

Total No. of Questions : 5]

SEAT No. :

**PB-1471**

[Total No. of Pages : 2

**[6226]-501**

**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) *A 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 Phishing?
- b) Define Cyber Terrorism.
- c) Define term Cyber Security.
- d) What is Public-key Certification in Digital Signature?
- e) Define term Cybercrime.
- f) What is reconnaissance?
- g) Define denial-of-service (DoS) attack.
- h) Define attack vector.
- i) What is Steganography?
- j) What is online fraud?

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

- a) Why there is need of Computer Forensic?
- b) Discuss various password cracking techniques.
- c) Discuss different types of active attack and passive attack.
- d) Explain how botnets can be used as a fuel to cybercrime.
- e) What is SQL injection and what are the different countermeasures to prevent the attack?

**P.T.O.**

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

- a) What are the consequences of cybercrime and their associated cost?
- b) Explain in brief each type of Intellectual Property.
- c) What are the challenges to Indian Law and cybercrime scenario in India?
- d) Explain the cyber security real life incident example.
- e) What is cyber forensics explain in details?

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

- a) Define virus. Discuss the types of viruses.
- b) What is Domain Name? Explain with example.
- c) What is CIA? Discuss three concept of CIA model.
- d) Explain different types of credit card frauds.
- e) Explain the rules of Digital Evidence.

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

- a) Copyrights.
- b) The ITA 2000 sections.
- c) Online Scams.



Total No. of Questions : 5]

SEAT No. :

**PB-1472**

[Total No. of Pages : 3

**[6226]-502**

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

**CA-502 : OBJECT ORIENTED SOFTWARE  
ENGINEERING**

**(2019 Pattern) (CBCS) (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)** Attempt any five of the following:

**[5 × 2 = 10]**

- a) List the types of inheritance.
- b) What is active class?
- c) Define term object orientation.
- d) Explain polymorphism.
- e) List any four characteristics of a system.
- f) Define Role Names.
- g) What is Action?

**Q2)** Attempt any four of the following:

**[4 × 4 = 16]**

- a) Explain what is requirement elicitation.
- b) Explain UML architecture.
- c) Explain activity diagram with Notations.
- d) Draw the collaboration diagram for hospital management system.
- e) Describe UP phases with the help of diagram.

**P.T.O.**

**Q3)** Attempt any four of the following:

**[4 × 4 = 16]**

- a) Explain deployment diagram. State any four notation of deployment diagram.
- b) What is classifier? Explain different classifiers.
- c) Explain which diagrams are called as interaction diagram and explain these diagrams are used to model which aspect of system.
- d) Explain prototyping model with diagram.
- e) Explain object oriented design process.

**Q4)** Attempt any four of the following:

**[4 × 4 = 16]**

- a) What is Package? Explain different kinds of packages.
- b) Explain Jacobson method of object oriented design.
- c) Define relationship. Explain different kinds of relationship.
- d) Define the following terms :
  - i) Composition
  - ii) Note
  - iii) Forking
  - iv) Joining
- e) What do you mean by task management component?

**Q5)** Attempt the following :

**[12]**

Hospital Management system help in registering information about patient and handles patient query. A unique ID is generated for each patient after registration. This help to maintain relationship and maintain medical history of patient. This system also monitor the doctor appointment when ID is generated the patient receive the appointment time and number from the receptionist and accordingly visit the doctor. The system also deal with patient Test detail.

The system also deals with bed allotment to various patients by checking their ID. The system identifies whether the person is a doctor or staff and handel various activities such as draw salary and give salary | add doctor | staff information into the database.

As per the doctor diagnoses the patient, gives treatment and give suggestion to patient and prescribe laboratory tests and medicines.

The patient can pay bill through credit card, cash or cheque whose information is maintained by the system.

Consider above situation draw the following UML diagram.

- a) Use case diagram
- b) Activity diagram
- c) Class diagram



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SEAT No. :

**PB-1473**

[Total No. of Pages : 2

**[6226]-503**  
**T.Y.B.B.A.(C.A.)**  
**CA - 503: CORE JAVA**  
**(Semester-V) (2019 Pattern)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

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

**Q1) Attempt any Eight: (Out of Ten)**

**[8 × 2 = 16]**

- a) What is Java?
- b) What is an Exception?
- c) Enlist types of Inheritance.
- d) What is AWT?
- c) State the purpose of throw keyword.
- f) What is Abstract class?
- g) What is an event?
- h) What is Method Overloading?
- i) Why Java is a architectural neutral language?
- j) Define Encapsulation.

**Q2) Attempt any Four of the following (Out of Five)**

**[4 × 4 = 16]**

- a) Write Features of Java in detail.
- b) What is polymorphism? Explain its types.
- c) What is difference between constructor and method? Explain types of constructors.
- d) Write a Java program to calculate power of number using recursion.
- e) Write a Java program using AWT to display details of Employee (emp\_id, emp\_name, emp addr) from user and display it on the next frame.

**P.T.O.**

**Q3) Attempt any Four of the following [Out of Five]**

**[4 × 4 = 16]**

- a) Write a Java program to print Fibonacci Series.
- b) Write a Java program to calculate area of circle, Triangle and Rectangle (Use Method over loading)
- c) Explain try and Catch with example.
- d) What is applet? Explain its types.
- e) What is Array? Explain types of array in detail.

**Q4) Attempt any Four of the following [Out of Five]**

**[4 × 4 = 16]**

- a) Write a java program to copy the dates from one file into another file.
- b) How to create and access package in Java? Explain it with example.
- c) What is Collection Framework? Explain any two interfaces used in Collection Framework.
- d) Write a Java program to display contents of file in reverse order.
- e) Write a Java program to find maximum number in array.

**Q5) Write short note on any two: [Out of Three]**

**[3 × 2 = 6]**

- a) Multiple Inheritance.
- b) Final Keyword.
- c) Abstract Class.



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SEAT No. :

**PB-1474**

[Total No. of Pages : 2

**[6226]-504**  
**T.Y. B.B.A. (C.A.)**  
**MONGO DB**  
**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.*

**Q1) Answer the following: (Any 8)**

**[8 × 2 = 16]**

- a) Define NoSQL
- b) What is a collection in mongoDB?
- c) Write mongoDB command to drop a collection
- d) Explain pretty()
- e) What is a single field index?
- f) What is the importance of the Seq operator?
- g) Write syntax of findOneAndDelete.
- h) Define Pipeline.
- i) What is a key-value pair?
- j) How is deleteOne() different from deleteMany()?

**Q2) Answer the following: (Any 4)**

**[4 × 4 = 16]**

- a) Explain need of NoSQL Databases
- b) Describe Collection, Documents and Key Values
- c) Explain MongoDB CRUD concepts.
- d) Explain READ commands like findOne and find with syntax.
- e) Explain cursor in MongoDB

**P.T.O**



**Q3) Answer the following**

**[4 × 4 = 16]**

- a) Explain types of NoSQL databases
- b) Compare Document databases with column family databases.
- c) Explain insert(), insertOne() and insertMany() with suitable example.
- d) Discuss the types of aggregation with examples.
- e) Discuss index and its types in MongoDB.

**Q4) Answer any THREE of the following questions.**

**[16]**

Create a 'films' collection of documents with the following fields:

```
{  
    title : "Jurassic Park",  
    director "Steven Spielberg",  
    release_year: 1993,  
    language:"English",  
    film_type : ["Action", "Adventure "],  
    actors : ["Sam Neill", "Laura Dern", "Jeff Goldblum"]  
}
```

Write below statements (8 statements for 2 marks each) in MongoDB to do the following:

1. Insert at least 2 documents in a collection.
2. Display all documents of 'films' collection in proper format.
3. Give all English films released before year 2000.
4. Display title and release year of 'Action' films that starts with the letter 'K'.
5. Display the latest five 'Hindi' films released in easy-to-read format.
6. Count the number of films in which 'Sam Neill' has not acted.
7. Update release year of a film 'Jungle Book' to 2016.
8. Display director of films that ends with the letter 'K'.

**Q5) Answer the following. (Any 2)**

**[2 × 3 = 6]**

- a) Explain features of MongoDB
- b) Explain Sharding
- c) mongoimport Command



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SEAT No. :

**PB-1475**

[Total No. of Pages : 2

**[6226]-505**  
**T.Y. B.B.A. (C.A.)**  
**504 CA: Python**  
**(Semester-V) (2019 Pattern)**

*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)**

**[2 × 8 = 16]**

- a) Write down difference between set and dictionary in python?
- b) Define numpy.
- c) What is exception in python.
- d) Explain features of python
- e) Explain the input( ) function.
- f) Define Tkinter.
- g) How to create class and object in python.
- h) How to import package in python.
- i) Define functions in python.
- j) What is Modules.

**Q2) Answer the following : (Any 4)**

**[4 × 4 = 16]**

- a) Explain int 'float' Str, range data types with syntax and examples.
- b) Describe for loop in python with syntax and example.
- c) Differentiate between list and Tuple.
- d) What is Inheritance? Explain its types with syntax and example.
- e) Explain predefined and user defined functions with example

**P.T.O.**

**Q3) Answer the following : (Any 4)**

**[4 × 4 = 16]**

- a) Explain different types of python libraries.
- b) Explain data time and calendar module with example.
- c) Describe Local and Global variable with syntax and example.
- d) Write a python GUI program to display an alert message when a button is pressed.
- e) Write a python program to print a table of any number.

**Q4) Answer the following : (Any 4)**

**[4 × 4 = 16]**

- a) Explain SYS module in detail.
- b) Explain different types of Tkinter widgets with example.
- c) Which are the basic dictionary operations? Explain any 4 with example.
- d) Write a program to create class which perform basic calculator operations.
- e) Write a program to implement the concept of queue using list.

**Q5) Write short note on following : (Any 2)**

**[3 × 2 = 6]**

- a) Exception handling in python
- b) Data types in python
- c) Matplotlib library

