Total No. of Questions : 5]

SEAT No. : ____

PC1154

[Total No. of Pages : 2

[6317]-101

S.Y. B.B.A. (Computer Application)

CA-301 : DIGITAL MARKETING

(2019 CBCS Pattern) (Semester - III)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary***

Q1) Attempt any Eight of the following. **[8×2=16]**

a) What is digital Marketing in E-commerce?

b) What is Internet Marketing?

c) What is Search Engine Results Pages (SERP)

d) Which are the types of hyperlink on website?

e) What is Resource planning?

f) What is CRM?

g) What is web analytics?

h) What is SEO.

i) Define cost budgeting?

j) What is upload and download?

Q2) Attempt any Four of the following. **[4×4=16]**

a) Describe the steps to do Cost Control.

b) What is difference between SEO & SEM?

c) Explain digital marketing and list its advantages.

d) What is social media marketing?

e) Explain the SWOT Analysis?

P.T.O.

Q3) Attempt any Four of the following. **[4×4=16]**

a) Write the difference between Digital Marketing and Traditional Marketing.

b) Write phases in content management lifecycle?

c) Write 5 D's of digital marketing?

d) Explain structure of website.

e) Write advantages of E-mail marketing?

Q4) Attempt any Four of the following. **[4×4=16]**

a) Explain E-Marketing plan?

b) Write CRM platform in detail?

c) Write Video sharing-youtube?

d) Explain the concept SEO optimization.

e) What is Web analytics? Describe the levels.

Q5) Write a short note on any Two of the following. **[2×3=6]**

a) Facebook.

b) URL.

c) E-marketing.

Total No. of Questions : 5]

SEAT No. : ____

PC-1155

[Total No. of Pages : 2

[6317]-102
S.Y. B.B.A.
COMPUTER APPLICATION
CA - 302 : Data Structure (CBCS)
(2019 Pattern) (Semester - III)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right side indicate full marks.***

Q1) **Attempt any Eight of the following (out of Ten):** **[8 × 2 = 16]**

a) What is an abstract data type?

b) What are the different types of tree?

c) What are the different operations performed on stack?

d) List out different types of Linked List.

e) What are different types of sorting?

f) What is pointer to pointer.

g) What is self referential structure?

h) Define Data structure.

i) Explain typedef keyword with syntax or example.

j) What is a complete binary tree.

Q2) **Attempt any four of the following (out of Five):** **[4 × 4 = 16]**

a) What is height-balanced tree? Explain LL and LR rotations with an example.

b) Explain insertion sort technique with an example.

c) What is queue? Explain different operations performed on queue.

d) What is Graph? Explain adjacency list of graph.

e) Write an algorithm to convert given infix expression to postfix expression.

P.T.O.

Q3) **Attempt any Four of the following (out of Five):** **[4 × 4 = 16]**

a) Write a function to create and display circular singly linked list.

b) Explain different types of AVL rotations with an example.

c) Write a function to traverse a graph using DFS technique.

d) Write a function to insert a node in linked list at given position

e) Write a function to check whether a given siring is palindrome or not (use Stack)

Q4) **Attempt any Four of the following (out of Five):** **[4 × 4 = 16]**

a) Sort the following data by using selection sort. 35, 20, 40, 100, 3, 10, 15.

b) Construct Binary search tree of following data. 15, 30, 20, 5, 10, 2,7.

c) Write a function to search the element from the array using binary search.

d) What is a circular queue? Explain it with an example.

e) Write a 'C' Program to count the number of nodes from singly link list.

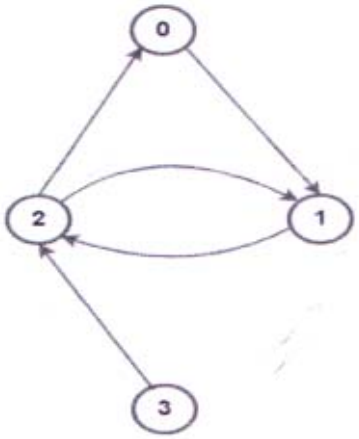
Q5) **Write any two of the following :** **[2 × 3 = 6]**

a) Evaluate the following postfix expressions where A=2, B=10, C=4, D=1

i) AB-CD*/ ii) ABC*+

b) Define the following terms. i) bridge ii) Cyclic graph iii) Pendant vertex

c) What is the degree of vertex? Find in degree & out degree of following graph for each vertex.



Total No. of Questions : 5]

SEAT No. :

PC-1156

[Total No. of Pages : 2

[6317]-103
S.Y. B.B.A. (CA)
CA - 303 : Software Engineering
(2019 Pattern) (Semester - III) (CBCS)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary.***

Q1) **Attempt any Eight of the following:** **[8 × 2 = 16]**

a) Define software engineering.

b) Name McCall's quality factors.

c) Define the term "Software Testing.'

d) What is reverse engineering?

e) What is a Data Dictionary?

f) Define the term "Software Development Life Cycle" (SDLC).

g) What is coupling in software design?

h) Define 'SRS'.

i) Define open and closed system.

j) Define operational feasibility.

Q2) **Attempt any four of the following:** **[4 × 4 = 16]**

a) Discuss different types of software testing and explain how they are performed.

b) Describe the concept of Software Maintenance and Software Re-Engineering.

c) Explain the stages of the V&V Model and the activities carried out in each stage.

d) Explain why understanding user requirements is crucial in software development. Describe two methods used to gather these requirements.

P.T.O.

e) Explain advantages and disadvantages of Waterfall Model.

Q3) **Attempt any Four of the following:** **[4 × 4 = 16]**

a) Explain Prototyping Model in detail.

b) What is Data Dictionary? Explain its various elements.

c) Explain characteristics of software.

d) What are the requirement gathering techniques? List out all the techniques and explain any two in detail.

e) Draw Decision Tree for following:

A Co-operative bank grants loan under following conditions.

i) If customer has account with bank and has no loan outstanding loan will be granted.

ii) If customer has account but some amount is outstanding from previous loans, loan will be granted under special management approval.

iii) Reject loan applications in all other cases.

Q4) **Attempt any Four of the following:** **[4 × 4 = 16]**

a) Draw First Level DFD for ATM Management System.

b) Design Screen Layout for creating user account on internet. (With personal details, User-id, Password, save, cancel etc.)

c) Maxwell is trading company which sells various consumables to its dealers, On receiving enquiry from dealers, the company sends quotation to dealer. The dealer then sends order to company. If stock is available then the order acceptance is sent to dealer.

- Draw E-R Diagram.

d) Define software process and software product. Distinguish between them.

e) Define software maintenance. Explain types of software maintenance.

Q5) **Write a short note on any Two of the following :** **[2 × 3 = 6]**

a) Structured Chart

b) Types of Cohesion

c) Validation and Verification Testing.

Total No. of Questions : 5]

SEAT No. : ____

PC-1157

[Total No. of Pages : 2

[6317] - 104
S.Y. B.B.A. (CA)
CA-304: ANGULARJS
(CBCS) (2019 Pattern) (Semester - III)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***Questions Total number of questions is 5.***
2) ***Neat diagram must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***

Q1) **Attempt any Eight of the following (Out of ten) :** **[8 × 2 = 16]**

a) What is AngularJs?

b) Define scope in AngularJs.

c) What are directives?

d) What is $http Service?

e) Explain ng-if directives with an example

f) How to create controller in AngularJs?

g) What are main features of AngularJs?

h) Explain date filter with syntax &example.

i) What are services in AngularJs?

j) Enlist four built in filters.

P.T.O.

Q2) **Attempt any Four of the following (Out of Five) :** **[4 × 4 = 16]**

a) What are the advantages and disadvantages of using AngularJs?

b) What is module? Write advantages of modules.

c) What are AngularJs Forms? Explain its elements.

d) Write AngularJs program to calculate simple interest using three text fields which will bound with three ng- model directives.

e) Write an AngularJs program to create service for finding factorial of given number.

Q3) **Attempt any Four of the following (Out of Five) :** **[4 × 4 = 16]**

a) Explain AngularJs Data Binding?

b) Explain scope hierarchy in detail.

c) Write an AngularJs program to find multiplication of two numbers.

d) Explain custom filter with an example.

e) Write an AngularJs program for ng-keyup and ng-keydown event.

Q4) **Attempt any Four of the following (Out of Five) :** **[4 × 4 = 16]**

a) Write short note on SPA.

b) Write an AngularJS program to demonstrate ng-init directive that initializes variable of string, number, array and object.

c) Why are expressions used in AngularJS?

d) Explain functions of AngularJs directive lifecycle?

e) Distinguish between factory, service and provider.

Q5) **Write a short note on any two (out of Three) :** **[2 × 3 = 6]**

a) MVC

b) Event Handling.

c) Dependency Injection.

Total No. of Questions : 5]

SEAT No. :

PC1158

[Total No. of Pages : 2

[6317]-105

S.Y.B.B.A. (Computer Application)

CA-304 : PHP

(2019 Pattern) (Semester-III)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***

Q1) Attempt any Eight of the following (Out of Ten) **[8×2=16]**

a) Give important features of PHP.

b) What are the different types of operators available in PHP?

c) How to declare variable in PHP?

d) What is cookie?

e) List different print functions used in PHP.

f) Explain PHP implode() function.

g) List array stack functions.

h) Explain validation in PHP.

i) What are the databases supported by PHP?

j) What is the use of<fieldset> tag?

Q2) Attempt any FOUR of the following (Out of Five) **[4×4=16]**

a) What is Array? Explain all types of array in PHP.

b) Explain the difference between while and do. .while loop in PHP.

P.T.O.

c) Write PHP program to check whether given number is palindrome or not.

d) What is the difference between GET and POST Method.

e) Explain passing value by reference with example.

Q3) Attempt any FOUR of the following (Out of Five) **[4×4=16]**

a) Explain relational operators in PHP.

b) Explain the role of phpMyAdmin?

c) Explain session in PHP.

d) Write a php program to count total number of vowels from the given string.

e) Write PHP script to define an interface which has methods area(), volume(). Create a class cylinder which implements this interface and calculate area and volume.

Q4) Attempt any FOUR of the following (Out of Five) **[4×4=16]**

a) What is variable? Explain its scope with example.

b) Explain array sort functions with example

c) Write a PHP program to find maximum of three numbers.

d) Write a PHP script to accept two strings from the user. Find the first occurrence and the last occurrence of the small string in the large string.

e) Give and explain syntax of Mysql functions used in PHP

Q5) Write a short note on Any TWO of the following (Out of Three) **[2×3=6]**

a) Class and Object

b) Form and Form elements

c) Conditional Statements

Total No. of Questions : 5]

SEAT No. :

PC1159

[Total No. of Pages : 2

[6317]-106
S.Y.B.B.A. (Computer Application)
CA-305 : BIG DATA
(2019 Pattern) (Semester-III)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right side indicate full marks.***

Q1) Attempt any Eight of the following. **[16]**

a) What is big data?

b) What is Apriori algorithm?

c) Enlist data types in R?

d) Enlist the stages of data science?

e) Define EM algorithm.

f) Define SVM?

g) What is Machine Learning? Enlist type of Machine Learning.

h) Define market basket analysis

i) What is Sample and Population?

Q2) Attempt any FOUR of the following. **[16]**

a) Explain different types of data analytics.

b) Give advantages and Disadvantages of Machine Learning.

c) Explain Correlation with its type.

d) Explain functions included in "dplyr" package.

e) Explain applications of big data.

P.T.O.

Q3) Attempt any FOUR of the following. **[16]**

a) What is histogram? Explain with example in R.

b) Explain Data frame with example.

c) Explain types of regression models.

d) What is digital data? Explain its type.

e) Explain Naive Bayes with the help of example.

Q4) Attempt any FOUR of the following. **[16]**

a) Explain Association rule mining.

b) Write an R program to find out number is positive or negative.

c) Write an R program to find the maximum and the minimum value of a given vector.

d) Write an R Program to print Multiplication Table of 2.

e) Write a R program accept any year as input and check whether the year is a leap year or not.

Q5) Write a short note on Any TWO of the following. **[6]**

a) Tools used in Big Data.

b) Loops in R.

c) Applications of Machine Learning.

Total No. of Questions : 5]

SEAT No. :

PC1160

[Total No. of Pages : 2

[6317]-107

S.Y.B.B.A. (Computer Application)

CA-305 : BLOCK CHAIN

(2019 Pattern) (Semester-III)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***

Q1) Answer the following: (any-8) **[8×2=16]**

a) What is a Ledger?

b) Define Block in case of blockchain.

c) What is Byzantine Fault Tolerance?

d) What is required to be solved for proof of work?

e) Define wallet.

f) What is Solidity?

g) Give examples of cryptocurrency.

h) Define Hyperledger.

i) Which are the three basic steps of digital signature?

j) Define Nonce.

Q2) Answer the following: (Any - 4) **[4×4=16]**

a) Explain Consensus in blockchain.

b) Compare Proof of Work and Proof of Stake in blockchain.

c) Draw a labelled diagram to explain Ethereum Virtual Machine.

d) Explain the working of blockchain.

e) Create a contract using solidity to display the message, “Hello Blockchain”.

P.T.O.

Q3) Answer the following: (any-4) **[4×4=16]**

a) Draw a labelled diagram to explain the Life Cycle of Blockchain.

b) Draw a labelled diagram to explain the structure of Block.

c) Explain the benefits of blockchain.

d) What is mining in blockchain ? Explain 'pool mining' and 'mining alone'.

e) Write a function using Solidity to calculate Hash Code for the transaction.

Q4) Answer the following: (Any - 4) **[4×4=16]**

a) Explain P2P Payment Gateway.

b) Explain the double spending problem and its solution.

c) Explain the Actors in case of blockchain.

d) Explain blockchain network.

e) Explain distributed ledger technology with a labelled diagram.

Q5) Answer the following: (Any - 2) **[2×3=6]**

a) State the uses of Hyperledger.

b) Explain Public Key Infrastructure

c) Explain Decentralised Autonomous Organizations (DAO)

Total No. of Questions :5]

SEAT No. :

PC1161

[6317]-201

[Total No. of Pages :2

S.Y. B.B.A. (Computer Application)

CA-401 : NETWORKING

(2019 Pattern) (Semester- IV)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory***
2) ***Neat diagrams must be drawn wherever necessary.***

Q1) Attempt any Eight of the following. **[8×2=16]**

a) What is proxy server?
b) What is bridge?
c) What is HTTP?
d) What is standard?
e) What is NIC?
f) Define computer Network
g) What are the types of twisted pair cable?
h) What is plaintext and ciphertext?
i) What is Piconet?
j) What is addressing?

Q2) Attempt any four of the following **[4×4=16]**

a) What is networking? Explain different types of network
b) Compare Iso/osI reference model and TCP/IP.
c) Explain Fiber optic cable in detail
d) What is AP? Explain BSS and ESS in detail.
e) What is cryptography? State objective of cryptography

Q3) Attempt any four of the following. **[4×4=16]**

a) What is back bone Network? Explain types of backbone Architecture
b) Difference between connection oriented and connectionless services
c) What is hub? Explain types of hub.
d) What is wireless transmission? Explain any one media in detail.
e) Draw TCP/IP model and state the function of each layer.

P.T.O.

Q4) Attempt any four of the following **[4×4=16]**

a) What is security services? Explain security mechanisms to provide the services.

b) What is topology? Explain difference between Bus and star topoloy

c) Explain ground wave propagation method in detail

d) Explain different types of addresses

e) What are the objective of wireless LAN?

Q5) Write short note on : any two. **[2×3=6]**

a) Repeaters

b) Modes of Communication

c) Coaxial cable structure

Total No. of Questions : 5]

SEAT No. : ____

PC-1162

[Total No. of Pages : 3

[6317]-202
S.Y. B.B.A. (Computer Application)
CA-402:OBJECT ORIENTED CONCEPTS THROUGH CPP
(2019 Pattern) (Semester - IV)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right side indicate marks.***

Q1) **Attempt any EIGHT of the following. (Out of Ten)** **[8 × 2 = 16]**

a) What is Object Oriented Programming (OOP)?

b) What are applications of C^{++}?

c) Define the scope resolution operator in C^{++}.

d) List the memory management operators in C^{++}.

e) Define inline functions.

f) What are default arguments in C^{++}?

g) Define a class and an object in C^{++}.

h) List the access specifiers in C^{++}+.

i) What is the scope resolution operator in C^{++}?

j) Define a destructor in C^{++} with its syntax.

Q2) **Attempt any four of the following. (Out of Five)** **[4 × 4 = 16]**

a) What are manipulators in C^{++}? Give an example.

b) Define reference variable in C^{++} and explain its use with an example.

c) Define Constructor. Explain any of its type along with example.

d) Define inheritance and its types in C^{++}.

e) Explain operator overloading in C^{++} with an example.

P.T.O.

Q3) **Attempt any Four of the following. (Out of Five)** **[4 × 4 = 16]**

a) Explain the difference between a structure and a class in C++.

b) Explain the use of a static data member and a static member function in C++ with an example.

c) Write a C++ which define a class named Bank Account with two private data members balance and interestRate. Implement a friend class named Bank with a function named get Interest() that calculates and returns the interest on the bank account using the interest rate.

d) Explain the concept of virtual base class in C++ with an example.

e) Explain the concept of objects as a function argument in C++.

Q4) **Attempt any four of the following: (out of Five) :** **[4 × 4 = 16]**

a) Write a C++ program to demonstrate function overloading using the following functions:

i) int sum(int a, int b)

ii) float sum(float a, float b)

iii) int sum(int a, int b, int c)

b) Write a class template named 'Pair' that can store a pair of values of different data types. The class should have two private data members, 'first' and 'second', and a constructor that can initialize both data members. The class should also have public member functions to get and set the values of the data members.

c) Write a C++ program to read data from a file named "input.txt" and write the data to a new file named "output.txt". The program should remove any blank lines from the input file.

d) Create a class called "Shape" with a protected member variable "color". Add a public method called "getColor()" that returns the value of "color". Create two subclasses of "Shape" called "Rectangle" and "Circle". The "Rectangle" class should have private member variables for "width" and "height" and a public method called "getArea()" that returns the area of the rectangle. The "Circle" class should have a private member variable for "radius" and a public method called "getArea()" that returns the area of the circle. Override the "getColor()" method in both subclasses to return the color of the shape.

e) Trace the output of the following program and explain it.

```
#include <iostrearn.h>

int add(int a, int b)

{
    return a + b;
}
float add(float a, int b)
{
    return a + b,;
}
int main()
{
    int x=5,y= 10;
    float a = 3.5, b = 7.2;
    cout << “Sum of” <<x <<“ and ” <<y <<“is: ”<<add(x, y) <<endl;
    cout << “Sum of” <<a <<“ and ” <<b << “is: ”<<add(a, b) <<endl;
    return 0;
}
```

Q5) **Write a short note on any two of the following:(Out of three): [2 × 3 = 6]**

a) Virtual functions

b) Exception handling

c) Friend Function

Total No. of Questions : 5]

SEAT No. : ____

PC1164

[Total No. of Pages : 2

[6317]-204

S.Y. B.B.A. (Computer Application)

CA-404 : NODE JS

(2019 Pattern) (Semester - IV)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***

Q1) Answer the following (Any Eight) : **[8×2=16]**

a) What is REPL in Nodejs.

b) NPM stands for?

c) What do you mean by event in Nodejs?

d) What is the use of prompt - sync module?

e) Define Anonymous function.

f) Explain global packages from Nodejs.

g) What is express.js?

h) Write syntax to create Buffer?

i) Which command is used for deleting a file?

Q2) Answer the following (Any four) **[4×4=16]**

a) What is Nodejs? Explain the features of Nodejs.

b) How we can create a local module with example?

c) What is package.json File?

d) Explain Nodejs process model?

e) Write down Advantages of NPM.

P.T.O.

Q3) Answer the following (Any Four) : **[4×4=16]**

a) Explain module.exports in Nodejs?

b) Write steps to load core modules in Nodejs?

c) How to write synchronous data to File explain with suitable example.

d) Write a code for selecting all records from the “employee” table.

e) Using Nodejs create a webpage to read two file Name from user and combine in third file.

Q4) Answer the following (Any Four) **[4×4=16]**

a) Write down the difference between GET and http.request () method?

b) What is the use of fs.fturncate method?

c) Write Nodejs application to create user defined Rectangle module to find area of rectangle & display the details on console.

d) What is web server?

e) Explain parameters of create connection?

Q5) Answer the following (Any Two) **[2×3=6]**

a) Explain path module.

b) How to uninstall local package.

c) How can we add Dependency in package.json.

Total No. of Questions : 5]

SEAT No. : ____

PC1165

[6317]-205

[Total No. of Pages : 2

S.Y. B.B.A. (Computer Application)

CA-404 : ADVANCE PHP

(2019 Pattern) (Semester - IV)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary.***

Q1) Attempt any EIGHT of the following : **[8×2=16]**

a) Which functions are used for serialization?

b) Enlist the HTTP Request methods.

c) What is web services?

d) Which are the databases supported by PHP?

e) What is setcookie() function?

f) Enlist the methods of simple XML extensions.

g) What is $http_response_header?

h) Give any two applications of AJAX.

i) Which are the parts of XML-RPC?

j) Explain the purpose of $this variable.

Q2) Attempt any FOUR of the following : **[4×4=16]**

a) What is sticky form? Explain with example.

b) What is DOM? Explain it with the help of program.

c) What is SOAP? Explain different elements of SOAP.

d) Explain with example how to connect database using PHP and Ajax.

e) Explain MVC architecture with diagram.

P.T.O.

Q3) Attempt any FOUR of the following : **[4×4=16]**

a) Write a PHP program to accept two string from user and check whether entered strings are matching or not. (Use Sticky form concept)

b) Write a PHP program to read the XML document "stock_list.xml" (fruits and vegetables) which create XML document and parse the XML data into an array.

c) Write a simple PHP program to implements Ajax for addition of two numbers.

d) Write a script to create XML file named "College.xml"

The element details of "College.xml" are:

```
<College>
    <Cname> ------ </Cname>
    <City> ------ </City>
    <Rank> ------ </Rank>
</College>
```

Display at least 3 colleges Information.

e) Write Ajax program to display list of games stored in an array on clicking OK button.

Q4) Attempt any FOUR of the following : **[4×4=16]**

a) What is Interface? Explain with suitable example.

b) Explain XML parser.

c) Write a PHP program to create a simple calculator that can accept two numbers and perform operations like add, subtract, multiplication and divide.(using self- processing form)

d) Explain features of Joomla/ Drupal.

e) Write a PHP script to create a class Shape and its sub-class Triangle, Square, Circle and display area of selected Shape. (use concept of Inheritance)

Q5) Write a note on Any TWO of the following : **[2×3=6]**

a) Asynchronous communication

b) UDDI

c) GET method

Total No. of Questions : 5]

SEAT No. : ____

PC1166

[Total No. of Pages :2

[6317]-301

T.Y.B.B.A. (C.A.)

CA-501 : CYBER SECURITY

(2019 Pattern) (Semester- V)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***

Q1) Attempt any EIGHT of the following (Out of Ten). **[8×2=16]**

a) What is Cyber defamation?

b) Define term Cyber Security.

c) What is Cyberstalking?

d) What is Steganography?

e) What is Spam Laws?

f) What is Cyber Forensic?

g) What do you understand by term ‘Trademarks’?

h) Define attack vector.

i) Define Spyware.

j) What is Reconnaissance?

Q2) Attempt any FOUR of the following (Out of Five). **[4×4=16]**

a) Why do we need cyber laws in India?

b) What is Computer forensics? Explain in details.

c) What is proxy server? Also write the purpose of it.

d) Explain different types of credit card frauds.

e) Discuss various password cracking techniques.

P.T.O.

Q3) Attempt any FOUR of the following (Out of six). **[4×4=16]**

a) Explain the different real life example of Cyber Crime.

b) What is Domain Name? Explain with example.

c) Explain how botnets can be used as a fuel to Cybercrime.

d) Describe active and passive attacks in details.

e) What is SQL injection? Explain different methods to prevent SQL injection attack.

f) What is difference between Virus and Worms?

Q4) Attempt any FOUR of the following (Out of Five). **[4×4=16]**

a) What is CIA? Discuss three concepts of CIA model.

b) Discuss DoS attack in detail.

c) Explain in brief the changes made to the Indian IT Act.

d) Explain different type of Intellectual property in details.

e) Explain organizational guidelines for internet usage.

Q5) Write a short note on Any TWO of the following (Out of Three). **[2×3=6]**

a) Phishing

b) Social Media Marketing.

c) Data Diddling.

Total No. of Questions : 5]

SEAT No. : ____

PC1167

[Total No. of Pages : 2

[6317]-302

T.Y. B.B.A. (C.A.)

CA - 502 : OBJECT ORIENTED SOFTWARE ENGINEERING

(2019 CBCS Pattern) (Semester - V)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Neat diagram must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***

Q1) Attempt any Five of the following: **[5×2 = 10]**

a) What is Object Orientation?

b) What is actor?

c) Explain Tagged Value.

d) Explain notations of use case diagram.

e) Explain term Join and Fork.

f) Define swim lane.

g) What is system boundary?

Q2) Attempt any Four of the following: **[4×4 = 16]**

a) Explain five UP work flows of UP in detail.

b) Draw state chart diagram for ATM system.

c) Describe the Rambaugh method in detail.

d) Define things. Explain types of things in UML.

e) Explain Object oriented Design in detail.

P.T.O.

Q3) Attempt any Four of the following: **[4×4 = 16]**

a) What is mean by Iterative Development? States its various advantages.

b) Define UML. Explain architecture of UML.

c) Explain class diagram with example.

d) Explain relationship types in detail.

e) Explain Booch method in detail.

Q4) Attempt any Four of the following: **[4×4 = 16]**

a) What is SRS? Explain types of SRS specification.

b) What is risk management in project management?

c) Explain visibility modes along with well labelled diagram.

d) What is class diagram. Explain with Notations.

e) Draw a collaboration diagram for ATM system.

Q5) Attempt the following: **[3×4 = 12]**

Railway reservation system is a system used for booking tickets over internet -any customer can book tickets for different trains. Customer can book a ticket only if tickets are available. Customer searches for the availability of ticket then if the tickets are available the books the ticket by initially filling details in a form. Tickets can be booked in two ways buy i-ticket or e-ticket booking.

In case of e-ticket booking Customer can book the ticket online and the tickets are couriered to particular customer at their address, but in case of e-ticket booking and cancelling ticket are booked and cancelled online sitting at the home and customer himself has to take print of the ticket but in both the cases amount for tickets are deducted from customer's amount.

For cancellation of ticket the customer's has to go at reservation office then fill cancellation form and ask the clerk to cancel the ticket then the refund is transferred to customer's account. After booking ticket, the customer has to check out by paying fare amount to clerk.

Consider above situation. Draw the following diagram:

a) Use case diagram

b) Class diagram

c) Activity diagram

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Total No. of Questions : 5]

SEAT No. :

PC1168

[Total No. of Pages : 2

[6317]-303
T.Y.B.B.A. (C.A.)
CA 503 : CORE JAVA
(2019 Pattern) (Semester-V)

Time : 2 ½Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagrams must be drawn wherever necessary.***

Q1) Attempt any Eight of the following: [Out of Ten] **[8×2=16]**

a) Describe any two features of Java programming Language.

b) Define Collection.

c) Define Static Keyword.

d) What is difference between Array and Array List?

e) Write advantages of Inheritance.

f) What is use of New operator?

g) How to create and access package in java.

h) What is difference between paint() and repaint().

i) What is Finalize() Method?

j) Write any two advantages of Inner Class.

Q2) Attempt any four of the following: [Out of Five] **[4×4=16]**

a) Write a Java program using AWT to display details of Customer (cust_id, cust_name, cust_addr) from user and display it on the next frame.

b) Differentiate between interface and abstract class.

c) Write a java program to count number of Lines, words and characters from a given file.

P.T.O.

d) What is exception? Explain its keyword with example.

e) Why the main() method is public static? Can we overload it? Can we run java class without main() method?

Q3) Attempt any four of the following: [Out of Five] **[4×4=16]**

a) Explain java.util Package.

b) Write a package MCA which has one class student. Accept student details through parameterized constructor. Write display() method to display details. Create a main class which will use package and calculate total marks and percentage.

c) How Multiple Inheritance is achieved in java? Explain.

d) What is 'this' keyword? Explain with suitable example.

e) What is recursion in Java? Write a Java Program to find factorial of a given number using recursion.

Q4) Attempt any four of the following: [Out of Five] **[4×4=16]**

a) Explain method overloading and method overriding in detail.

b) Write a Java program to design email registration form. (Use swing components)

c) What is Layout Manager? Explain any one in detail.

d) How to create String in java? Explain any four functions of String.

e) Write a java program to accept'n' integers from the user & store them in an ArrayList Collection. Display the elements ofArrayList collection in reverse order.

Q5) Write short note on any two: [Out of Three] **[2×3=6]**

a) Vector

b) Types of constructor.

c) Anonymous class.

Total No. of Questions : 5]

SEAT No. :

PC1169

[Total No. of Pages : 2

[6317]-304

T.Y.B.B.A. (Computer Application)

CA-504 (A) : MONGO DB

(2019 Pattern) (Semester-V)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Neat diagram must be drawn wherever necessary.***

Q1) Answer the following: (Any 8) **[8×2=16]**

a) List types of NoSQL databases.

b) Explain Aggregation Pipeline in MongoDB.

c) Explain collStats command.

d) Define Horizontal Scaling.

e) List the different command-line utilities of MongoDB.

f) What is Multikey Index?

g) Explain Monitoring tools related to MongoDB.

h) Write the syntax of insertMany method.

i) Explain any two features of MongoDB.

j) Explain one to one relationship in Embedded Documents.

Q2) Answer the following: (Any 4) **[4×4=16]**

a) How the Runtime Configuration of MongoDB is handled? Explain in detail.

b) Explain MongoDB CRUD Concerns (Read and Write Operations).

c) List and explain different MongoDB shell commands related to database.

d) Explain the different indexing reference methods in detail.

e) Explain Cursor used in MongoDB.

P.T.O.

Q3) Answer the following: (Any 4) **[4×4=16]**

a) Explain Graph Database in detail.

b) Explain analogy between RDBMS and MongoDB Data Model.

c) Explain Batch Insert with an example.

d) Explain MongoDB Architecture.

e) What is Page Fault? How to get details of Page Fault in MongoDB?

Q4) Answer the following: **[8×2=16]**

Write statement in MongoDB to do the following:

a) Create a collection 'Employee' with fields ID, EmployeeName, Designation and Salary.

b) Create a new document in the 'Employee' collection having ID=01.

c) Write a command to show the details of 'Employee' collection.

d) Display EmployeeName, Designation, Salary of Employees having ID=05.

e) Display ID, EmployeeName, Designation, Salary of Employees in which designation ends with "ger".

f) Display ID, EmployeeName, Designation of Employees whose salary is greater than 50000.

g) Display ID,Employee Name,Salary of all Employees in readable format.

h) Update salary of Employee having ID=05 to 75000.

Q5) Solve the following: (Any 2) **[2×3=6]**

a) Explain Monitoring at Server.

b) Explain Delete Commands.

c) Explain Partial Indexes.

Total No. of Questions : 5]

SEAT No. :

PC1170

[Total No. of Pages : 2

[6317]-305
T.Y.B.B.A. (C.A.)
CA -504 : PYTHON
(2019 Pattern) (Semester-V)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions is compulsary.***
2) ***Figures to the right indicate full marks.***

Q1) Attempt any eight of the following. **[8×2=16]**

a) Write any three functions of Math module.

b) What is the use of random () in random module?

c) Name any four widgets available in Tkinter

d) What is class variable?

e) What is the use of try-finally block?

f) Write the syntax of exception.

g) State the features of Keras.

h) What are the properties of a Python list?

i) What is the use of pass and break statement?

j) What is the difference between append () and extend () methods in Python lists?

Q2) Attempt any four of the following. **[4×4=16]**

a) What is dictionary? Explain three built-in dictionary functions with examples.

b) What are the differences between global and local variables in Python? Provide examples.

c) Explain IS-A relationship and HAS-A relationship with example.

d) Explain frame widget in tkinter with example.

e) What is Data Visualization? List any 4 data visualisation libraries.

P.T.O.

Q3) Attempt any four of the following. **[4×4=16]**

a) Write a Python script using class to reverse the string word by word.

b) How does Python static method works?

c) Explain the methods for Geometry Management.

d) Describe string manipulation techniques in Python with examples.

e) Write a Python program that accepts a list of numbers and returns a new list containing only the even numbers.

Q4) Attempt any four of the following. **[4×4=16]**

a) What is Python? What are the benefits of using Python?

b) Write a Python program to check if a string is a palindrome.

c) Explain user defined functions with example.

d) Write a Python GUI program to accept dimension of a cylinder and display the surface area and the volume of cylinder.

e) Explain the delete () and insert () method of entry widget.

Q5) Write short note on any two. **[2×3=6]**

a) Python package

b) Class method

c) Raise statement

Total No. of Questions : 5]

SEAT No. : ____

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[6317]-401

T.Y.B.B.A. (C.A.)

CA-601 : RECENT TRENDS IN INFORMATION TECHNOLOGY

(2019 Pattern) (Semester- VI)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***

Q1) Attempt any EIGHT of the following (Out of TEN) **[8×2=16]**

a) What is Apache kafka?

b) What is data warehouse?

c) What is data integration?

d) Write types of OLAP server.

e) Define natural language processing.

f) What is ETL?

g) List out steps of the KDD process.

h) Define data frame.

i) What is Deep Learning?

j) What are the types of data?

Q2) Attempt any FOUR of the following (Out of Five) **[4×4=16]**

a) Explain data mining and knowledge discovery in database.

b) Explain different RDD operations in spark.

c) What is OLAP? Explain its operations.

d) Explain Hill climbing technique.

e) Explain applications of AI.

P.T.O.

Q3) Attempt any FOUR of the following (Out of Five) **[4×4=16]**

a) Explain data pre-processing.

b) Explain Association rule mining with example.

c) Explain data mining task.

d) What is data cleaning? Describe various method of data cleaning.

e) Explain BFS with example.

Q4) Attempt any FOUR of the following (Out of Five). **[4×4=16]**

a) Explain water jug problem with example.

b) Describe the Architecture of data warehouse.

c) Explain the multidimensional data model.

d) Explain Depth First Search technique of artificial intelligence.

e) Explain FP tree algorithm.

Q5) Write a short note on Any TWO of the following (Out of THREE) **[2×3=6]**

a) 'Means End Analysis' (MEA) in artificial intelligence.

b) MOLAP and HOLAP.

c) Use of AI in agriculture.

Total No. of Questions : 5]

SEAT No. : ____

PC1172

[Total No. of Pages : 2

[6317]-402

T.Y.B.B.A./B.C.A. (Computer Application)

CA - 602 : SOFTWARE TESTING

(2019 Pattern) (Semester - VI)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Neat diagram must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***

Q1) Attempt any Eight of the following: (out of Ten) **[8×2=16]**

a) Explain the term performance testing.

b) Define Big Bang Approach.

c) Define failure and defect.

d) Define verification testing.

e) What is sandwich approach of integration testing?

f) Define validation Testing?

g) Explain sandwich approach.

h) Explain terms-Error, Fault and Failure?

i) Define regression testing.

j) What is software metric?

P.T.O.

Q2) Attempt any Four of the following. (out of Five) **[4×4=16]**

a) Explain V-V Model of testing in detail.

b) Explain load and Smoke testing in detail.

c) Explain any four testing principles in detail.

d) Explain all testing principles in detail.

e) Differentiate between alpha and beta testing.

Q3) Attempt any Four of the following. (out of Five) **[4×4=16]**

a) Explain test case design for the login process.

b) Stub and Driver concept in Unit testing.

c) Explain white box testing and its techniques.

d) Explain Capability Maturity Model (CMM) in detail.

e) Explain in short a concept of Complexity Metrics.

Q4) Attempt any Four of the following. (out of Five) **[4×4=16]**

a) Explain Boundary- Value analysis in details.

b) Explain GUI testing in details.

c) Explain Sandwich and Big-Bang approach of Integration testing.

d) Explain Software testing life cycle with diagram.

e) Write difference between Static and Dynamic testing.

Q5) Write a short note on Any Two of the following. (out of Three) **[2×3=6]**

a) Rational Robot.

b) System testing.

c) Statement coverage criteria of White-Box testing.

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Total No. of Questions : 5]

SEAT No. : ____

PC1173

[Total No. of Pages : 2

[6317]-403

T.Y. B.B.A. (Computer Application)

CA - 603 : ADVANCED JAVA

(CBCS 2019 Pattern) (Semester - VI)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***

Q1) Attempt any eight of the following. **[8×2=16]**

a) List any 2 JDBC drivers.

b) What is protocol?

c) What is JSP?

d) What is sleep ( ) method?

e) What is session?

f) What is TCP/IP?

g) What is hybernate?

h) What is port number?

i) List any 2 implicit objects in JSP.

j) What is thread synchronization.

Q2) Attempt any four of the following. **[4×4=16]**

a) Explain driver manager class & its methods.

b) Write down the difference between do get ( ) & do post ( ) methods.

c) Explain thread life cycle with diagram.

d) What are the benefits of spring.

e) Write a java program to display all the records from EMP table. Assume EMP (Eno, Ename, Salary) table is already created.

P.T.O.

Q3) Attempt any four of the following. **[4×4=16]**

a) List and explain types of result set in JDBC.

b) Explain runnable interface with example.

c) Explain socket & server socket classes used in networking.

d) Write a multithreading program in java to display all the integers between 1 to 100 randomly after 2 seconds.

e) Write a java program to delete the details of given teacher. Assume teacher table with attributes tno, tname, subject is already created.

Q4) Attempt any 4 of the following. **[4×4=16]**

a) Write a servlet application to display "Hello Java" message on the browser.

b) List and explain any 4 directives in JSP.

c) Explain prepared statement interface in detail with example.

d) List different ways of session tracking. Explain any one in detail.

e) Write a JSP script to display all the even numbers between 1 to n in Blue color.

Q5) Write a short note on any two of the following. **[2×3=6]**

a) Service ( ) method.

b) Thread class.

c) Hibernate.

Total No. of Questions : 5]

SEAT No. : [ ]

PC1174

[Total No. of Pages : 2

[6317]-404

T.Y. B.B.A.(Computer Application)

CA - 604 : ANDROID PROGRAMMING

(2019 Pattern) (Semester - VI)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Draw neat diagrams whenever necessary.***

Q1) Attempt the following (any 8). **[8×2=16]**

a) What is adapter?

b) What is view group?

c) Define Toast.

d) Define Linear Layout.

e) What is use of spinner?

f) Define thread.

g) Explain reverse Geocoding.

h) What is Notification?

i) Dfine SQLite database.

j) Explain DVM.

Q2) Attempt the following (any 4). **[4×4=16]**

a) Describe the concept of services in Android and explain bounded & unbounded service in detail.

b) Explain basic building blocks in android?

c) Describe table layout with example.

d) Explain the working of handlers & runnable.

e) Explain service life cycle in detail.

P.T.O.

Q3) Answer the following (any 4). **[4×4=16]**

a) What is dialog box? Explain alert dialog with example.

b) Explain the android architecture.

c) What is Androidmanifest .xml file? Explain the importance of Androidmanifest .xml file in android application.

d) Design a simple calculator using table layout.

e) Demonstrate the use of Image button with suitable example.

Q4) Answer the following (any 4). **[4×4=16]**

a) Create a simple application, which reads a five digit positive number from the user, display the reverse number in another actvity.

b) Create a simple application which shows lifecycle of activity.

c) What is Radio Button and Radio Group? Explain with example.

d) Explain Gridview using Adapter.

e) What is Menu? Explain its type

Q5) Answer the following (any 2) : **[2×3=6]**

a) Methods of Asyntask.

b) Broadcast receiver

c) Custom dialog

Total No. of Questions : 5]

SEAT No. : [ ]

PC1175

[Total No. of Pages : 2

[6317]-405

T.Y. B.B.A.(Computer Application)

CA - 604 : DOT NET FRAMEWORK

(2019 Pattern) (Semester - VI)

Time : 2½ Hours] ***[Max. Marks : 70***

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***

Q1) Attempt any eight of the following. **[8×2=16]**

a) What is MSIL?

b) Enlist string concatenation operators in Vb. Net.

c) What is use of CLR?

d) Explain input Box ( ) and Msgbox ( ) functions.

e) What is Asp.Net?

f) What is request object and response object?

g) Define sealed class with its syntax.

h) What is use of virtual key word in c #?

i) What is use of executenon Query ( ) and execute Reader ( ) ?

j) What is use of 'This key word'?

Q2) Attempt any four of the following. **[4×4=16]**

a) Explain Data Adapter object in ADO.Net.

b) What are access modifiers? Explain types of access modifiers with example.

c) Explain any four validation controls in Asp.Net.

d) Explain interface with examples.

e) Explain Asp.Net basic controls.

P.T.O.

Q3) Attempt any four of the following. **[4×4=16]**

a) Write C# program to check given number is armstrong number or Not.

b) Write Ve.Net program to accept character from keyboard and check whether it is vowel or consonant.

c) Write Vb.Net program to calculate factorial of given number.

d) Write Vb.Net program to accept a number from Input Box and display its multiplication table in listbox.

e) Write C# program to find transpose of matrix

Q4) Attempt any four of the following. **[4×4=16]**

a) Explain constructor in C# with suitable example.

b) Explain any four dialog controls in Vb.Net.

c) Explain data reader in ADD.Net.

d) Write C# program to calculate sum of digits of given number.

e) Write Vb.Net program to perform addition of two numbers using runtime textbox.

Q5) Write short note on any two of the following: **[2×3=6]**

a) Inheritance in C#

b) Treeveiw control

c) Master page in Asp.Net.