

Exam. Seat No.

Total No. of Questions: 3

Total No. of Pages: 1

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
S.Y. BBA (C.A)
Semester III
BCA-201-MJM: Java Programming
(NEP 2023 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks : 30

Instructions to the candidates:

- i. All questions are compulsory
- ii. All questions carry equal marks
- iii. Figures to right indicate full marks.

Q1. (A) Attempt each of the following

(1 Marks each)

- i. What is use of jdbc and javap?
- ii. What is Exception?
- iii. Define Event.
- iv. Define Constructor.

(B) Attempt each of the following

(2 Marks each)

- i. Why java is compiled and interpreted language?
- ii. Write a difference between throw and throws.
- iii. List out the datatypes in java.

Q2. Attempt any four of the following

(3 Marks each)

- i. Write difference between C++ and java.
- ii. Explain nested & inner class.
- iii. Write a program to display only numeric data from file.
- iv. Explain String class with any 4 methods.
- v. Write a program to add student name in ArrayList and display in reverse order using ListIterator.
- vi. Explain event delegation model in detail.

Q3. Attempt any two of the following

(4 Marks each)

- i. Explain interface in detail.
- ii. Explain steps to create user defined package with example.
- iii. How exception handled in java? Explain.
- iv. Explain difference between AWT and Swing.

Total No. of Questions: 3

Total No. of Pages: 1

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
S.Y.BBA (CA)
Semester: III
BCA-203-MJM: Software Engineering
(NEP 2023 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks: 30

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Assume suitable data if necessary.
- iii. Draw necessary diagrams.

Q1. (A) Attempt each of the following

(1 Marks each)

- (i) What is Software?
- (ii) Define RAD.
- (iii) Define Requirement Analysis?
- (iv) What is Coupling?

(B) Attempt each of the following

(2 Marks each)

- (i) Explain Need for Software Engineering?
- (ii) What is Agility?
- (iii) What is feasibility study?

Q2. Attempt any four of the following

(3 Marks each)

- (i) Explain Characteristics of Software?
- (ii) Explain Spiral Model in detail?
- (iii) Short note on SRS.
- (iv) Draw Entity Relationship diagram for library management system
- (v) Define Requirement gathering and explain Fact Finding Techniques?
- (vi) Draw decision tree for the following case: A company gives discount on the purchase of goods depending on the sale and duration of payment:
 - a) 5% discount if order amount > 50,000.
 - b) 3% discount if order amount between 25,000 and 50,000
 - c) No discount if order amount < 10,000 or payment is not done within 8 days.

Q3. Attempt any two of the following

(4 Marks each)

- (i) Consider a system for swimming tank management. Applicant fill the admission form containing details like address, date of birth, age, father's/gardian's name and also submit two photographs, medical certificate and fees. Then swimming tank management issues I-card to the applicant.
Draw First Level DFD for the above system.
- (ii) Explain SDLC in detail.
- (iii) Draw the class diagram for Railway reservation system.
- (iv) What is Data Dictionary? Explain Element of Data Dictionary.

Total No. of Questions: 3

Total No. of Pages: 1

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
SYBBA (C.A)
Semester III
BCA-221-VSC: Software Testing and Automation
(NEP 2023 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks: 30

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw the diagram whenever necessary.

Q1. (A) Attempt each of the following**(1 Marks each)**

- (i) What is bug?
- (ii) Write any two Tools name of software Testing?
- (iii) What is testing GUI?
- (iv) Define Error.

(B) Attempt each of the following**(2 Marks each)**

- (i) Write System testing?
- (ii) Define Unit Testing.
- (iii) Define JUnit testing tools?

Q2. Attempt any four of the following**(3 Marks each)**

- (i) Explain Bug Life Cycle in detail.
- (ii) Explain SQA Activities.
- (iii) Explain validation & Verification.
- (iv) What is Web Driver & Web element?
- (v) Explain Load runner testing tools.
- (vi) Explain grayBox testing.

Q3. Attempt any two of the following**(4 Marks each)**

- (i) Explain White Box testing and it's types in detail.
- (ii) Explain Performance testing.
- (iii) What is Selenium? Why it is used?
- (iv) Explain software Testing life Cycle in detail.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)

Affiliated to Savitribai Phule Pune University, Pune

S.Y.BBA (C.A.)

Semester - III

UBCA232A: PHP

(Backlog) (2022 Pattern)

(No.of.Credit:03)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.

Q.1 (A) Attempt each of the following**(1 Marks each)**

- i) What is the full form of PHP?
- ii) In PHP variable names start with ----- symbol.
- iii) Which keyword is used for creating a function?
- iv) Which protocols are used to retrieve mail from server?

(B) Attempt each of the following**(2 Marks each)**

- i) What is associative array? Give one proper example.
- ii) What is the use of == and === operators in PHP?
- iii) What is difference between echo () and print () function?
- iv) Define Global variable.

Q.2 Attempt any Three of the following.**(4 Marks each)**

- i) Explain foreach loop with proper example.
- ii) Discuss the Scope of a Variable in PHP with an example
- iii) Which are the fields used in cookies?
- iv) Explain concept of sticky form with example.

Q.3 Attempt any Two of the following.**(6 Marks each)**

- i) Explain difference between get and post method.
- ii) What is inheritance? Illustrate the concept with example.
- iii) Explain sort functions in PHP.

Q.4 Attempt any Two of the following.

(6 Marks each)

- i) How Email is sent in PHP.
- ii) What is Session? How to start the new session?
- iii) Write a PHP script to accept user name and password allow 3 changes from user otherwise display error message.

Q.5 Attempt any One of the following.

(12 Marks each)

- i) a) Write a PHP Script which will perform the Arithmetical Operations of two numbers as per the choice. (Use Switch Case).
b) What is Function? Explain different types of Functions?
- ii) a) What is Concatenation operator? Give suitable example?
b) What is array? Enlist types of array in PHP?

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)

Affiliated to Savitribai Phule Pune University, Pune
Class: S.Y. BBA (C. A.)

Semester - III

UBCA235: Business Statistics Using R Programming

(Backlog 2022 Pattern)

(No.of.Credit:03)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates: (If any)

- i. All questions are compulsory.
- ii. Figure right indicate full marks.
- iii. Draw the diagrams whenever necessary.

Q.1 (A) Attempt each of the following

(1 Marks each)

- i) Which function joins two or more column vectors to form a data frame.
- ii) Write the sample space when a die is thrown.
- iii) Define Frequency Distribution.
- iv) What is Random variable?

(B) Attempt each of the following

(2 Marks each)

- i) Find the Range of 23,45,76,56,42.
- ii) What is Difference between Print () and cat () function?
- iii) Define Median and Write formula to calculate Median.
- iv) Find the mode of the given data set 1, 2, 2, 2, 3, 3, 4, 5.

Q.2 Attempt any Three of the following.

(4 Marks each)

- i) Write a R program to merge two list into the one list.
- ii) Write a short Note on Histogram.
- iii) If a coin is tossed two times, what is the probability of
 - a. getting head at least once?
 - b. getting exactly one tail?
- iv) Calculate Mean From the following Data.

Class	0-10	10-20	20-30	30-40	40-50
Frequency	2	8	28	9	3

Q.3 Attempt any Two of the following.

(6 Marks each)

- i) Write a Short Note on List in R programming.
- ii) Explain Quartile deviation and write formula for it.
- iii) Compute values of the following
 - a) 5P_3
 - b) ${}^{10}C_2$

Q.4 Attempt any Two of the following.

(6 Marks each)

- i) How many arrangements can be made using all the letters of the word?
 1. STATISTICS
 2. MADAM
- ii) Write a R program to find the elements of a given vector that are not in another given vector.
- iii) Calculate Variance from the following data.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	7	8	10	36	12	17	10

Q.5 Attempt any One of the following.

(12 Marks each)

- i) a) Explain Permutation and Combination in detail.
- b) Write a R program to create a list containing a vector, a matrix and a list and give names to the element in the list. And access the first and second element of the list and add element at the end of the list.
- ii) Calculate the regression equation of 'X' on 'Y' and 'Y' on 'X' from the following data

X	10	12	13	17	18
Y	5	6	7	9	13

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: S.Y. BBA (C. A.)
(Semester-IV)
UBCA241: Advanced Java Programming
Backlog (2022 pattern)
(no. of Credits:3)

Time: 2.00 Hours]**[Max.Marks:60****Instructions to the candidates:**

- All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw neat Diagram where ever to necessary.

- Q1. A. Attempt the following. 1mark each**
- i) What is the role of a ResultSet in JDBC?
 - ii) What is ServerSocket?
 - iii) What is Multithreading?
 - iv) What is thread priority?
- B. Attempt the following. 2mark each**
- i) What are Hibernate mapping files?
 - ii) Define JSP scripting elements.
 - iii) What are the benefits of Spring?
 - iv) What is session tracking?
- Q2. Write a short note on any Three of the following. 4 mark each**
- i) cookies
 - ii) Java.net package
 - iii) Types of Drivers
 - iv) Hibernate SessionFactory.
- Q3. Attempt any Two of the following. 6 mark each**
- i) Explain the life cycle of JSP.
 - ii) Differentiate between TCP and UDP
 - iii) Write a java program to display "Hello Java" message n times

on the screen.

Q4. Attempt any Two of the following.

6 mark each

- i) Explain the life Cycle of Servlet
- ii) Write a JDBC program to connect to a MySQL database and retrieve records.
- iii) Differentiate between extending the Thread class and implementing the Runnable interface.

Q5. Attempt any One of the following

12 mark each

- i) a) Write a SERVLET program to change inactive time interval of session.
b) Write a JDBC program to count the number of records in table.
- ii) a) Differentiate between Statement and PreparedStatement.
b) Differentiate between Servlet and CGI.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)

Affiliated to Savitribai Phule Pune University, Pune

Class -S.Y.BBA (C.A.)

Semester – IV

UBCA243: Mathematical Foundation for Computer Applications

Backlog (2022 Pattern)

(No.of.Credit:03)

Time : 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figures to the right indicate full marks.
- iii. Use of non-programmable scientific calculator is allowed.

Q.1 (A) Attempt each of the following

(1 Marks each)

- i) What is meant by compliment of a set?
- ii) Define Non-Singular matrix.
- iii) Find the Arithmetic mean of 35 and 19.
- iv) Check whether given matrix $A = \begin{bmatrix} 7 & 3 & 1 \\ 3 & 2 & 0 \\ 1 & 0 & 0 \end{bmatrix}$ is Skew-Symmetric or not.

(B) Attempt each of the following

(2 Marks each)

- i) Check whether the function $f: \mathbb{R} \rightarrow \mathbb{R}$ defined as $f(x) = 2x^2$ is one-one or not?
- ii) Give any two examples of Symmetric matrices.
- iii) Write down Idempotent laws for the sets A and B.
- iv) Find the transpose of the matrix $\begin{bmatrix} 1 & 0 & 0 \\ 1 & 1 & 3 \end{bmatrix}$.

Q.2 Attempt any three of the following.

(4 Marks each)

- i) Find the sum of each of the geometric series $-2, \frac{1}{2}, \frac{-1}{8}, \dots, \frac{-1}{37268}$.
- ii) Let $A = \{-1, 2, 5, 6, 8\}$ and $B = \{1, -2, 5, 7, 8, 10\}$, Find $A \cap B$ and $B - A$.
- iii) If the sum of four consecutive terms of an Arithmetic Progression is 4 and their product is 385 then find these four consecutive terms.
- iv) Let $A = \{a, b\}$ and $B = \{5, 6\}$, find the Cartesian product $A \times B$ and $B \times A$.

Q.3 Attempt any two of the following.

(6 Marks each)

- i) Let $A = \begin{bmatrix} 2 & 2 \\ 3 & 4 \end{bmatrix}$, $I = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, and $B = \begin{bmatrix} -3 & 1 \\ 0 & 1 \end{bmatrix}$. Find a) $A + B$, b) $A - B$ and c) $A + I$.
- ii) How many numbers between 1 and 100 (inclusive) are divisible by 3 or 5?
- iii) Define and give examples of reflexive, transitive and symmetric binary relations.

Q.4 Attempt any two of the following.

(6 Marks each)

- i) Find the inverse of the matrix $\begin{bmatrix} 5 & 4 \\ 6 & 5 \end{bmatrix}$.
- ii) Suppose $f_1: \mathbb{R} \rightarrow \mathbb{R}$ defined as $f_1(x) = x^2 + 1$ and $f_2: \mathbb{R} \rightarrow \mathbb{R}$ defined as $f_2(x) = 2x$ then find the composition functions $f_1 \circ f_2$ and $f_2 \circ f_1$.
- iii) With the help of Venn Diagram prove that $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$.

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) a) Find the determinant of A and determinant of B, where $A = \begin{bmatrix} 1 & -2 & 3 \\ 0 & 0 & 3 \\ 1 & 5 & 4 \end{bmatrix}$ and

$$B = \begin{bmatrix} 1 & 3 & 1 \\ -3 & 1 & -3 \\ 1 & 3 & 1 \end{bmatrix}.$$

- b) Define Arithmetic mean (A.M.) and Geometric Mean (G.M.).
Also find relation between A.M. and G.M.

- ii) a) Prove by using the principle of mathematical induction that

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

- b) Verify that matrix multiplication is not commutative i.e. $AB \neq BA$ where

$$A = \begin{bmatrix} 1 & 3 \\ 2 & 2 \end{bmatrix} \text{ and } B = \begin{bmatrix} -2 & 3 \\ -2 & 1 \end{bmatrix}.$$

Total No. of Questions: 3

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: SYBBA (C.A)
Semester - IV
BCA-252-MJM: Advanced PHP
(Fresh) (NEP 2023 Pattern)

Time: 01.00 Hours

(No. of Credits 02)

Max. Marks : 30

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.

Q1. (A) Attempt each of the following**(1 Marks each)**

- (i) What is SimpleXML extension?
- (ii) Enlist types of function.
- (iii) What are the databases supported by PHP?
- (iv) What is \$_SERVER variable?

(B) Attempt each of the following**(2 Marks each)**

- (i) What is functions?
- (ii) Write a syntax and example for select statement
- (iii) Why we use \$_REQUEST []?

Q2. Attempt any four of the following**(3 Marks each)**

- (i) Write a short note on Sessions.
- (ii) Write a PHP script to create CD catalog using XML file.
- (iii) What is Array? Explain different types of PHP.
- (iv) What is self-processing form? Explain.
- (v) Write a syntax and purpose of following functions:
a) Strlen() b) strrev() c) strtoupper()
- (vi) Differentiate between \$_GET and \$_POST variables.

Q3. Attempt any two of the following

(4 Marks each)

- (i) Write a PHP program to delete record whose id is 3 on Employee table with attributes (eid, ename, city).
- (ii) Discuss the structure of an XML document
- (iii) Define \$_COOKIE and explain its use in PHP.
- (iv) Explain Built in functions for Array.

Total No. of Questions: 5

Total No. of Pages: 02

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: S.Y. BBA (C. A.)
(Semester –IV)
BCA2401: Advanced Java Programming
Backlog (2019 Pattern)
(no. of Credits:3)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw neat diagram wherever to necessary.

Q1. A. Attempt the following.**1mark each**

- i) What is JDBC in Java?
- ii) What is use of getConnection ()?
- iii) Give syntax of loading Driver Manager.
- iv) What is Socket ?

B. Attempt the following.**2 mark each**

- i) How to set Priority of Thread?
- ii) What is Multithreading?
- iii) What is a Servlet?
- iv) What is Scriptlet tag?

Q2. Attempt any Three of the following.**4 mark each**

- i) Write a JDBC program to delete the records of employees whose names are starts with 'a' character.
- ii) Explain Thread Life Cycle with diagram.
- iii) Explain JDBC Driver in detail.
- iv) Explain Directives in JSP.

Q3. Attempt any Two of the following.**6 mark each**

- i) Write a java program which will display name and priority of current.
- ii) Explain Session tracking mechanisms with examples.
- iii) Explain Servlet Life Cycle with diagram.

Q4. Attempt any Two of the following.

6 mark each

- i) Write a java program to display IP address and name of the client Machine
- ii) Create a JSP page to accept a number from a user and display it in words
- iii) Explain RMI Architecture with a suitable diagram.

Q5. Attempt any One of the following

12 mark each

- i) Explain JDBC architecture with a program demonstrating CRUD operations.
- ii) Write Short Notes on following:
 - 1) Java Beans
 - 2) JAR and Manifest Files.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)

Affiliated to Savitribai Phule Pune University, Pune

Class: S.Y. BBA (C.A.)

(Semester-III)

BCA2304: Operating System
(2019 Pattern)

Time: 02.00 Hours

(No.of.Credit:03)

Max. Marks: 60

Instructions to the candidates: (If any)

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw the diagram whenever necessary.

Q.1 (A) Attempt each of the following**(1 Marks each)**

- i) What is OPR(Optimal Page Replacement Algorithm)?
- ii) Define MVT.
- iii) Define Segmentation.
- iv) What is Logical Memory?

(B) Attempt each of the following**(2 Marks each)**

- i) What are the different features of Linux.
- ii) Give the different functions of Memory Management.
- iii) What is multiprocessor operating system? Enlist its types.
- iv) Draw the diagram for PCB.

Q.2 Attempt any three of the following.**(4 Marks each)**

- i) What is directory? Explain the different types of directories.
- ii) What is Process Scheduler? Explain the different types of scheduler.
- iii) What is multiprocessor operating system? Explain in details.
- iv) Explain the features of Linux operating system.

Q.3 Attempt any two of the following.**(6 Marks each)**

- i) What is kernel? Explain the different types of kernel.
- ii) What is process? Explain different process state with suitable diagram.
- iii) Consider the following four process with process ID-P1, P2, P3 &P4.
The time arrival of P1-0, P2-1, P3-2 & P4-3. The burst time for the processes-6,8,10 & 12 respectively. Calculate only Completion time by FCFS scheduling algorithm.

Q.4 Attempt any two of the following**(6 Marks each)**

- i) Explain layered Linux operating system
- ii) Explain the Concept Thrashing.
- iii) Write an algorithm and shell script for "Hello World"

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

i) Find the number of Page Fault, Page Hit & also calculate Hit Ratio-Page Ratio for the following String According to: -

- a. FIFO
- b. MRU.

Consider the Page Reference String: - 1,2,3,4,2,1,5,6,2,1,3 with page frames =3

ii) Answer the following

- a. What is I/O channel? Explain the different types of I/O channel.
- b. Explain the different CPU states with suitable diagram.

Exam Seat No

Total No. of questions: 05]

[Total No. of Pages: 02

Anekant Education Society's

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati

(Empowered Autonomous)

Affiliated to Savitribai Phule Pune University, Pune.

S.Y. BBA (C.A.)

BCA2305: Business Statistics using R programming

Semester-III

Backlog (2019 pattern)

(no. of Credits:3)

Time: 2:00 Hours]

[Max.Marks:60

Instruction:

- i. All questions are compulsory
- ii. Figure to right indicate full marks

Q1. A. Attempt each of the following

1 mark each

- i) Define mode.
- ii) Define probability.
- iii) What is sampling.
- iv) Define correlation.

Q1. B. Attempt each of the following

2 mark each

- i) What is R programming?
- ii) What is statistics?
- iii) What is frequency distribution?
- iv) What is the coefficient of variation?

Q2. Attempt any Three of the following

4 mark each

- i) Write a short note on Permutation.
- ii) Write a short note on Data Frame.
- iii) From the given values find the median.

25,28,25,30,29,24,23,25,28,25

- iv) Write a R program to create a matrix taking a given vector of numbers as input and define the column and row names and Display the matrix.

Q3. Attempt any Two of the following

6 mark each

- What is Sampling? Explain its various types.
- Calculate Karl Pearson's correlation coefficient from the following data.

X	2	3	4	5	6	7	8
Y	4	7	8	9	10	14	18

- a fair coin is tossed 6 times, if getting head is a success find the probability that
 - Exactly 2 head occur
 - At least 4 heads occur.

Q4. Attempt any Two of the following

6 mark each

- Compute values of
 - 5P_3
 - ${}^{10}C_2$
 - ${}^8C_4 \times {}^5C_2$
- List types of Data structure in R programming and explain any two.
- How many arrangements can be made using all the letters of the word?
 - INDEPENDENT
 - MADAM
 - MISSISSIPPI

Q5. Attempt any One of the following

12 mark each

- Calculate Variance, standard deviation and coefficient of variation from the following data.

Class-interval	05-07	08-10	11-13	14-16	17-19	20-22
Frequency	2	3	6	5	3	1

- Draw a pie chart and display the explanation box.

- Find Quartile deviation and Coefficient of Quartile deviation

Marks	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No. of students	4	12	18	28	19	14	5

- Write an R program to create a simple horizontal bar plot of five subject's marks with colour and bar texture.

Total No. of Questions: 5

Total No. of Pages: 02

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: S.Y. BBA (C. A.)
(Semester -IV)
BCA2401: Advanced Java Programming
Backlog (2019 Pattern)
(no. of Credits:3)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw neat diagram wherever to necessary.

Q1. A. Attempt the following.

1mark each

- i) What is JDBC in Java?
- ii) What is use of getConnection ()?
- iii) Give syntax of loading Driver Manager.
- iv) What is Socket ?

B. Attempt the following.

2 mark each

- i) How to set Priority of Thread?
- ii) What is Multithreading?
- iii) What is a Servlet?
- iv) What is Scriptlet tag?

Q2. Attempt any Three of the following.

4 mark each

- i) Write a JDBC program to delete the records of employees whose names are starts with 'a' character.
- ii) Explain Thread Life Cycle with diagram.
- iii) Explain JDBC Driver in detail.
- iv) Explain Directives in JSP.

Q3. Attempt any Two of the following.

6 mark each

- i) Write a java program which will display name and priority of current.
- ii) Explain Session tracking mechanisms with examples.
- iii) Explain Servlet Life Cycle with diagram.

Q4. Attempt any Two of the following.

6 mark each

- i) Write a java program to display IP address and name of the client Machine
- ii) Create a JSP page to accept a number from a user and display it in words
- iii) Explain RMI Architecture with a suitable diagram.

Q5. Attempt any One of the following

12 mark each

- i) Explain JDBC architecture with a program demonstrating CRUD operations.
- ii) Write Short Notes on following:
 - 1) Java Beans
 - 2) JAR and Manifest Files.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati.
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: S.Y. BBA (C. A.)
(Semester-IV)
BCA2402: Advanced Web Technologies
(Backlog)(2019 pattern)

Time: 02.00 Hours

(No.of.Credit:03)

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure to right indicate full marks.
- iii. Draw neat Diagram where ever to necessary.

Q. 1 (A) Attempt each of the following**(1 Marks each)**

- i) Which are the Databases supported by PHP?
- ii) What is Array?
- iii) What is WordPress?
- iv) What is Web Services?

(B) Attempt each of the following**(2 Marks each)**

- i) What is AJAX?
- ii) Name any two parameter of MySQL_connect().
- iii) Define strcmp().
- iv) Explain datatypes in PHP.

Q.2 Write short notes on any three of the following.**(4 Marks each):**

- i) Cookies.
- ii) AJAX-PHP Framework.
- iii) XML Document Structure.
- iv) Sorting in Array

Q.3 Attempt any two of the following.**(6 Marks each)**

- i) Explain different types of PHP functions with examples.
- ii) Describe GET, POST, REQUEST methods with example.
- iii) Write a PHP program to accept two String from user and check whether entered strings are matching or not

Q.4 Attempt any two of the following.

(6 Marks each)

- i) Write a simple PHP program which implements Ajax for addition of two numbers.
- ii) Explain different types of string in PHP.
- iii) What is sticky form? Explain with example.

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) a) Write a PHP program to implement Create, Read, Update and Display operations on student table with attributes (sid, sname, address, age). (Use Radio Buttons)
- b) Explain Indexed and Associative arrays in PHP.
- ii) a) Write PHP script to create a CD catalog using XML file. (Using Ajax).
- b) Explain any five String function with syntax and example.

Exam. Seat No.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune

Class: S.Y. BBA (C. A.)
Semester-IV
BCA2403: Mathematical Foundation of Data Science
Backlog (2019 Pattern)

Time: 02.00 Hours

(No.of.Credit:03)

Max. Marks: 60

Instructions to the candidates:

- i. All questions are compulsory.
- ii. Figure right indicate full marks

Q.1 (A) Attempt each of the following

(1 Marks each)

- i) Define Square matrix.
- ii) Define Summation.
- iii) What is Approximation?
- iv) List the types of Matrices.

(B) Attempt each of the following

(2 Marks each)

- i) Define Transpose Matrix.
- ii) Find Integration of $\int \sqrt{x} dx$.
- iii) What is Differentiation? List out its types.
- iv) What is Null matrix? Give its example.

Q.2 Attempt any three of the following.

(4 Marks each)

- i) Find Determinant of

$$A = \begin{bmatrix} 2 & -3 \\ 3 & 4 \end{bmatrix}$$

- ii) Write a Short Note on Gradient Descent.
- iii) What is Singular Matrix and Non- Singular Matrix?
- iv) Find Second derivative of x^3 .

Q.3 Attempt any two of the following.

(6 Marks each)

- i) Explain One-to-One function and Onto Function in detail.
- ii) Find Approximate value of $\sqrt{36.6}$
- iii) Evaluate Determinant of following and write transpose as well.

$$A = \begin{bmatrix} 2 & 1 & 3 \\ 3 & 1 & 2 \\ 1 & 2 & 3 \end{bmatrix}$$

Q.4 Attempt any two of the following.

(6 Marks each)

- i) Write a short note on Mathematical induction.
- ii) Differentiate the function $(x^2 - 5)(x^3 - 2x + 3)$.
- iii) Explain different types of matrices.

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) Prove that $3^{2n} + 7$ is divisible by 8 $\forall n \in \mathbb{N}$ by using mathematical induction
- ii) Obtain the inverse of the following Matrix by Adjoint Method.

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 0 & 4 & 5 \\ 1 & 0 & 6 \end{bmatrix}$$

Exam. Seat No.

Total No. of Questions: 5

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class: S.Y. BBA (C.A.)

(Semester-IV)
BCA2404: Software Testing and Quality Assurance
(Backlog) (2019 Pattern)
(No.of.Credit:03)

Time: 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- i. *All questions are compulsory.*
- ii. *Figure to right indicate full marks.*
- iii. *Draw the diagram whenever necessary.*

Q.1 (A) Attempt each of the following

(1 Marks each)

- i) What is Defect?
- ii) Define Beta Testing.
- iii) What is Test Plan?
- iv) Define Black Box Testing.

(B) Attempt each of the following

(2 Marks each)

- i) Define Software Testing.
- ii) What is Gray Box Testing?
- iii) Define Regression Testing.
- iv) What is Quality Control?

Q.2 Write short notes on any three of the following.

(4 Marks each)

- i) White Box Testing and its Techniques.
- ii) Types of Performance Testing.
- iii) GUI Testing and its Types.
- iv) Software Testing Principles

Q.3 Attempt any two of the following.

(6 Marks each)

- i) What is Debugging? Describe Steps involved in Debugging process
- ii) What is Integration Testing? What are the different strategies used in Integration testing
- iii) Explain the importance of testing Documentation and help facilities.

Q.4

Attempt any two of the following

- i) What is Load Runner? Explain the key components of Load Runner.
- ii) Why there is need of Website testing? What are the activities involved in Website Testing?
- iii) Differentiate between Validation and Verification

(6 Marks ea

Q.5

Attempt any one of the following (Long answer questions).

- i)
 - a) What is SQA? Enlist the elements of SQA.
 - b) Explain Strategies of Regression Testing?
- ii) Explain Agile Testing in detail. How does it differ from traditional Testing Methodologies.

(12 Marks ea

Total No. of Questions: 5

Exam. Seat No.

Total No. of Pages: 2

Anekant Education Society's
Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)
Affiliated to Savitribai Phule Pune University, Pune
Class : SYBBA(CA)
Semester IV
BCA2405 Networking
(Backlog) (2019 Pattern)
(No.of.Credit:03)

Time : 02.00 Hours

Max. Marks: 60

Instructions to the candidates:

- i. All Questions are Compulsory.
- ii. Figure to the right indicates full marks.
- iii. Draw the diagram whenever necessary.

Q.1 (A) Attempt each of the following

i) Define LAN.

ii) What is HTTP?

iii) What is infrared?

iv) What is HUB?

(1 Marks each)

(B) Attempt each of the following

i) What is encryption?

ii) Explain Router.

iii) Define Ethernet.

iv) What is Skaywave Propagation?

(2 Marks each)

Q.2 Attempt any three of the following.

i) Explain types of twisted pair cables.

ii) Compare ISO/OSI reference model and TCP/IP.

iii) Write a short note on protocol and standards.

iv) Explain substitution technique.

(4 Marks each)

Q.3 Attempt any two of the following.

i) What is attack? What are the types of attack.

ii) Write a short note on Repeater

iii) Explain Bluetooth in details.

(6 Marks each)

Q.4 Attempt any two of the following.

(6 Marks each)

- i) Explain propagation method.
- ii) Explain TCP/IP protocol in details.
- iii) Explain Server Based and peer-to-peer LAN

Q.5 Attempt any one of the following (Long answer questions).

(12 Marks each)

- i) Define Computer Network. Explain Goal and types of Networks in detail.
- ii) Write a short note on:
 - a. Optic fiber cable
 - b. Twisted pair cable
 - c. Topology

[Total No. of Question: 3]

Seat No

Anekant Education Society's

[Total No. of Pages- 1]

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati
(Empowered Autonomous)

Affiliated to SavitribaiPhule, Pune University

Class- S..Y. B.A.,B.COM.,B.Sc.,B.Sc.(CS) , B.B.A. (CA), B.Voc.

MARATHI (मराठी) (Semester-IV)

Sub Code – MAR- 281-AEC- लेखन निर्मिती व परीक्षण कौशल्ये
(NEP 2023 Pattern)

Time : 1. Hours

(No. of Credits 2)

Max Marks : 30

सूचना- १) सर्वप्रश्न सोडविणे आवश्यक आहे.
२) उजवीकडील अंक प्रश्नांचे पूर्ण गुण दर्शवितात.

प्र.१ला. खालील प्रश्न सोडवा.

(४)

अ) खालील प्रश्नांची उत्तरे एका वाक्यात लिहा.

१. निबंधाची व्याख्या लिहा.
२. 'नटसम्राट', हे नाटक कोणी लिहिले?
३. ग्रंथपरीक्षणाची व्याख्या लिहा.
४. वर्णनात्मक निबंधाचा कोणताही एक विषय सांगा ?

ब) खालील प्रश्नांची उत्तरे २० शब्दांत लिहा.

(६)

१. तुम्हांला माहित असलेल्या कोणत्याही दोन नाटकाची नावे लिहा .
२. मराठी नाटकाचे जनक कोणास म्हटले जाते ?
३. ग्रंथपरीक्षणाची कोणतेही दोन माध्यमे लिहा .

प्र.२ रा. खालील प्रश्नांची उत्तरे ५० शब्दांत लिहा. (कोणतेही चार)

(१२)

१. समीक्षणात्मक लेखन म्हणजे काय? स्पष्ट करा.
२. निबंधाची संकल्पना स्पष्ट करा.
३. नाटकाची संहिता कशास म्हटले जाते?
४. ग्रंथपरीक्षकाचे गुण लिहा .
५. नाटकाचे स्वरूप थोडक्यात स्पष्ट करा .
६. प्रायोगिक नाटकाविषयी माहिती लिहा.

प्र.३रा. खालील प्रश्नांची उत्तरे १५० शब्दांत लिहा. (कोणतेही दोन)

(८)

१. 'ग्रंथपरीक्षण एक कला आहे.' याविषयी चर्चा करा.
२. तुम्ही वाचलेल्या कोणत्याही एका ग्रंथाचे ग्रंथपरीक्षण लिहा.
३. पुढीलपैकी कोणत्याही एका विषयावर निबंध लिहा.
१. ग्रंथ हेच गुरु २. मी महाविद्यालयाचा प्राचार्य झालो तर...?
४. तुम्ही वाचलेल्या कोणत्याही एका नाटकाचे परीक्षण लिहा.
