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MSCIT-3	Prelims Exam-2020	Time-2.30 hour	SUB:-HYBRID TCHNOLOGY

Q-1 A Objective type Questions [4]
1. Cascading Style Sheet
2. Hypertext Transfer Protocol
3. It is a combination of web and mobile platform
4. It is used for develop hybrid application

Q-1 B Answers in Brief (Any 1 out of 2) [2]
1. What is Ionic?

   Ans: - Ionic is the app development platform for web developers. Build amazing cross platform mobile, web, and desktop apps. Ionic makes it easy to build high performance mobile and Progressive Web Apps with its mobile app platform.

2. What is Html5?

   Ans: - HTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and latest major version of HTML that is a World Wide Web Consortium (W3C) recommendation.

Q-1 C Answer in detail (Any 1 out of 2) [3]
1. Print Hello World in node.js

```
//example of hello world which run in browser
var http = require('http');

http.createServer(function (req, res) {
   res.writeHead(200, {'Content-Type': 'text/plain'});
   res.end('Hello World!');
}).listen (8080);
```

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2. Play Audio in HTML5.

```
<!DOCTYPE html>
<html>
<body>

<audio controls>
  <source src="horse.ogg" type="audio/ogg">
Your browser does not support the audio element.
</audio>

</body>
</html>
```

Q-1 D Write a note on (Any 1 out of 2)   **[5]**

1. Explain Data Storage API.

   Ans: - web applications can store data locally within the user's browser. Before HTML5, application data had to be stored in cookies, included in every server request.
   Web **storage** is more secure, and large amounts of **data** can be **stored** locally, without affecting website performance.

   To **enable**/disable **Web Storage** in Chrome:

   Type chrome://settings/content/cookies in the address bar. On the subsequent screen toggle the "**Allow** sites to save and read cookie data" setting. Note: This will affect both **Web Storage** and cookies.

2. Define Cordova and git installation steps.

   Ans: -

   Briefly, these are steps you need to take:
   - i.   Install the Git for Windows terminal application.
   - ii. Install and configure the Android SDK.
   - iii. Install the Cordova CLI and create a sample app.
   - iv. Deploy to the Android emulator.
   - v.   Deploy to your device.

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Q-2 A Objective type questions **[4]**

1. Application Programming Interface
2. Personal Home Page/ Hypertext Preprocessor
3. Validate Data of relative Control
4. Modal, View and Controller.

Q-2 B Answers in Brief (Any 1 out of 2) **[2]**

1. Define $scope and $rootscope.

   Ans:-

   - $scope is an object that is accessible from current component e.g. Controller, Service only.
   - $rootScope refers to an object which is accessible from everywhere of the application. You can think $rootScope as global variable and $scope as local variables.

2. Explain config () and run ().

   Ans:

   - Configuration blocks (registered with module.config ()) get executed during provider registration, and can only be injected providers and constants (see module.provider () and module.constant ()). This is typically where you would configure application-wide stuff, such as the $routeProvider. Stuff that needs to be configured before the services is created.

   - Run blocks (registered with module.run ()) get executed after the injector has all the providers. Now, all instances and constants can be injected. This is typically where you would configure services, $rootScope, events and so on.

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Q-2 C Answer in detail (Any 1 out of 2)   **[3]**

1. Explain MVC architecture of angular.js.

   Ans:

   Model View Controller or MVC as it is popularly called, is a software design pattern for developing web applications. A Model View Controller pattern is made up of the following three parts –

   • Model – It is the lowest level of the pattern responsible for maintaining data.

   • View – It is responsible for displaying all or a portion of the data to the user.

   • Controller – It is a software Code that controls the interactions between the Model and View.

2. Explain TODO Task.

   Tasks is a simple todo list app that emphasizes simplicity and ease of use. ... Use reminders so that to-dos can be delivered at the right time and with actionable notifications there is no need to open the app, simply mark a task as done or snooze for later.

Q-2 D Write a note on (Any 1 out of 2)   **[5]**

1. Explain Directives in angular.js.

   Ans:

   • AngularJS lets you extend HTML with new attributes called Directives.

   • AngularJS has a set of built-in directives which offers functionality to your applications.

   • AngularJS also lets you define your own directives.

   AngularJS directives are extended HTML attributes with the prefix ng-.

   a. The ng-app directive initializes an AngularJS application.

   b. The ng-init directive initializes application data.

   c. The ng-model directive binds the value of HTML controls (input, select, and text area) to application data.

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2. Print Hello World In angular.js.

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="utf 8">
   <title>Example of Hello World</title>
</head>
<body ng-app="app">
<h1 ng-controller="HelloWorldCtrl">{{message}}</h1>
<script src="https://code.angularjs.org/1.6.9/angular.js"></script>
<script>
   angular.module("app", []).controller("HelloWorldCtrl", function($scope) {
   $scope.message="Hello World"
   } )
</script>

</body>
</html>
```

Q-3 A Objective type Questions   [4]

1. Command Line Interface
2. Uniform Resource Locator
3. Hypertext Transfer Protocol
4. Plug-in is a (sometimes essential) piece of software code that enables an application or program to do something it couldn't by itself.

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Q-3 B Answers in Brief (Any 1 out of 2) [2]

1. Introduction to ionic.

   Ans:

   Ionic Framework is an open source UI toolkit for building preferment, high-quality mobile and desktop apps using web technologies (HTML, CSS, and JavaScript).

2. Step by step installation of ionic.

   Ans:

   1. npm install -g cordova ionic
   2. npm update -g cordova ionic

Q-3 C Answer in detail (Any 1 out of 2) [3]

1. Write steps to create menu via ionic CLI.

   Ans:

   Step 1: Firstly, you are required to create a new blank ionic project. ...

   Step 2: After executing this command, you create app components. ...
   app.component.ts.

   Step 3: In this step, you can add the <ion-menu> element in the HTML file and it can create the side menu in the ionic application.

2. Explain about Menu toggle and Split-Pane

   Ans:

   Menu Toggle

   The Ionic menu toggle can be used to open and closed the menu. Menu toggle is only visible when the selected menu is active. When it is opened or closed, the menu is active. If the menu is hidden or displayed as a split-pane, then the menu is marked as inactive, and <ion-menu-toggle> component hides.

   Split-pane

   It is very useful when you want to create a multi-view layout. It permits the UI component, like menus, to be shown as the view-port with the increase in the width. If the width of the device screen is less than a specific size, the split pane will be failed, and the menu will be disabled. It is ideal for creating an application that will be presented in the browser and will be implemented through the app store on phones and tablets.

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Q-3 D Write a note on (Any 1 out of 2) [5]

1. Explain any 5 components of ionic.

    Ans:

    1. **Button -** The Button, an essential part of any mobile experience. Like the Header, they come in the full spectrum of Ionic's default colors.
    2. **Card -** Cards have become widely used in recent years. They are a great way to contain and organize information, while also setting up predictable expectations for the user. With so much content to display at once, and often so little screen realestate, cards have fast become the design pattern of choice for many companies, including the likes of Google, Twitter, and Spotify.
    3. **Form -** A form contains Placeholder Labels, Inline Label, Stacked Labels, Floating Labels, Inset forms, Inset Inputs, Input Icons, Header Inputs, Toggle, Checkbox, Radio buttons, Range, Select, Tabs ,Grid, Utility.
    4. **Color-** Ionic framework gives us a set of nine predefined color classes. You can use these colors or you can override it with your own styling.
    5. **Header-** Headers are fixed regions at the top of a screen that can contain a title label, and left/right buttons for navigation or to carry out various actions.
       Headers come in a variety of default color options:

2. Explain any 5 components of java script ionic.

    Ans –

    1) **Action Sheet-**An Action Sheet is a dialog that displays a set of options. It appears on top of the app's content, and must be manually dismissed by the user before they can resume interaction with the app.

    2) **Back Drop-**Backdrops are full screen components that overlay other components. They are useful behind components that transition in on top of other content and can be used to dismiss that component.

    3) **Content-**Content component provides an easy to use content area with some useful methods to control the scrollable area. There should only be one content in a single view component.

    4) **Model-**Modal controllers programmatically control the modal component. Modals can be created and dismissed from the modal controller.

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5) **Popup-**This service is used for creating a popup window on top of the regular view, which will be used for interaction with the users. There are four types of popup namely – show, confirm, alert and prompt.

Q-4 A Objective type Questions [4]
1. Collection of Tables
2. It is a Relational Database Management System
3. JavaScript Object Notation
4. Create,Read,Update and Delete

Q-4 B Answers in Brief (Any 1 out of 2) [2]
1. Explain about server.

   Ans:

   A computer that stores information that a number of computers can share.

   In computing, a **server** is a piece of computer hardware or software (computer program) that provides functionality for other programs or devices, called "clients". ... Typical **servers** are database **servers**, file **servers**, mail **servers**, print **servers**, web **servers**, game **servers**, and application **servers**.

2. Explain Array.

   Ans:

   An **array** is a data structure, which can store a fixed-size collection of elements of the same data type. ... An **array** is used to store a collection of data, but it is often more useful to think of an **array** as a collection of variables of the same type.

Q-4 C Answer in detail (Any 1 out of 2) [3]
1. Explain array_push (), array_pop (), array_search ().

   Ans:

   array_push () - The array_push () function inserts one or more elements to the end of an array.

   array_pop () – The pop () method removes the last element of an array, and returns that element.

   array_search () – This function search an array for a value and returns the key.

2. Explain file_get_contents (), json_encode (), json_decode ().

   Ans:

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file_get_contents ("php://input") - Reads entire file into a string

Json_encode () and json_decode () – In PHP, json_encode () is used to convert PHP supported data type into JSON formatted string to be returned as a result of JSON encode operation.

This function accepts the following set of arguments.
- Data to be encoded.
- Options with JSON encode constants to reflect effects on encoding behavior.
- Depth limit for performing recursive encoding with nested levels of input.

Q-4 D Write a note on (Any 1 out of 2)   [5]

1. Explain architecture of node.js
   Ans:

```
var http = require('http');

http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.end(statement);
}).listen(8080);
```

2. Create server of node.js and listen port of node.js
   Ans:

```
var http = require('http');

http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/html'});
  res.end('Hello World!');
}).listen(8080);
```

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Q-5 A Objective type Questions   **[4]**
1. It is an operating system used for mobile devices manufactured by Apple Inc.
2. A **keystore** can be a repository where private keys, certificates and symmetric keys can be stored.
3. Git is a mature, actively maintained open source project originally developed in 2005 by Linus Torvalds, the famous creator of the Linux operating system kernel.
4. It is a Platform to publish app.

Q-5 B Answers in Brief (Any 1 out of 2)   **[2]**
1. Explain pull and push commands.

   Ans:

   <mark>Pull -</mark> a pull grabs any changes from the GitHub repository and merges them into your local repository.

   <mark>Push -</mark> pushing sends the recent commit history from your local repository up to GitHub.

2. Explain commit and rollback commands.

   Ans:

   <mark>Commit -</mark> committing is the process which records changes in the repository.

   <mark>Rollback –</mark> reset process in the repository

Q-5 C Answer in detail (Any 1 out of 2)   **[3]**
1. Explain about configure ionic-camera

   Ans:

   <mark>Ionic-camera -</mark> Now, let's get it onto your iOS or Android device, then start building the photo gallery feature.

   ♦ Add Cordova iOS and Android Platforms.
   ♦ Add the Camera Dependencies via the CLI.
   ♦ Add Camera plugin to Angular App Module.
   ♦ Add the Camera to the Gallery page.

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2. What is Android and IOS?

Ans:

Google's **Android** and **Apple's iOS** are operating systems used primarily in mobile technology, such as smartphones and tablets. ... **Android** is now the world's most commonly used smartphone platform and is used by many different phone manufacturers. **IOS** is only used on **Apple** devices, such as the iPhone.

Q-5 D Write a note on (Any 1 out of 2) **[5]**

1. Write steps to publishing application over playstore.

Ans:

==Create an account==

Firstly, to publish your app on google play store, you need to have account on google. You may have already personal email account with them but for your app it's better to separate one for manage your app(s) easily. You would have to pay a registration fees of 25 USD, using Google payments, While registering your publisher account. After that, a verification mail would be sent to you and then you sign in to your developer console, where all action would take place.

2. ==Familiarize yourself with Developer Console==

Developer console is starting point and main dashboard for publishing tools and operations. Before you go ahead, familiarize yourself with list of merchant countries and developer countries. You need to review list of merchant countries if you want to sell apps or in app purchases or have subscriptions and list of developer countries will tell you about locations where distribution to Google play users is supported. Apart from this, also looks the Google Play's Terms and conditions.

3. ==Fill in the necessary account details==

After this, you have to provide your complete account details like you have to provide your developer name, the name which would be displayed in Google Play Store. You will have to wait for anything between just a little and 48 hours, after filling the details for Google play developer registration to be processed.

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4. Link your merchant account

If you have a paid app or subscription or in app purchases, then you have to inter link your google payments merchant account and developer profile. It can be used for tax and financial identification as well as monthly payout from sale.

5. Upload your app

When you are sign in your Google Play developer console, click on "Add new application" from "All Applications tab". After this select correct "Default Language" from drop down menu and then type "title" of your app which would be appear on Google Play store. Then, select "Upload APK" button to view on new page which would be your homepage for app. Time taken to upload file depend on your app size. App will be in drafts until or unless you publish it.

6. Provide details for store listing

After uploading "APK" file go to "Store listing" tab. Over there you need to add details of app like "Full description" and "Short description". Along with this add categorization, contact details, link of promo video if you have, add screenshots and other necessary details to app. After complete mandatory fields click on "Save" button. You can update your store listing anytime.

7. Add pricing and distribution details

Now move on next tab, which is "Pricing and Distribution" and select it is "Paid" or "Free" app. You also select distribution countries and check boxes stating your app comply with content guidelines. If your app is a game one, then you can put in limelight using "Google Play for Game" option. Now save changes and move on next step.

8. Publishing the application

When all three tabs "Pricing and Distribution", "Store Listing" and "APK" have been filled then appear a green check mark next to them you are all ready to publish app in Google Play. After then click on "Publish this app" button under "Ready to Publish" drop down menu at top right corner of Developer console. A confirmation bar would show up stating your app would appear shortly in Google Play Store.

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2. Write steps to publishing application over appstore.

   Ans:

- Creating your own iTunes Connect organization and being the team agent. Sign in with the Apple ID you used to enroll in the Apple Developer Program

- Or being invited by an existing organization as a user with an Admin, Technical, or App Manager role.
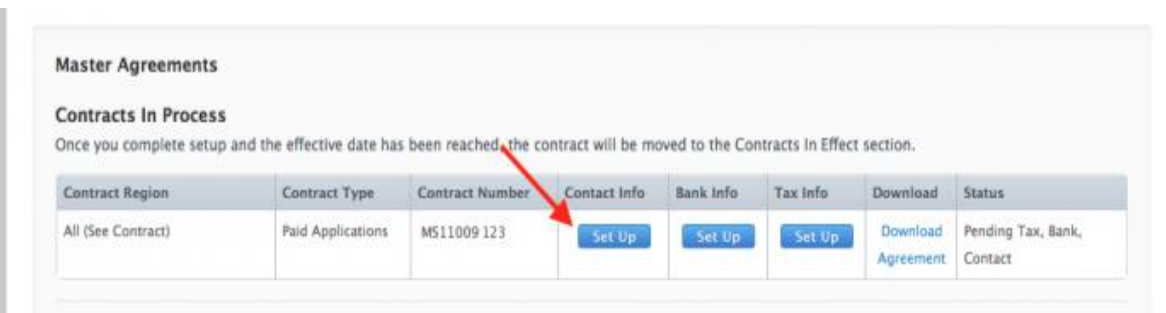
For paid apps

If you're submitting a paid app, you'll need to sign a contract that covers terms of payment. If your app is free,
Click on "**Agreements, Tax, and Banking**" on the iTunes Connect dashboard.
Click on "Request" under "Request Contracts".

Review the agreement that appears, check the box to agree to the terms, and click on "Submit".
Under "Contracts In Process" click "Set Up" in the "**Contact Info**" column.

In the window that appears, click on "Add New Contact" and enter your information.
Back under "Contracts In Process" in the "**Bank Info**" column, click "Set Up" then "Add Bank Account" and follow the directions to save your account info.

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In the "**Tax Info**" column, click "Set Up". A U.S. Tax Form is *mandatory*, so click "Set Up" and fill out the required information. Set up any other country tax forms necessary.

After you've completed the above, the contract's status will now say "Processing". After Apple has verified the info you provided, which will take about an hour, the contract will now appear under "Contracts In Effect".

Master Agreements

Contracts In Effect

Contract Region	Contract Type	Contract Number	Contact Info	Bank Info	Tax Info	Effective Date	Expiration	Download

Add a new app

In the iTunes Connect dashboard, select "**My Apps**".

Click on the "+" sign in the upper left-hand corner, then "New App".

To create a new iTunes Connect record, you'll need these details: **platform**, **app name**, **default language**, **bundle ID**, and **SKU**. You can't really change these details later, so be sure of what you enter.

- Use keywords in your app name to optimize for discovery.

- The bundle ID must be an exact match of the bundle identifier in your Xcode project Info.plist file (in the target's General > Identity section).

- The SKU is not visible to users and is up to you to set. It can be an identifier you use in your company or something else that is meaningful for you. Acceptable characters include letters, numbers, hyphens, periods, and underscores, and it must begin with a letter or number.

If applicable, you can also set user access at this step.

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3. Archive and upload your app using Xcode

Before you can submit your app for review through iTunes Connect, you need to upload the build through Xcode.

- In Xcode, select "Generic iOS Device" as the deployment target.

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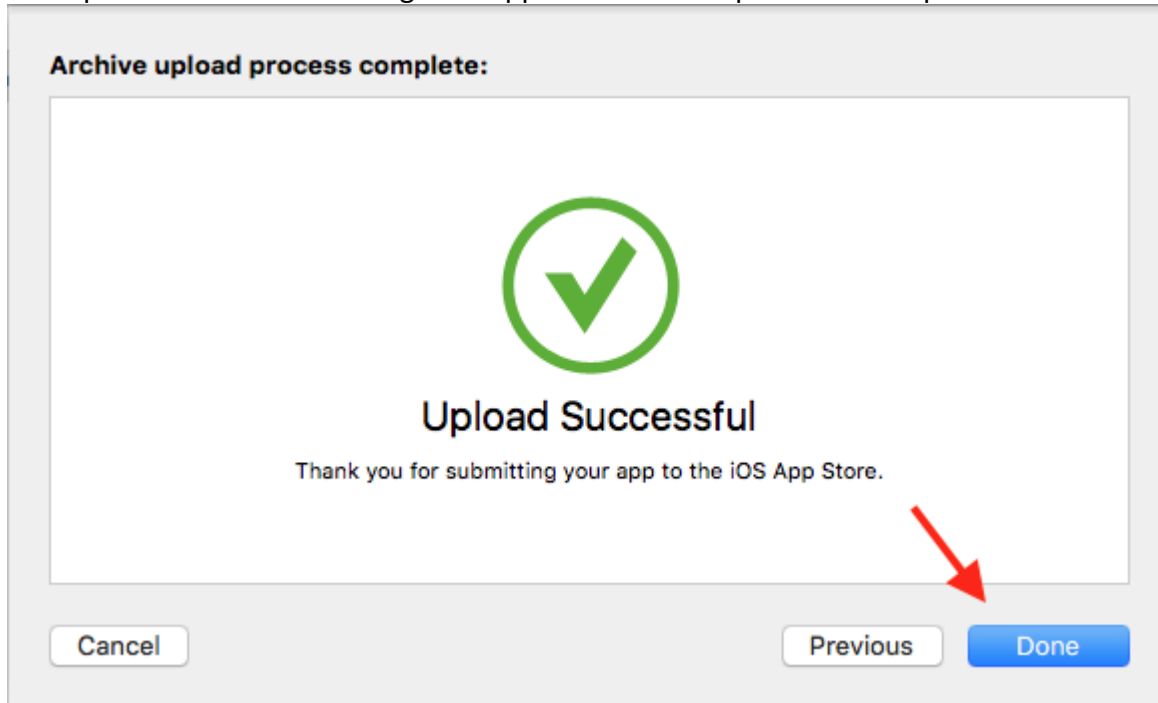## (AFFILIATED TO SAURASHTRA UNIVERSITY)

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- Choose "Product" from the top menu and click on "Archive".

- The Xcode Organizer will launch, displaying any archives you've created in the past.

- Make sure the current build is selected and click on "Upload to App Store" in the right-hand panel.

- Select your credentials and click "Choose".

- In the next window that appears, click on "Upload" in the bottom right-hand corner.

An "Upload Successful" message will appear when the upload has completed. Click "Done".

4. Configure your app's metadata and further details in its iTunes Connect record

    Under the "App Store" tab in iTunes Connect, in the "App Information" page you can add **additional languages**, **categories**, and your app's **Privacy Policy URL**

ALL THE BEST