Source book
For
Certificate Course in Advanced Web Technology

Source Book for Certificate Course in Advanced Web Technology **Batch:**

1. **Eligibility:** Any Engineering /Science graduate with mathematics up to 10+2 level

2. **Course Pre-requisites:** Sound knowledge of Computing Fundamentals and Fundamentals of Programming.

3. **Course Focus:** The objective of this course is to provide the student with an expertise in Website development.

4. **Teaching Schema:**

Sl. No.	Modules	Hours
1	Computer & Programming Concepts	40
2	Web Programming – I (HTML , CSS, Ajax)	60
3	Database Concepts	20
4	Web Programming – II (PHP, Java scripts)	80
5	Internet Terminologies	20
6	Management Development Program	60
7	Project	40
	Total	**320**

5. **Suggested Schedule**

Week	Teaching Sessions & Academic Activity
1	Computer & Programming Concepts (20/40)
2	Computer & Programming Concepts (20/40)
3	Web Programming – I (HTML , CSS, Ajax) (20/60)
4	Web Programming – I (HTML , CSS, Ajax) (20/60)
5	Web Programming – I (HTML , CSS, Ajax) (20/60)
6	Database Concepts (20/20)
7	Web Programming – II (PHP, Java scripts) (20/80)
8	Web Programming – II (PHP, Java scripts) (20/80)
9	Web Programming – II (PHP, Java scripts) (20/80)
10	Web Programming – II (PHP, Java scripts) (20/80)
11	Internet Terminologies (20/20)
12	Management Development Program (20/60)
13	Management Development Program (20/60)
14	Management Development Program (20/60)
15	Project (20/20)
16	Project (20/20)
17	1st Day – Exam, Two Days – Project Evaluation, 5th Day – Re-exam

6. **Session wise Breakup**
Note: Each single session is of two hours duration for all subjects mentioned below.

Fundamental of Computing (20 Theory + 20 Lab Hrs)

Session 1:

- Computer Fundamental: Uses of Computer, Hardware, Accessories,
- Interfaces and their functions, Computer hardware connectivity
- Primary and Secondary storage
- Input-output devices
- Software, types of software, Operating Systems
- Software used in Academic departments and other area.
- Computer language, Different types of Programming Language

Session 2:

- Operating System (Introduction, The Need of Operating System, Functions of Operating System User Interface)
- What are CUI (Command User Interface) and GUI (Graphics User Interface)?
- Data communications and computer networking
- Introduction to windows operating systems
- The desktop, The window, application window, document window, Dialog Window
- The Icons, Explore Your Computer, The Start Button and Taskbar

Session 3:

- My Computer, Windows Explorer, Starting and Closing Programs,
- Managing File and Folders Creating Folders, Finding Files and Folders,
- Opening Files and Folders, Renaming Files and Folders
- To Move or Copy a File or Folder, To copy a File to Floppy Disk,
- To Delete a File or Folder
- Creating Shortcuts, Using Clipboard

Session 4:

- Shutting Down the Computer
- Installing Operating System
- Performing a New Installation for Windows
- Installing a Software other than OS
- Setting up a printer
- Uninstalling software

Session 5:

- Operating System
- Types of operating system : Time sharing, Distributed, Network, Real time
- Functions of operating system
- Memory Management
- Processor Management
- Device Management
- File Management
- Security

Session 6:

- Programming concepts

- Introduction
- Program Structure
- Variable Declaration
- The Boolean Operators
- Comparison Operators
- Combining Boolean and Comparison Operators
- Conditional Statements (IF..THEN..ELSE)
- Iterative Constructs (Loops)

Session 7:

- Algorithm
- Introduction to Algorithms
- The Definition of an Algorithm
- Sorting
- Searching

Session 8:

- Flow charts
- History of Flowcharts
- Flowchart Symbols Meaning
- How to Draw a Flowchart
- Common Mistakes Made when Drawing Flowcharts

Session 9 and 10:

- Introduction to loops, functions
- Iterative Constructs (Loops)
- for, do…while, while, break and continue
- Introduction to functions
- Difference between function and equation

Lab Assignments:

- View the contents of a directory: A directory may contain visible and invisible files with different file permissions.
- Checking the integrity of Downloaded/Transferred Packages
- Converting and copying a file
- Install, Update and maintain Packages and Operating system
- Uncompressing a file
- See current date, time and calendar
- Print contents of a file
- Copy and Move
- See the working directory for easy navigation
- Change the working directory
- Finding a file in a given directory
- See the current running processes
- Write algorithm, loops and functions for various programs.
- Write algorithm for the following :
  a) to check whether an entered number is odd / even.
  b) to calculate sum of three numbers.
- Draw a flowchart for the following :

a) to find greater and smaller number from given two numbers.
b) to calculate sum of first 10 odd numbers.

- 3 Write short notes on the following :
  a) C Variables b) C data types
- Accept principal amount, rate of interest, and duration from the user. Display Interest Amount and Total Amount (Principal + Interest).
- Accept the salary of an employee from the user. Calculate the gross salary on the
- following basis:

Basic	HRA	DA .
1 - 4000	10%	50%
4001 - 8000	20%	60%
8001 - 12000	25%	70%
12000 and above	30%	80%

Accept any number from the user. Display whether the number is divisible by 100 or not.
Accept a month in digit from the user. Display the month in words. If number is not between 1 and 12 display message “Invalid Month”. (Use ‘switch’)

- Display all prime numbers between 50 and 150.
- Write a program to print the following pattern:

a)
```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

b)
```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

- Write a program to swap the values of two numbers. Do this using call by reference method of function.
- Write a program to accept 10 values in an integer array. Display the number of odd, even, and negative numbers.
- Accept any two strings from the user. Display whether both the strings are equal or not. (do not use standard functions.)

Web Programming –I (HTML, CSS, Ajax) (30 Theory + 30 Lab Hrs)

Session 1 & 2: HTML

Brief history of the Internet

- How the internet works
- Internet protocol; HTTP protocol; Domain names; Domain Names Service Servers
- Web servers; IIS; Apache server
  - Introduction to basic HTML Aligning the Headings
  - Anchor Tag
  - Paragraph
  - Images and Pictures
  - Tables

Session 3 & 4: HTML (Cont…)

- Framesets
  - New features in HTML5
  - New element
  - New attribute

- Link relations
- Microdata
- ARIA accessibility
- Multimedia
- 2D and 3D drawing Support

Session 5 & 6: HTML (Cont…)

- Forms
- HTML Controls
  - INPUT
  - Text Area
  - Radio Button
  - Check Box
  - Dropdown
  - List box
  - Submit button
  - Set button
  - Button

Session 7 & 8: CSS

- CSS3
- CSS3 Introduction
- CSS3 Borders
- CSS3 Backgrounds
- CSS3 Gradients
- CSS3 Shadows
- CSS3 Text
- CSS3 Fonts

Session 9 & 10:

- CSS3 2D Transforms
- CSS3 3D Transforms
- CSS3 Transitions
- CSS3 Animations
- CSS3 Multiple Columns
- CSS3 User Interface
- CSS3 Box Sizing

Session 11 & 12:

- Introduction to Ajax
- Ajax using HTML, CSS, JavaScript and DOM
- XMLHttpRequest
- Ajax Architecture
- Introduction to the JavaScript Object Notation (JSON)

Session 13 & 14:

- Creating a windows web services
- Web services and Ajax
- JPSpan
- DWR

Session 15:

- Ajax using HTML, CSS

Assignment – Lab:

- Create your bio-data in an HTML Page. Divide it into following sections – Personal information, Family Background, Academic Qualifications, and Experience. Now divide a HTML page into three frames as upper, left and right (main) frames. Write a Heading in the upper frame and put the bio-data sections links in the left frame and on click the section links the respective detail information should be displayed into the right main frame.
- Write a CSS rule that changes the color of all the elements with attribute CLASS =”Green-Move” to green and shift them down 25 pixels and right 15 pixels.
- Create a form to submit a resume
- A Login and Registration system using Ajax

Database Concepts (10 Theory + 10 Lab Hrs)

Session 1:

- Introduction to DBMS – What is DBMS, Its need
- Areas where DBMS are used
- Types of DBMS:
- Codd’s 12 rules for a Relational Database (conclusion)
- Need for Normalization.

Session 2:

- Various normalization forms1st normal form, 2nd normal form
- 3rd normal form,
- Introduction to 4th, BCNF, etc
- Need for Denormalization

Session 3 & 4 & 5:

- DDL Commands
- DML & DCL Commands

Session 6 and 7:

- Inbuilt Functions
- Grouping Things Together (Group By, Having Clause)
- Set Operators (UNION, UNION ALL, INTERSECT, MINUS)

Session 8 & 9:

- Subqueries
- Joins

Session 10:

- Indexes and Views

Assignment – Lab:

- SQL Practice Questions:-
  - Correlated Queries, SubQueries, Outer Joins
- Number Functions: -
  - Single Value Functions:NVL,ABS,CEIL etc
  - Group Value Functions:AVG,COUNT,MAX etc
- SQL Practice Questions:-
  - Queries containing Group By, Having Clause and set operations
  - SQL Practice Questions Including:-
  - DDL Commands: Create/Alter/Drop/Grant/Revoke
  - DML Commands: Select/Insert/Update/Delete/Truncate
  - DCL Commands: RollBack Commit

Web Programming – II (PHP, Java scripts) (40 Theory + 40 Lab Hrs)

Session 1, 2 & 3: JavaScript

- Introduction to JavaScript
- What is JavaScript?
- Advantages of using Java Script on client side over VB Script
- How to embed JavaScript in HTML Page?
- How it works?
- How to handle events?
- Variables in Java Script
  - "Var" type
  - Scope of variables
- Array in Java Script
- Using array methods (length, reverse, sort etc)

Session 4 & 5: JavaScript (Cont…)

- Creating Objects in Java Script
  - Date
  - String
  - Using Object methods
- Operators
  - Arithmetic
  - Logical
  - Bitwise
  - this
  - new
  - delete
- Control and Looping Statements

Session 6 & 7: JavaScript (Conti.)
Functions

- Common Events
  - onClick
  - onLoad
  - onMouseOver
  - onReset
  - onSubmit
- Different functions:
  - alert(), prompt(), confirm().
  - eval
  - isFinite
  - isNaN
  - parseInt and parseFloat
  - Number and String
  - escape and unescape

- DOM
- Object hierarchy in Java Script
- Working With
  - Window
  - Form
  - Document
  - Frame

Session 8:

- Introducing to jQuery
- Selecting the elements
- Bringing pages to life with jQuery

Session 9 & 10:

- JQuery Events
- Energizing pages with animations and effects
- DOM with jQuery utility functions

Session 11:

- Introduction of UI Scripting Framework

Session 12 & 13: PHP

- Basic rule of PHP
- PHP in action
- Working with text, variable and numbers
- Making decisions and repeating yourself
- Arrays
- Working with Arrays
- Looping through array
- Sorting arrays
- Functions

Session 14 & 15: PHP

- Making web forms
  - Form processing with functions
  - Validating data
  - Display default value
- Working with cookies and Sessions
  - Login and User Identification
  - Parsing, display date and times

Session 16,1 7 & 18: PHP

- Storing information with databases
  - Connection to database
  - Create a table
  - Inserting and retrieving data from database
  - Inserting and retrieving form data safely
  - MySQl with out PEAR DB
- XML
  - Generating and Parsing an XML Document
  - Advanced XML processing

- Debugging
  - Fixing parsing error and database error

Session 19 & 20: PHP

- Working with files
  - File permissions
  - Reading and writing files
  - Working with CSV Files
  - Checking for errors
- Command line PHP
- Running Shell command
- IMAP, POP3 and NNTP
- Graphics, PDF
- Sending and receiving mails

Assignment – Lab:

- Implement factorial in Java Script.
- Write a program to sort input strings.
- Display a complete date with the name of the Session and name of the month
- Validate the above resume form using the Java Script
- Write a simple program in PHP.
- Write a program in PHP that uses the increment operator (++) and combined multiplication (*=) operator to print out the numbers from 1 to 5 and powers of 2 from 2(2^1) to 32(2^5)
- Write a simple program to remembering user with cookies and Sessions
- Write a program to implement various databases queries.
- Write a program to implement various file operation.
- Write a program to implement Command line PHP
- Write a program in PHP for Sending and receiving mails

Internet Terminologies (10 Theory and 10 Lab Hrs)

Session 1 & 2: Web Services

- Creating a windows web services
- Web services and Ajax
- JPSpan
- DWR

Session 3 & 4:

- Deployments of application on Internet
- Installation of PHP application/Website in LAN
- Installation of PHP application/Website in LAN

Session 5:

- Maintenance of application
- How to do maintenance work with affecting the other web pages

Management Development Program (30 Theory + 30 Lab hrs)

Session 1:

- Introduction to communication,

- Barriers to communication, Kind of communication,
- Confidence building Non-verbal Communication

Session 2:

- Fluency and vocabulary
- Synonyms
- Antonyms
- Grammar, Noun Pronoun,
- Verb, Adjective, Preposition, Conjunction

Session 3:

- Words of Idioms & phrases
- Sentence Construction
- Pronunciation,

Session 4:

- Greeting,
- Conversation practice,
- Polite Conversation,

Session 5:

- Resume Writing,
- Covering letter,
- Email,

Session 6:

- Presentation Skill,
- What is group discussion?
- Interview skills, Mock interview

Session 7:

- Analogy, Series Completion (Number, Alphabet, Letter Series)
- Coding-Decoding for Number
- Alphabet and Letter
- Blood Relations

Session 8:

- Puzzle Test: Classification Type questions
- Compression Type questions
- Sequential order questions
- Section based on given conditions
- Questions involving family members

Session 9:

- Alphabet test
- Order of words
- Letter words problems
- Rule detection
- Alphabetical quibble
- Word formation
- Number
- Ranking
- Time Sequence Test
- Mathematical operations
- Logical sequence of words

Session 10:

- Arithmetic reasoning
- Logical reasoning
- Statement-Arguments
- Statement-Assumptions
- Statement-courses of Action
- Statement-Conclusions
- Deriving conclusion from passages

Session 11:

- General Aptitude
- Addition
- Multiplication
- Divisibility
- Squaring
- Cube
- HCF and LCM
- Fraction

Session 12:

- Number system
- Permutation & combination
- Probability
- Ratio & Preparation

Session 13:

- Partnership
- Percentage
- Average
- Problem on Ages
- Profit and loss

Session 14:

- Simple Interest
- Compound Interest
- Time and work
- Work and Wages

Session 15:

- Trains
- Streams Pronoun
- Allegation
- Clock
- Pipes and cisterns

Lab Practice:

Faculty needs to conduct GD, presentation for speaking, conducting mock interviews etc.
Faculty needs to conduct tests, Surprise tests, assignments etc.

7. List of Reference Books

Name of the Module	Title of the Book	Author/Publication	Edition	ISBN
Computer & Programming Concepts	Computer Fundamentals	P K Sinha/ BPB	6th	9788176567527
	Computing Fundamentals And C Programming	Balagurusamy/TMH	1st	9780070669093
	Programming: Concepts and Design (English) 5th Edition	Stewart Venit, Elizabeth Drake/Pearson	5th	9789332518766
Web Programming – I (HTML , CSS, Ajax)	Html5 Black Book:Covers Css3,Javascript,Xml,Xhtml,Ajax,Php And Jquery	Paperback /Dreamtech Press	2011	9789350040959
	Web Programming Building Internet Application	Paperback /Wiley	2002	9788126502721
	Web Technology: Theory and Practice	Paperback/ Pearson	2012	9788131774199
	Web Technologies : A Computer Science Perspective	Paperback/ Pearson	2008	9788131717158
Database Concepts	Mysql : The Complete Reference	Paperback/ TMH	2004	9780070586840
	Php And Mysql 24-hour Trainer PB	Paperback/ Wiley	2011	9788126533473
	Upgrading to PHP?5 (Covers MySQL 4.1)	Paperback	2004	9788173666209
Web Programming – II (PHP, Java scripts)	Php: The Complete Reference	Steven Holzner /TMH	2007	9780070223622
	Beginning PHP and MySQL: From Novice to Professional	W. Jason Gilmore/Apress	2010	9788184897456
	Head First PHP & MySQL	Lynn Beighley/Shrof	2009	9788184046588
Internet Terminologies	PHP Project for Beginners	Sharanam Shah/X-Team	2010	9788184048445
Management Development Program	High School English Grammar & Composition Revised Edition	Wren, Martin / S. Chand Publisher	2011 Edition	9788121900096
	Communication Skills	Sanjay Kumar, Pushp Lata / Oxford University Press	2011 Edition	9780198069324
	Professional Communication Skills	Praveen S R Bhatia / S.Chand Publishing	2011 Edition	9788121920926
	Quantitative Aptitude For Competitive Examinations	R. S. Aggarwal / S. Chand Publishing	17th Edition	9788121924986
	A Modern Approach To Verbal & Non-Verbal Reasoning	R. S. Aggarwal / S.Chand Publishing	Year 2012 Edition	9788121905510
	How to Prepare for GD and Interview (With CD) 3rd Edition	Hari Mohan Prasad, Rajnish Mohan/TMH	2010	0070706344

8. Evaluation Guidelines

8.1. Evaluation

Evaluation is a necessary and essential part of conducting the C-DAC Certificate Course in Advanced Web Technology, as it provides important feedback and inputs to both the institute as well as the student. The institute gets an idea about the relative performance of each student, which also serves as feedback about the design and conduct of the programme. The student gets a clear picture of his academic standing, individually and in comparison to his fellow students.

In order to ensure timely and efficient evaluation and certification of all students, the following guidelines are being issued and should be followed religiously.

8.2. Evaluation Methodology

8.2.1 Each centre should have a Designated Responsible Member (DRM) for Evaluation.

8.2.2 The DRM Evaluation would be responsible for coordinating all activities relating to evaluation at the training centre and for communicating with CDAC ACTS, Pune.

8.2.3 Evaluation is a compulsory part of the process of obtaining Certificate Course in Advanced Web Technology. All students are required to pass in each subject of the course in order to be eligible to receive the C-DAC Certificate.

8.2.4 The faculty of every subject should outline the objectives of the evaluation to be conducted for that particular subject, so as to enable the student to prepare himself/ herself properly.

8.2.5 The performance of students is constantly evaluated through surprise quizzes, hourly examinations, assignments throughout the term, submission of term reports, presentations and final examinations at the end of the course.

8.2.6 Mode of exams will be in online / offline, but prior information will be given by C-DAC, ACTS about the mode of the exam and it will be final.

8.3. EVALUATION METHODS

8.3.1 Course End Evaluation

After completion of the all subjects, a written examination CEE (Course End Examination) will be held, which will test the knowledge of the students of each subject and it is a compulsory part of the evaluation. Conducting CEE involves performing duty with responsibility. A small mistake in the process may hamper the whole system. Everyone has to play their role in an effective manner. It is a joint effort work which has to be carried out in a combined way. Right from receiving question paper from ACTS, C-DAC to sending the OMR answer sheet (in case of offline exam) and the response file (in case of online exam) for evaluation dealt with lot of responsibility.

ACTS, C-DAC in its pursuit of excellence, believes in providing a congenial atmosphere to the students during all exams in order to get them to perform at their optimum level. However, there are certain norms which the students are expected to be aware of and observe both in letter and spirit. These norms are:

8.3.1.1 Impersonation may lead to permanent expulsion from the Institute.

8.3.1.2 Cell phones are strictly prohibited in the exam hall/room.

8.3.1.3 Valid ID card is mandatory for entry to the exam room / hall.

8.3.1.4 Punctuality is most important at all times. Students are expected to check their exam location and be seated at least 10 minutes prior to the exam time.

8.3.1.5 In case of offline exam, as per ACTS, C-DAC policy all question papers are to be returned along with the answer script.

8.3.1.6 Students are required to bring their own stationary as no lending or borrowing is permitted during examination.

8.3.1.7 Programmable calculators or any other kind of electronic devices are strictly prohibited inside the exam area.

8.3.1.8 Indiscipline in the exam hall/ room will not be tolerated.

8.3.1.9 Possession of any written material related to the subject or communication with their fellow students, will result in disciplinary actions.

8.3.1.10 A student must score a minimum of 40 percent marks, in order to successfully clear the course.

8.3.1.11 It is recommended that the students should ensure 100% attendance for each course. 10% absences are permissible, only in case of illness, or emergencies. These have to be approved by the Centre Head. Approval is contingent upon the evidence provided.

8.3.1.12 There will be 150 questions to answer in 3 hours duration in CEE as per the following distribution mentioned in Table – 1.

Table – 1

Sl. No.	Module Name	Hours	No. of Questions
1	Computer & Programming Concepts	40	20
2	Web Programming – I (HTML , CSS, Ajax)	60	30
3	Database Concepts	20	15
4	Web Programming – II (PHP, Java scripts)	80	45
5	Internet Terminologies	20	10
6	Management Development Program	60	30
	Total	**320**	**150**

8.3.2 GENERAL GUIDELINES FOR AWARD OF GRADES:

The marks of obtained in the CCEE shall be calculated to get total marks out of 100. The rounding off shall be done on the higher side. The grades shall be awarded on the basis of cut off in the absolute marks, as mentioned in Table – 2.

Table 2

Lower range of marks	Grade	Upper range of marks
91	≤ A+ <	100
81	≤ A <	90
71	≤ B+ <	80
61	≤ B <	70
51	≤ C+ <	60
41	≤ C <	50
0	≤ F <	40

8.3.3 Guidelines of CEE:

CEE will be conducted normally before the commencement of Project work of the course.

The written examination should be of 180 minutes duration. It should consist of objective questions. A typical objective type exam paper should contain the following types of questions: –

- Multiple choice
- Yes or No
- True or False

Objective questions are useful in testing the recognition and recall abilities of students. They also help in keeping the exam short and easier to evaluate.

For the pure objective type question papers, there will be 150 objective type questions with 4 maximum answer options having only one correct option. The value of each objective type question is of one mark only. There will not be any negative marks for the wrong answers given by the students.

8.3.4 Guidelines for setting Question Papers:

While setting the question papers for theory Exam the following weightages should be assigned as per the difficulty level of the questions.

Levels	Requirements	Weightage
Level A – Easy	Requires elementary knowledge which may be obtained by attending all lectures and completion of mandatory lab assignments	25%
Level B – Intermediate	Requires thorough study of all course material, attendance at all lectures and completion of mandatory assignments	50%
Level C – Difficult	Requires study and lab work beyond the prescribed course material and mandatory assignments	25%

8.4 Guidelines for generating questions:

8.4.1 Question paper setter has to use sample paper format provided by C-DAC, ACTS Pune

8.4.2 Mention the subject name without fail.

8.4.3 Language of the question should be easy to understand.

8.4.4 The answers must have relevant objective type choices and “only one” correct answer.

8.4.5 The questions must be prepared by referring appropriate books, reference books, reference material, and course material having good information.

8.4.6 The question must be created by the domain expert afresh and should not be copied directly from any book, website, existing previous question papers etc.

8.4.7 The question should be unique and should have not been published anywhere.

8.4.8 Please mention the source of the question wherever possible, as it may help us in referring the same for detailing if required.

8.4.9 The caliber of the question should suffice the growing need of competition.

8.4.10 The question paper should have questions covering the entire syllabus.

8.4.11 The questions have to be typed in MS Word with “Arial” having letter size 12 point. Do not bold any letter, word or sentence in any part of the question paper.

8.4.12 It is essential to give password to the word document and send/tell the password separately.

8.4.13 It is essential that utmost care is taken at your end to maintain the secrecy of the soft copy at all time.

8.4.14 An expert team will review all questions. The questions will be filtered as per following:

- If the question is incomplete
- If the answer of the question is wrong
- If the question is not there in the syllabus
- If the question appears more than once
- If the question is too lengthy
- If the question is irrelevant
- If the options to the questions are irrelevant

8.4.1 Template for generation of Questions

Date:

Question generated by: Mr. /Ms.

Subject Name:

Q. No.
Question: <Text of the question>

Answer Choices
A:
B:
C:
D:

Difficulty Level: Easy / Intermediate / Difficult

Reference: (Name of books)
(If question taken from book) (Mention name of the book, author, ISBN)
Total Number of Questions Generated: _____

8.4.2 Template for Answer Key:

Module name:			
Question No.	**Answer Keys**	**Question No.**	**Answer Keys**
1		|	
2		|	
3		141	
4		142	
5		143	
6		144	
7		145	
8		146	
9		147	
10		148	
|		149	
|		150	

8.4.3 Evaluation of answer papers:

For Offline mode: Use of OMR sheets will be useful for processing the result of multiple choice exams. OMR is an effective way to collect data, process for the result and also it takes less time with greater accuracy in less effort. Centres need to follow the best way for scanning the OMR sheets, process the result and publish the result. Centres which are not using OMR can user OCR to conduct the exams and evaluate the students. Centre which are not using OMR or OCR can evaluate the students manually and process the result.

For Online mode: Course end exam will be through online s/w. Evaluation will be through that Exam s/w.

If a student requests for re-evaluation then the student has to pay `150 /- and it should be routed through training centre. The Re-evaluation fee should be paid to respective C-DAC training Centres, in case of Authorized Training Centres associated to C-DAC, Pune, payment to be made in favour of "C-DAC, ACTS" and payable at Pune. (This is applicable only for theory exam)

8.5 Moderation:

Grace marks would be awarded as per the methodology below:

8.5.1. Maximum of 4% of total term end theory exam marks can be awarded to a candidate.

S No.	Name of the course	Total Marks	Maximum grace marks for the course
1	Certificate Course in Advanced Web Technology	150	6

On completion of the moderation exercise the revised marks should be updated in the marks database.

8.6 Re-examinations:

The following conditions will be applicable for the course end re-exam:

8.6.1. Students who do not appear for an exam on the scheduled date will not have an automatic right to re-examination. Only those students who, in the opinion of the centre/course coordinator have a genuine reason for being absent may be allowed to appear for a re-exam.

8.6.2. Students who have failed an exam may be allowed to appear for a re-exam.

8.6.3. The re-exam should be conducted following the same process as the regular examination.

8.6.4. Students, who failed/remained absent in the Course End Examination conducted by C-DAC, shall be allowed to appear in the re-examination only once.

8.6.5. Students who remain absent or fail in the re-examination will not get any further chance for appearing for a third attempt or further. In such case the candidate can receive the Performance Statement and the certificate of participation without any grade.

8.6.6. On evaluation of their answer sheets 20% of the marks obtained by the students will be deducted (towards de-rating for re-examination) for arriving at the final score, i.e. in order to clear the module test the student has to score a minimum of 50% marks instead of 40%.

8.7 Project Module:

8.7.1. Project work should be start as soon as possible.

8.7.2. After that students should be ready with all mandatory documents with database design and then completion of all teaching modules they can do the project.

8.7.3. Performance in the Project module will be awarded in grade. The Project grade will be mentioned separately on the certificate & will have no effect on the overall grade obtained by a student.

8.7.4. Students may do industry-sponsored projects, but will be required to do the project work within the centre.

8.7.5. Evaluation of the Project module will take place as following:

8.7.5.1. Internal evaluation will be take place at mid of the module

8.7.5.2. External evaluation will take place at the end of the module

Based on both evaluations, final grade will be awarded & communicated to C-DAC ACTS, Pune

8.7.6 Guidelines for Project Evaluation

Evaluation of Project work needs to be carried out as per the following guidelines:

a. Literature study.
b. Submission of abstract for their colloquium/seminar/project work along with the references.
c. Submission of the detailed work report
d. Two presentations each for 15 minutes on the work done restricted to 15 – 20 slides followed by evaluation.
e. The evaluation for 100 marks will be splited up as follows:
   i. Literature survey – 10
   ii. Contents of the project work – 20
   iii. Contents Flow of Presentation – 15
   iv. Communication and Presentation Skills – 20
   v. Depth of Knowledge in the topic – 15
   vi. Viva Voce – 15
   vii. Attendance – 5
f. Soft copy of the presentation should be submitted to C-DAC, ACTS, Pune

8.8 Ensuring Security of Evaluation data/records:

8.8.1 Ensure that all data relating to evaluation of students is stored in a secure place that cannot be accessed by unauthorized personnel.

8.8.2 All question papers must be prepared and stored in a separate area specifically designated for the purpose.

8.8.3 Whenever any external faculty sets a question paper, ensures that he should follows the guidelines given by C-DAC ACTS Pune.

8.8.4 Ensure that only one copy of any question paper is prepared in physical (printed) form for review and revision.

8.8.5 When the question paper is finalized, print out one master copy and gets it signed by the paper setter, Reviewer and DRM Evaluation.

8.8.6 Prepare required number of photocopies of the question paper and store them in a safe and secure location before the exam.

8.8.7 The data relating to evaluation of students, such as soft copies of question papers and answer keys, student marks database and performance statements etc. must be kept in a separate domain/directory which is accessible only to authorized personnel. Ensure that the data is regularly backed up.

8.8.8 The question papers for the theory as well as the laboratory examinations at all the centres will be set by CDAC, ACTS Pune. The centres according to guidelines provided by C-DAC, ACTS Pune, will conduct the evaluation of the laboratory and assignments locally.

Note: The Evaluation Guidelines, Rules and Regulations issued by C-DAC, ACTS – Pune from time to time shall be binding on all the centers and all the students. C-DAC, ACTS, Pune reserves the right to add, modifies or deletes any or entire contents of this document at any point of time without giving any notice. It's the responsibility of the centre coordinator to inform such changes to the students in form of a formal notice with a duly signed copy to C-DAC, ACTS, Pune.

9 Requirements (S/W and H/W)

Computing Facilities for C-DAC Certificate Course in Advanced Web Technology	
A. Servers	
1. Unix / Linux / Server	
2. Windows 2008 / Windows 2012	
3. Application / Dummy Servers Configured for various modules	
Severs Configuration	
1. Processor (min 3.2 Ghz)	
2. RAM (min 8 GB)	
3 HDD (min 500 GB)	
4. Network Card	
5. AGP Card with 4/8 MB VRAM	
6. 2 Serial ports, 1 parallel port, 104 Keys Keyboard.	
7. DVD RW Drive	
B. Clients Machines Configuration	
1. Processor (Min 3.2 GHz)	
2. RAM (Min 4 GB)	
3. HDD IDE / EIDE (min 250 GB)	
4. AGP-64 bit Card with 8 MB / 4MB VRAM	
5. PCI Network Card 10/100 Base T, UTP Ethernet	
6. Multimedia Kit	
C. Network	
1. 10/100 Base T UTP Hub(s)	
2. UTP CAT-5 Cabling with RJ-45 connectors	
3. UTP Patch Cables	
D. Communication and Internet	
1 Internet Access	
2. ISDN Connectivity	
3. Modem 512 KBPS	
E. Printers	
1. Laser Printer	
F. Additional Lab Equipments	
1. Amplified Speakers, Headphones & Mikes	
2. Hi-Lumen OHP	
3. Video Projector (XGA / SVGA Compatible)	
4. TWAIN Compliant Color Scanner	
G. Module Specific Software Environments, Operating Systems and Hardware	
Computer & Programming Concepts	Open Suse 13.1
Web Programming – I (HTML , CSS, Ajax)	MS Frontpage, Visual Interdev,
Database Concepts	MySQL
Web Programming – II (PHP, Java scripts)	PHP Eclipse
Internet Terminologies	IIS, Apache, Tomcat