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Question Paper Code: ACS006



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

## MODEL QUESTION PAPER

B.Tech V Semester End Examinations, November - 2019

**Regulations: IARE-R16**

**WEB TECHNOLOGIES**

(Information Technology)

**Time: 3 hours**

**Max. Marks: 70**

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Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

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### UNIT – I

1.    a)    What is a frame? What are the advantages of using a frame? Briefly explain the creation of frames in HTML with an example. [7M]  
      b)    Create a simple calculator web application that takes two numbers and an operator (+, -, /, \* and %) from an HTML page and returns the result page with the operation performed on the operands. [7M]
  
2.    a)    Explain different types of Cascading Style Sheets. Write an HTML page that contains a selection box with a list of countries. When the user selects a country, its capital should be printed next to the list. Add CSS to customize the properties of font of the capital (color, bold and font size). [7M]  
      b)    Write an HTML page that has one input, which can take multi-line text and a submit button. Once the user clicks the submit button should show the number of characters, words and lines in the entered using an alert message. Words are separated with space and lines are separated with new line character. [7M]

### UNIT – II

3.    a)    What is the difference between XML DTD and XML schema or XSD? Justify the four possible key words in a DTD declaration. [7M]  
      b)    Write an application to create a XML document from a university employee database. The XML document should contain the following: [7M]  
          i) Employee id    ii) Employee Name    iii) Designation  
          iv) Address       v) Department    vi) The last twelve month performance summary.
  
4.    a)    What is an Object in java script? Discuss Java script objects in detail. Differentiate between HTML and DHTML. [7M]  
      b)    Build a Web page, which accept user information and user comments on the web site to check if all the Text fields have being entered with data else display an alert message. [7M]

### **UNIT – III**

5.    a) Explain the servlet architecture and various interfaces invoked by servlet container. [7M]  
      Explain how java servlet perform session handling.
- b) Develop a JSP for a news channel to conduct public opinion poll on any topic. Users will [7M]  
      respond through yes/no answer. Later display the results in percentages.
6.    a) Explain different packages that support Servlet request and responses. With suitable [7M]  
      coding, Explain how a Servlet is used for server side programming.
- b) Develop a JSP to act as a simple search engine with the support of a necessary database. [7M]  
      Web page will accept the topic name and JSP will be activated by a “submit” button. JSP  
      will open relevant page with a set of relevant URL’s for the topic.

### **UNIT – IV**

7.    a) What is an array? How array is declared in PHP. Also explain various types of array [7M]  
      with suitable examples.
- b) Create user validation web application in PHP, where the user submits the login name [7M]  
      and password to the server. The name and password are checked against the data already  
      available in Database and if the data matches, a successful login page is returned.  
      Otherwise a failure message is shown to the user.
8.    a) What are functions? Explain different types of functions in PHP. Briefly explain How to [7M]  
      add parameters in PHP functions.
- b) Create a web application in PHP that takes name and age from an HTML page. If the age [7M]  
      is less than 18 it should send a page with “Hello <name>, you are not authorized to visit  
      the site “message, where <name> should be replaced with the entered name. Otherwise it  
      should send “Welcome <name> to this site “message.

### **UNIT – V**

9.    a) What is the main difference between GET and POST method in PHP? Explain with [7M]  
      suitable examples.
- b) A user validation web application in PHP, where the user submits the login name and [7M]  
      password to the Server. The name and password checked against the data already  
      available in Database and if data matches, a successful login page is returned. Otherwise  
      a fail message is shown to the user.
10.   a) How to create a session in PHP? How to set a value in session? How to Remove data [7M]  
      from a session?
- b) Write a PHP program to check if a number is an Armstrong number or not. Return true if [7M]  
      the number is Armstrong otherwise return false.



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## COURSE OBJECTIVES:

The course should enable the students to:

I	Design static and dynamic webpages using HTML, CSS and Java Script.
II	Understand a well formed XML schemes for developing web applications.
III	Design and implement web services from the server and client side.
IV	Understand how server-side programming works on the web using PHP.
V	Apply tools to retrieve the information from the database.

## COURSE OUTCOMES (COs):

CO 1	Implement interactive web page (s) using HTML, CSS and JavaScript.
CO 2	Build well-formed XML Document and implement Web Applications using Javascript objects.
CO 3	Implement server side java application called Servlet/JSP to catch form data sent from client, process it and store it on database.
CO 4	Understand the general concepts of PHP scripting language for the development of Internet websites.
CO 5	Build Dynamic web site using server side PHP Programming and Database connectivity.

## COURSE LEARNING OUTCOMES (CLOs):

ACS006.01	Understand the basic HTML tags.
ACS006.02	Understand and apply the design principles of HTML and Java Script to create static and dynamic web pages.
ACS006.03	Understand the difference between HTML and XML scripting languages.
ACS006.04	Identify the engineering structural design of XML and parse construction tree model.
ACS006.05	Analyze the client side validation procedure in web applications.
ACS006.06	Proficient in creating reusable web component using java bean.
ACS006.07	Identify the difference between the JSP and Servlet.
ACS006.08	Able to use web server and data base servers using specific vendor related software's.
ACS006.09	Create applications by using the concepts like JSP and Servlet.
ACS006.10	Identify and perform requesting and response generation process in web servers.
ACS006.11	Understand the PHP downloading, installation and configuring PHP process.
ACS006.12	Understand branching statements, loop statements and use them in problem solving.
ACS006.13	Identify the methods to read data from web pages using PHP.
ACS006.14	Understand how MYSQL server is connected with PHP

ACS006.15	Able to perform crude operations in data base servers, operations in PHP
ACS006.16	Understand the file handling methods using PHP.
ACS006.17	Familiar with basic HTML, XML, JSP and PHP techniques: Creation of web pages, that Includes verification and validation of web pages.
ACS006.18	Possess the knowledge and skills for employability and to succeed in national and international level competitive examinations.

#### MAPPING OF SEMESTER END EXAMINATION - COURSE OUTCOMES

SEE Question No		Course Learning Outcomes		Course Outcomes	Blooms Taxonomy Level
1	a	ACS006.01	What are the types of CSS? Explain with examples.	CO 1	Understand
	b	ACS006.02	Explain string methods of Java script with examples.	CO 1	Understand
2	a	ACS006.01	What are the different types of lists in HTML? Explain them with suitable examples.	CO 1	Understand
	b	ACS006.01	Explain the procedure for creating Frameset and write in detail about attributes of tag.	CO 1	Understand
3	a	ACS006.03	Write the XML schema for library information system.	CO 2	Remember
	b	ACS006.01	Discuss in detail about various objects used in JAVA Script.	CO 2	Remember
4	a	ACS006.04	What is a name space? Describe how a name space is created with a relevant example.	CO 2	Understand
	b	ACS006.02	Write a JavaScript program to accept a number as input for one text field and produce the factorial of the number as a result in another text field once the submit button is clicked.	CO 2	Remember
5	a	ACS006.8	Explain the architecture of a Java Servlet.	CO 3	Understand
	b	ACS006.9	Write a program to demonstrate database connectivity in JSP.	CO 3	Remember
6	a	ACS006.9	Develop JSP Applications with JSP tags, JSP scriptlets and java beans.	CO 3	Understand
	b	ACS006.10	Explain the concept of JSP directives with suitable example.	CO 3	Understand
7	a	ACS006.15	Write a PHP script to display the squares of 10 numbers in a table.	CO 4	Remember
	b	ACS006.12	Explain the scope and Life Time of variables in PHP?	CO 4	Understand
8	a	ACS006.12	Discuss different types of Conditional statements in PHP with suitable examples.	CO 4	Understand
	b	ACS006.16	Differentiate between GET and POST methods with example. How to create a database using PHP?	CO 4	Remember
9	a	ACS006.18	How asynchronous processing is handled using Ajax? What are the disadvantages of AJAX?	CO 5	Remember
	b	ACS006.17	Explain about XMLHttpRequest object with example.	CO 5	Understand
10	a	ACS006.18	What is AJAX? Explain the working of AJAX.	CO 5	Understand
	b	ACS006.14	Explain with an example program how to connect a SQL server database from a PHP script.	CO 5	Understand

Signature of Course Coordinator

HOD, IT