of the above



- 6) Beans defined in spring framework are by default.
- a) singleton
 - b) initiated
 - c) abstract
 - d) final
- 7) What are the different types of bean injections ?
- a) Constructor and getter
 - b) Constructor and setter
 - c) Getter and setter
 - d) None of these
- 8) We can do one to one mapping in hibernate by the way
- a) many to one element
 - b) one to one element
 - c) both a and b
 - d) none of these

B) Fill in the blanks : 4

- 1) The JSP _____ directive is used to include the contents of any resources like jsp, html.
- 2) ORM stands for _____
- 3) Spring is an _____ and _____ framework.
- 4) How many types of association mapping are possible in hibernate ? _____.

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

- 1) A bean encapsulates many objects into one object, so we can access this object from multiple places.
- 2) Include tag facilitate the developer to write their own tags.
- 3) Hibernate caching improves the performance of the application by pooling the object in the cache.
- 4) Spring framework provides templates for JDBC, Hibernate.

2. A) Explain the architecture of JSP. 6

B) What are the various types of inheritance mappings in hibernate ? Explain TPH with example. 6

C) What are the applications of spring ? 4

3. A) Explain <jsp:plugin> action element in JSP. 6

B) Explain elements in hibernate configuration file. 6

C) What are the advantages of JSP over Servlet. 4



- 4. A) Explain different types of implicit object in JSP. 6
 - B) Explain spring architecture. 6
 - C) What are the different services provided by WAP ? 4
 - 5. A) Write a program to demonstrate session tracking in JSP. 8
 - B) Write a program to store-students records in table using hibernate. 8
 - 6. A) Write a program to delete the records of employee having designation as “Supervisor” by using PreparedStatement interface in JDBC template class. 8
 - B) Create a jsp page that will display current data and time and also display how many times user visited to the page. 8
 - 7. Write short notes on (**any four**) : 16
 - 1) Advantages and disadvantages of Java Bean.
 - 2) Architecture of hibernate.
 - 3) ResultSetExtractor.
 - 4) Features of W A P.
 - 5) Dependancy injection.
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Seat No.	
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**B.C.A. – III (Semester – VI) Examination, 2016
CYBER LAW AND SECURITY CONTROL**

Day and Date : Monday, 11-4-2016
Time : 10.30 a.m. to 1.30 p.m.

Max. Marks : 80

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

1. A) Choose correct alternatives :

12

- 1) Generally accepted standards of rights and wrong in a society is called
 - a) Moral
 - b) Ethics
 - c) Guideline
 - d) Code of standards
- 2) Unauthorised duplication of software is known as
 - a) Computer Programming
 - b) Software piracy
 - c) Unauthorised access
 - d) O/S software
- 3) Norms and principles are state under
 - a) IT Act, 2000
 - b) Codes of Ethics
 - c) Cyber law
 - d) Morals
- 4) _____ is fully service oriented commerce.
 - a) Traditional Commerce
 - b) E-Commerce
 - c) M-Commerce
 - d) E-Communication
- 5) E-Commerce Scope is
 - a) Local
 - b) Global
 - c) National
 - d) None of these

P.T.O.



- 6) _____ refers to all the legal and regulatory aspects of the Internet and WWW.
- a) Cyber Crime
 - b) Cyber Law
 - c) IT act
 - d) Code of Standards
- 7) _____ means the official Gazette published in the electronic form.
- a) Electronic Gazette
 - b) Electronic Record
 - c) Electronic Form
 - d) All of above
- 8) _____ is a discipline that deals with issues in copyright, trademark and patent laws.
- a) Cyber Law
 - b) IT Act
 - c) Cyber Crime
 - d) Intellectual Property Right
- 9) When the software is free to copy is known as
- a) Freeware
 - b) Shareware
 - c) Copyright
 - d) Preware
- 10) Hacking bank account related information is example of
- a) Software piracy
 - b) Unauthorised access
 - c) Cyber law
 - d) Fair use
- 11) Conversion of data into secured format is known as
- a) Encryption
 - b) Description
 - c) Prescription
 - d) None of these
- 12) Online buying and selling the products is called as
- a) Internet Commerce
 - b) Traditional Commerce
 - c) E-Commerce
 - d) Traditional Communication

B) State true or false :

4

- i) Computer user should purchase only legitimates software products.
- ii) License means a license granted by operator.
- iii) Lunix is an example of freeware software.
- iv) Decryption and Encryption processes are same.



2. a) Write down theft of information. 6
b) What is meant by E-Commerce ? Write down scope of E-Com. 6
c) Write short note on Security Audit. 4
 3. a) Explain UNCITRAL objective and scope. 6
b) What is digital signature ? Where is it used ? 6
c) Write down need of Cyber Law. 4
 4. a) Define E-Commerce. State 2 advantages and 2 disadvantages of E-Commerce. 6
b) Differentiate between Traditional Commerce and E-Commerce. 6
c) Write short note on “Copyright”. 4
 5. a) Explain Information Technology Act – 2000. 8
b) What is EDI ? Explain the benefits of EDI. 8
 6. a) What is meant by Security ? Explain need and types of Security. 8
b) Explain Intellectual Property Aspect and Criminal Aspect. 8
 7. Write short note on (**any 4**) : 16
 - a) E-Commerce Application
 - b) Data Protection
 - c) Hardware and Software Security
 - d) Duties of Subscribers
 - e) E-Market.
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Seat No.	
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B.C.A. – III (Semester – VI) Examination, 2016
COMPUTER SCIENCE
Software Project Management

Day and Date : Wednesday, 13-4-2016

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** questions from Q. No. 2, 3 and 4.
3) Attempt **any one** question between Q. 5 and Q. 6.
4) Figures to the **right** indicate **full** marks.

1. Choose the correct alternative :

16

- 1) _____ 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
- 2) _____ model is an elaboration of the waterfall model.
 - a) Spiral
 - b) V-process
 - c) Classical
 - d) None of these
- 3) _____ is the time between the start and end of a task.
 - a) Waiting time
 - b) Turnaround time
 - c) Elapsed time
 - d) None of these
- 4) The _____ is carried out to calculate the earliest dates on which each activity may be started and completed.
 - a) Backward pass
 - b) Forward pass
 - c) Both a) and b)
 - d) None of these



- 5) DSDM stands for
 - a) Dynamic Systems Development Method
 - b) Dual System Development Method
 - c) Dynamic Software Development Method
 - d) Dynamic System Dual Method
- 6) _____ approach is normally associated with parametric/algorithmic models.
 - a) Top-down
 - b) Bottom-up
 - c) Both a) and b)
 - d) None of these
- 7) PERT stands for
 - a) Program Evaluation Review Technique
 - b) Program Entity Review Technique
 - c) Program Entity Remark Technique
 - d) Program Evaluation Remark Technique
- 8) The two main approaches to the identification of risks are the use of _____ and _____.
 - a) find, avoid
 - b) checklists, brainstorming
 - c) list, avoid
 - d) check, avoid
- 9) _____ is simplest and oldest technique for tracking project progress.
 - a) Slip chart
 - b) Gantt chart
 - c) Ball chart
 - d) None of these
- 10) Groups of methods or techniques are often referred as
 - a) Plan
 - b) Group plans
 - c) Activities
 - d) Methodologies
- 11) The water fall model begins with a feasibility study.
 - a) True
 - b) False
- 12) Leadership is generally taken to mean the ability to influence other in a group to act in a particular way to achieve group goals.
 - a) True
 - b) False
- 13) The net profit of a project is not the difference between the total costs and the total income over the life of the project.
 - a) True
 - b) False
- 14) COCOMO is often referred to the literature on software project management.
 - a) True
 - b) False
- 15) Stakeholders are peoples who have a stake/interest in the project.
 - 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 plan, methods and methodologies. **6**
 - b) Explain the Oldham-Hackman job characteristic model. **6**
 - c) What is the Forward Pass ? **4**
 - 3. a) Explain the activities covered by software project management. **6**
 - b) What is cost benefit evaluation technique ? **6**
 - c) Write note on Gantt chart. **4**
 - 4. a) Explain the dynamic systems development method. **6**
 - b) Explain V-Process model in details. **6**
 - c) Explain typical terms of contract. **4**
 - 5. a) Explain different objectives of activity planning. **8**
 - b) What is risk management ? Explain in details. **8**
 - 6. a) Explain stepwise overview of project planning. **8**
 - b) What is software process model ? Explain spiral model in details. **8**
 - 7. Write note on : **16**
 - a) COCOMO model.
 - b) Leadership.
 - c) Stakeholders.
 - d) Importance of software quality.
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Seat No.	
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B.C.A. – III (Semester – VI) Examination, 2016
Web Technology – III
COMPUTER SCIENCE

Day and Date : Monday, 18-4-2016
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) _____ directive is used to add particular namespace.
a) Using b) Import c) Add d) All of these
- 2) _____ property of bulletedList Control is set to display items in hyperlink form.
a) DisplayMode b) DisplayStyle
c) Display Hyperlink d) Hyperlink
- 3) AJAX stands for
a) Asynchronous JavaScript and XML b) Abstract JavaScript and XML
c) Another Java and XML d) Another Java and x-window
- 4) _____ describes which operations web services can execute and format the messages which can sends and receives.
a) WSDL b) UDDI c) SOAP d) XML
- 5) Which language is used to design the layout in Silverlight ?
a) HTML b) XAML c) c# d) VB.Net
- 6) The _____ file contains ASP.Net settings for all applications on server and it is top of configuration file hierarchy.
a) webconfig.config b) web.config
c) Application.config d) machine.config



- 7) E-mail address can be validate by using _____ validation control.
- a) E-mail expression
 - b) Basic expression
 - c) RegularExpressionValidator
 - d) Pattern expression
- 8) Session state are client side state management technique.
- a) True
 - b) False
- 9) Common style information files are stored in _____ location.
- a) Browser
 - b) Master Page
 - c) Themes
 - d) All of these
- 10) The TreeView server control is a rich server control for rendering a hierarchy of data, so it is quite ideal for displaying what is contained in your .sitemap file.
- a) True
 - b) False
- 11) Hidden fields are used to store data at page level.
- a) True
 - b) False
- 12) App_code folder store _____ type file.
- a) class
 - b) mdf
 - c) css
 - d) skin
- 13) _____ property of RadioButtonList is used to display list in multiple column.
- a) Multicolumn
 - b) Columns
 - c) RepeatColumns
 - d) DisplayColumns
- 14) A content page defines the _____ control in a master page.
- a) Content
 - b) ContentHolder
 - c) ContentPlaceHolder
 - d) None of these
- 15) Page-load is first event of page life cycle.
- a) True
 - b) False
- 16) _____ state management technique is not useful for sensitive data.
- a) Application
 - b) Session
 - c) View
 - d) Query string



- 2. a) What is Cross-page posting ? Explain with example. 6
 - b) Explain :
 - 1) DropDownList Server control
 - 2) ListBox Server control
 - 3) CheckBoxList Server control. 6
 - c) Explain IsPostBack and AutoPostBack with example. 4
 - 3. a) Explain different types of authentication. 6
 - b) Explain client side and server side ajax. 6
 - c) Explain command name property with example. 4
 - 4. a) Explain validation groups with example. 6
 - b) Explain Themes and skins with example. 6
 - c) Explain need of master pages. 4
 - 5. a) Explain application folders. 8
 - b) What is client side and server side validation ? Explain regular expression and compare validator control in detail. 8
 - 6. a) What is Web services ? Explain how to create web service in ASP.Net. 8
 - b) Explain client side state management. 8
 - 7. Write short notes on (**any four**). 16
 - a) Event ordering of master page
 - b) AdRotator Control
 - c) Website life cycle
 - d) page directive
 - e) sitemap file.
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