

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 topology
- 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 <iostream.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



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SEAT No. :

PC1164

[6317]-204

[Total No. of Pages : 2

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.ftuncate 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.

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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

x x x