GOVERNMENT POLYTECHNIC, NASHIK
(An Academically Autonomous Institute of Government of Maharashtra)

Winter Examination 2023, 15ᵗʰ Dec. Friday, 02.00 p.m. to 05.00 p.m.

Diploma Programme in Computer Technology / Information Technology

Course: PHP Programming	Code	: 21534
Duration: 03 Hr.	Marks	: 80

Instructions:
1. All Questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Use of mathematical tables, steam tables, non-programmable electronic pocket calculator and Mollier's chart is permissible.
4. Figures to the right indicate full marks. CO means Course Outcome
5. Assume suitable additional data if necessary.
6. Communication instruments such as pager, mobile etc. are not allowed in the exam hall.

Q. 1   Attempt any FIVE (20)

CO5 a) State i) Database ii) Abstraction iii) DDL iv) DML
CO1 b) List any four i) Bitwise operator ii) Logical operator.
CO4 c) Develop and explain program for any one directory operations.
CO2 d) Explain cohesion and Coupling.
CO5 e) Design a php program to retrieve all the records from a database.(Consider suitable database)
CO3 f) Define and explain GET and REQUEST methods.
CO1 g) Explain Indexed and Associative arrays with suitable example.

Q. 2   Attempt any THREE (12)

CO1 a) List out the characteristics of PHP.
CO2 b) Write a program in PHP to demonstrate the use of constructor.
CO5 c) Write a program to connect MySQL database with PHP.
CO2 d) Explain i) Interface ii) $_GET[].
,3

Q. 3   Attempt any THREE (12)

CO2 a) State i) Class ii) Polymorphism iii) Encapsulation iv) Inheritance.
CO4 b) Write a program using fgets() and fgetc() methods.
CO1 c) Explain for loop and develop a program to print a one dimensional array.
CO1 d) Explain while and do.. while Loop statements with an example.

Q. 4   Attempt any THREE (12)

CO5 a) Explain Inserting and Retrieving data in the database.
CO1 b) List data types in PHP and define i) Constant ii) Variable.
CO3 c) List any four Regular Expression function with example.
CO4 d) Write a PHP script for uploading a file to the server.

Q. 5   Attempt any THREE (12)

CO5 a) Develop a program to Update and Delete operations on table data.
CO1 b) Differentiate between PHP and JSP.
CO4 c) List different modes of file opening in PHP?
CO3 d) List and explain types of Regular expressions.

Q. 6   Attempt any THREE (12)

CO1 a) State i) Literals ii) Function iii) Tuple iv) Metadata
,5
CO3 b) Create customer form in HTML like customer name, address, mobile no, date of birth using different form of input elements & display user inserted values in using PHP.
CO4 c) Explain the PHP fopen() function and PHP fclose() functions.
CO2 d) List characteristics of OOP.

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Winter Examination 2023, 13th Dec. Wednesday, 02.00 p.m. to 05 00 p.m.

Diploma Programme in Computer Technology / Information Technology

Course: Software Testing	Code : 21533
Duration: 03 Hr.	Marks : 80

Instructions:

1. All Questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Use of mathematical tables, steam tables, non-programmable electronic pocket calculator and Mollier's chart is permissible.
4. Figures to the right indicate full marks. CO means Course Outcome
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(20)

Q. 1   Attempt any FIVE

CO5	a)	Explain test case organization and tracking.
CO2	b)	Explain Low level specification test techniques in static black box testing.
CO3	c)	Describe data declaration errors in static white box testing with suitable examples.
CO4	d)	Enlist Different Testing approaches and describe any one in detail.
CO5	e)	State the need for Automated Testing tools.
CO1	f)	Define software testing. List all skills of software tester.
CO2	g)	Define the terms test–to-pass and test-to-fail in dynamic black box testing.

(12)

Q. 2   Attempt any THREE

CO1	a)	Discuss software Errors in Disney Lion Kings case study.
CO2	b)	Explain Data testing with Boundary and Sub-Boundary conditions of dynamic black box testing.
CO4	c)	Differentiate between alpha and beta testing. (any four points)
CO3	d)	Explain code coverage in dynamic white box testing with example.

(12)

Q. 3   Attempt any THREE

CO5	a)	Explain Bug's Life cycle with suitable diagram.
CO2	b)	Differentiate between white box and black box testing. (any four points)
CO3	c)	Define formal reviews and its types.
CO1	d)	Differentiate between verification and validation.

(12)

Q. 4   Attempt any THREE

CO1	a)	Define precision and accuracy with respect to software testing.
CO2	b)	State the use of state testing to check fail states.
CO2	c)	Explain other Black Box testing techniques with example.
CO3	d)	Differentiate between static and dynamic testing.

(12)

Q. 5   Attempt any THREE

CO5	a)	Design test cases for Admission form of your institute.
CO4	b)	State the goals of test planning with suitable example.
CO5	c)	Enlist factors considered for selecting a testing tool for test automation.
CO4	d)	Explain integration testing with its approaches.

(12)

Q. 6   Attempt any THREE

CO4	a)	Design test cases for any e-commerce website.
CO4	b)	Explain Regression Testing with example.
CO5	c)	Design test cases for hostel admission form of your institute.
CO5	d)	List and explain random testing and monkey testing tools.

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Winter Examination 2023, 08th Dec Friday, 02 00 p.m. to 05 00 p.m.

Diploma Programme in Computer Technology / Information Technology

Course: Advanced Java

Duration: 03 Hr.

Code : 21526

Marks : 80

Instructions:
1. All Questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Use of mathematical tables, steam tables, non-programmable electronic pocket calculator and Mollier's chart is permissible.
4. Figures to the right indicate full marks. CO means Course Outcome
5. Assume suitable additional data if necessary.
6. Communication instruments such as pager, mobile etc. are not allowed in the exam hall.

(20)

Q. 1   Attempt any FIVE

CO1 a) Differentiate between AWT and Swing.

CO2 b) List two event handling mechanisms and define the following- i)Event ii)Event Sources iii)Event Listeners

CO2 c) Demonstrate the use of Action Event class with suitable example.

CO3 d) Define the Following-i) Socket ii) IP iii) TCP iv) UDP.

CO4 e) List and explain common JDBC components.

CO5 f) Differentiate between doget() and dopost() methods.

CO5 g) Explain lifecycle of JSP.

(12)

Q. 2   Attempt any THREE

CO1 a) Differentiate between Frame and Panel.

CO2 b) Write a program for TextListener Interface.

CO3 c) Define Inet Address and Enlist Factory methods of InetAddress.Also explain any two Factory methods.

CO4 d) Draw and explain JDBC two tier and three tier models.

(12)

Q. 3   Attempt any THREE

CO1 a) Enlist different Layouts and explain any one with example.

CO2 b) Develop a program using ActionListener Interface.

CO3 c) Write a Java program to demonstrate TCP/IP communication between client and server.

CO4 d) Explain JDBC CRUD operations.

(12)

Q. 4   Attempt any THREE

CO1 a) Write a simple AWT program for designing a student course registration form.

CO2 b) Explain the use of Adapter class with suitable example.

CO3 c) State secure coding guidelines for Java.

CO5 d) Illustrate the concept of Session Tracking.

(12)

Q. 5   Attempt any THREE

CO2 a) Demonstrate the use of Mouse Event class with suitable example.

CO3 b) Differentiate between TCP and UDP.

CO4 c) Write an Application program to make connectivity with database, insert and view data from database using JDBC API.

CO5 d) Write a program to demonstrate the concept of cookies.

(12)

Q. 6   Attempt any THREE

CO1 a) Write a program to implement Menubar and Menus.

CO3 b) Explain methods of URLConnection.

CO4 c) List and explain types of JDBC Drivers.

CO5 d) Write a simple JSP program to print Hello "Username".Here Username should be entered by user as input and after clicking on submit button, Hello "Username" should be displayed.

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GOVERNMENT POLYTECHNIC, NASHIK
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Winter Examination 2023, 11ᵗʰ Dec. Monday, 02.00 p.m. to 05.00 p.m.

Diploma Programme in Computer Technology / Information Technology

Course: Free and Open Source Software	Code : 21527
Duration: 03 Hr.	Marks : 80

Instructions:

1. All Questions are compulsory.
2. Illustrate your answers with neat sketches wherever necessary.
3. Use of mathematical tables, steam tables, non-programmable electronic pocket calculator and Mollier's chart is permissible.
4. Figures to the right indicate full marks. CO means Course Outcome
5. Assume suitable additional data if necessary.
6. Communication instruments such as pager, mobile etc. are not allowed in the exam hall.

Q. 1   Attempt any FIVE (20)

- CO1   a)   Define Linux Kernel and list benefits of using Linux based Kernel.
- CO4   b)   Define data, DBMS, tuple, metadata.
- CO2   c)   List any process process related commands in Linux.
- CO2   d)   Define file and inode. Explain features of Linux File system.
- CO3   e)   Explain Service in Computer system.
- CO4   f)   Explain uses of MySQL.
- CO5   g)   Explain the use of PHP.

Q. 2   Attempt any THREE (12)

- CO1   a)   Explain any four Linux Distributions.
- CO2   b)   Explain various commands used in linux for checking out the directories taking more disk space.
- CO2   c)   Design shell script for arranging numbers in ascending order.
- CO5   d)   Explain main characteristics of PHP variable.

Q. 3   Attempt any THREE (12)

- CO2   a)   Explain Linux Security Model.
- CO2   b)   Explain different file systems in Linux.
- CO3   c)   Explain the steps to setup Apache.
- CO4   d)   State MySQL queries for –i) Creating Database ii) Create Table iii) Insert Data into table iv) View table data

Q. 4   Attempt any THREE (12)

- CO2   a)   Develop a shell script to reverse a given number.
- CO3   b)   Explain the steps to setup user and Group in Apache.
- CO4   c)   Explain any four String Functions.
- CO5   d)   Explain sessions and cookies in PHP.

Q. 5   Attempt any THREE (12)

- CO3   a)   Differentiate between Apache Tomcat server and Apache web server.
- CO4   b)   Explain steps for loading and dumping a database.
- CO5   c)   List steps to create database using MySQL and PHP.
- CO5   d)   Explain steps of executing PHP script from command line.

Q. 6   Attempt any THREE (12)

- CO4   a)   Explain USE command.
- CO5   b)   Explain types of array in PHP.
- CO5   c)   Develop a program to encrypt a password using PHP.
- CO5   d)   Design a PHP code for using function.

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