A10.2-R5 : FULL STACK WEB DEVELOPMENT USING MVC FRAMEWORK

DURATION : 03 Hours   **MAXIMUM MARKS : 100**

OMR Sheet No. : ☐☐☐☐☐

Roll No. : ☐☐☐☐☐☐   **Answer Sheet No. :** ☐☐☐☐☐☐

Name of Candidate : _____ ; **Signature of Candidate :** _____

INSTRUCTIONS FOR CANDIDATES :

- Carefully read the instructions given on Question Paper, OMR Sheet and Answer Sheet.

- Question Paper is in English language. Candidate has to answer in English language only.

- There are **TWO PARTS** in this Module/Paper. **PART ONE** contains **FOUR** questions and **PART TWO** contains **FIVE** questions.

- **PART ONE** is Objective type and carries **40** Marks. **PART TWO** is Subjective type and carries **60** Marks.

- **PART ONE** is to be answered in the **OMR ANSWER SHEET** only, supplied with the question paper, as per the instructions contained therein. **PART ONE** is **NOT** to be answered in the answer book for **PART TWO**.

- Maximum time allotted for **PART ONE** is **ONE HOUR**. Answer book for **PART TWO** will be supplied at the table when the Answer Sheet for **PART ONE** is returned. However, Candidates who complete **PART ONE** earlier than one hour, can collect the answer book for **PART TWO** immediately after handing over the Answer Sheet for **PART ONE** to the Invigilator.

- **Candidate cannot leave the examination hall/room without signing on the attendance sheet and handing over his/her Answer Sheet to the invigilator. Failing in doing so, will amount to disqualification of Candidate in this Module/Paper.**

- After receiving the instruction to open the booklet and before answering the questions, the candidate should ensure that the Question Booklet is complete in all respects.

DO NOT OPEN THE QUESTION BOOKLET UNTIL YOU ARE TOLD TO DO SO.

PART - ONE

(Answer all questions; each question carries ONE mark)

1. **Each question below gives a multiple choice of answers. Choose the most appropriate one and enter in the "OMR" answer sheet supplied with the question paper, following the instructions therein.** (1x10)

1.1 In the model-view-controller (MVC) architecture, the model defines the _____.

(A) Interface Layer

(B) Data-access Layer

(C) Domain Object Layer

(D) Business-logic Layer

1.2 Which function is executed before every action in the controller ?

(A) beforeFilter

(B) afterFilter

(C) firstFilter

(D) initialFilter

1.3 PHP frameworks typically follow the _____ design pattern.

(A) Object-Relational Mapping

(B) Object Random Map

(C) Model View Controller

(D) Command Link Interface

1.4 Which of the following is **not** components of CakePHP ?

(A) Authentication

(B) Request handling

(C) Scaffolding

(D) Testing

1.5 PHP stands for _____.

(A) Hypertext Preprocessor

(B) Pretext Hypertext Preprocessor

(C) Personal Home Processor

(D) None of the above

1.6 Which of the following variable name is invalid ?

(A) $myVar

(B) $my_Var

(C) $my-var

(D) All of the above

1.7 What is the name of Cake's database configuration file ?

(A) database.php.default

(B) database.php

(C) databaseconfig.php

(D) default.database.php

1.8 Which method scope prevents a method from being overridden by a subclass ?

(A) Abstract

(B) Protected

(C) Final

(D) Static

1.9 Which folder holds the Cake console executables ?

(A) config

(B) bin

(C) logs

(D) plugins

1.10 Which methods **cannot** be accessed with routing ?

(A) Public

(B) Private

(C) Protected

(D) Both (B) and (C)

2. **Each statement below is either TRUE or FALSE. Choose the most appropriate one and enter your choice in the "OMR" answer sheet supplied with the question paper, following the instructions therein. (1x10)**

2.1 Scaffolding in CakePHP also allows developers to define how objects are related to each other, and to create and break those links.

2.2 "+" operator is used for concatenation in PHP.

2.3 The practice of creating objects based on predefined classes is often referred to as object instantiation.

2.4 Friendly property scope is supported by PHP.

2.5 CakePHP template files have a default extension of .ctp.

2.6 PHP recognizes constructors by the name function __construct().

2.7 Inherit keyword is used to inherit subclass into a superclass in PHP.

2.8 A controller is responsible for controlling the way that a user interacts with an MVC application.

2.9 CakeRequest is the default request object used in CakePHP.

2.10 Displaying query results vertically is **not** possible in MySQL.

3. **Match words and phrases in column X with the closest related meaning/word(s)/phrase(s) in column Y. Enter your selection in the "OMR" answer sheet supplied with the question paper, following the instructions therein.** (1x10)

	X		Y
3.1	Functions which display information about PHP and its configuration	A.	for ranges.
3.2	Built-in function in PHP that adds a value to the end of an array	B.	action
3.3	Stored program associated with a schedule is	C.	array_push()
3.4	The SQL keyword BETWEEN is used	D.	View
3.5	Public method in a controller which is accessible from URL is	E.	Int
3.6	Component responsible for generating the specific output required for request	F.	GROUP BY
3.7	Numeric Data type has the largest range	G.	phpinfo()
3.8	Object in CakePHP allows introspection of an incoming request	H.	Foreign Key
3.9	Field in one table which refers the PRIMARY KEY in another table is	I.	Event
3.10	Command is used to group the result set in SQL	J.	Tinyint
		K.	php_info()
		L.	into_array()
		M.	Request

4. Each statement below has a blank space to fit one of the word(s) or phrase(s) in the list below. Enter your choice in the "OMR" answer sheet supplied with the question paper, following the instructions therein. (1x10)

A.	Object-Relational Mapping	B.	Object Random Map	C.	$this
D.	Controller	E.	Helpers and Cells	F.	Indexes
G.	redirect()	H.	afterFilter()	I.	
J.		K.	<option>	L.	header()
M.	uniqueid()				

4.1 ORM stands for _____.

4.2 _____ keyword is used to refer to properties or methods within the class itself.

4.3 The view uses _____ to generate the response body and headers.

4.4 _____ function helps in navigation to another php page.

4.5 _____ function is called after every controller action and after rendering is done.

4.6 _____ tag is used to create ordered list in HTML.

4.7 _____ tag is used to define options in a drop-down selection list.

4.8 _____ are used to find rows with specific column values quickly.

4.9 _____ PHP function is used to generate unique id.

4.10 The term in the MVC architecture that receives event is called _____.

PART - TWO

(Answer any FOUR questions)

5. (a) Explain the concept of caching in CakePHP.

(b) Explain various Middleware available in CakePHP.

(c) What is CakePHP ? Which features attracts its Uses ? **(5+5+5)**

6. (a) Explain MVC architecture in detail.

(b) Explain various types of arrays available in PHP. **(7+8)**

7. (a) Explain various PHP access modifiers with suitable example.

(b) Explain the concept of abstract class in PHP with example.

(c) What is SQL Injection ? What are some common tools used by hackers when attempting to execute a SQL injection attack ? **(5+5+5)**

8. (a) Explain various ways of defining validation rules in CakePHP models.

(b) What is session in CakePHP ? How is it used in CakePHP ? **(7+8)**

9. (a) How to create user defined functions in PHP ? Also, explain the concept of default\argument value with functions.

(b) Explain the advantages and disadvantages of using MySQL.

(c) Differentiate between primary key and foreign key with suitable example. **(5+5+5)**

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