ANDROID APPLICATION DEVELOPMENT

Subject Code : IT702PC
Regulations : R16 - JNTUH
Class : IV Year B.Tech I Semester

Department of INFORMATION TECHNOLOGY

BHARAT INSTITUTE OF ENGINEERING AND TECHNOLOGY

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ANDROID APPLICATION DEVELOPMENT (IT702PC)
COURSE PLANNER

I.COURSE OVERVIEW:

Introduction to Android development framework and programming. Java and XML are the two main programming languages used in App development. Application components are the essential building blocks of app development. It is designed to quickly get you up to speed with writing apps for Android devices.

II.PREREQUISTES:

1.Oops through java
2.XML

III.COURSE OBJECTIVES:

1	To demonstrate their understanding of the fundamentals of Android operating systems.
2	To demonstrate their skills of using Android software development tools.
3	To demonstrate their ability to develop software with reasonable complexity on mobile platform
4	To demonstrate their ability to deploy software to mobile devices.
5	To demonstrate their ability to debug programs running on mobile devices

IV. COURSE OUTCOMES:

S.No	Description	Bloom's Taxonomy Level
1	Describe the components and structure of a mobile development framework	1:UDERSTAND
2	Understanding of the specific requirements, possibilities and challenges when developing for a mobile context.	1:UNDERSTAND
3	Apply Java programming concepts to Android application development	2:APPLY
4	Design and develop user Interfaces for the Android platform..	3:EVALUATE
5	Publish an application to the Android Market	3:ANALYZE

V. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes (PO)		Level	Proficiency assessed by
PO1	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems related to Computer Science and Engineering.	**3**	Assignments
PO2	**Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems related to Computer Science and Engineering and reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering	**3**	Assignments

PO3	**Design/development of solutions**: Design solutions for complex engineering problems related to Computer Science and Engineering and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	**3**	Assignments
PO4	**Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	**2**	Assignments
PO5	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	**3**	Assignments
PO6	**The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the Computer Science and Engineering professional engineering practice.	**1**	Assignments
PO7	**Environment and sustainability**: Understand the impact of the Computer Science and Engineering professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	**-**	--
PO8	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	**-**	--
PO9	**Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in ultidisciplinary settings.	**-**	**--**
PO10	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	**-**	**--**
PO11	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team,	**-**	--

	to manage projects and in multidisciplinary environments.		
PO12	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	**2**	Research

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High) - : None

VI. HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

	Program Specific Outcomes (PSO)	Level	Proficiency assessed by
PSO1	**Foundation of mathematical concepts:** To use mathematical methodologies to crack problem using suitable mathematical analysis, data structure and suitable algorithm.	**2**	Lectures, Assignments
PSO2	**Foundation of Computer System:** The ability to interpret the fundamental concepts and methodology of computer systems. Students can understand the functionality of hardware and software aspects of computer systems.	**2**	Lectures, Assignments
PSO3	**Foundations of Software development:** The ability to grasp the software development lifecycle and methodologies of software systems. Possess competent skills and knowledge of software design process. Familiarity and practical proficiency with a broad area of programming concepts and provide new ideas and innovations towards research.	**3**	Lectures, Assignments

VII. SYLLABUS:

UNIT- I

Introduction to Android Operating System: Android OS design and Features – Android development framework, SDK features, Installing and running applications on Eclipse platform, Creating AVDs, Types of Android applications, Best practices in Android programming, Android tools

Android application components – Android Manifest file, Externalizing resources like values, themes, layouts, Menus etc, Resources for different devices and languages, Runtime Configuration Changes

Android Application Lifecycle – Activities, Activity lifecycle, activity states, monitoring state changes

UNIT- II

Android User Interface: Measurements – Device and pixel density independent measuring units. Layouts – Linear, Relative, Grid and Table Layouts.

User Interface (UI) Components – Editable and non-editable Text Views, Buttons, Radio and Toggle Buttons, Checkboxes, Spinners, Dialog and pickers.

Event Handling – Handling clicks or changes of various UI components.

Fragments – Creating fragments, Lifecycle of fragments, Fragment states, Adding fragments to Activity, adding, removing and replacing fragments with fragment transactions, interfacing between fragments and Activities, Multi-screen Activities.

UNIT- III

Intents and Broadcasts: Intent – Using intents to launch Activities, Explicitly starting new Activity, Implicit Intents, Passing data to Intents, Getting results from Activities, Native Actions, using Intent to dial a number or to send SMS

Broadcast Receivers – Using Intent filters to service implicit Intents, Resolving Intent filters, finding and using Intents received within an Activity

Notifications – Creating and Displaying notifications, Displaying Toasts

UNIT- IV

Persistent Storage: Files – Using application specific folders and files, creating files, reading data from files, listing contents of a directory Shared Preferences – Creating shared preferences, saving and retrieving data using Shared Preference

Database – Introduction to SQLite database, creating and opening a database, creating tables, inserting retrieving and deleting data, Registering Content Providers, Using content Providers (insert, delete, retrieve and update)

UNIT- V

Advanced Topics: Alarms – Creating and using alarms.

Using Internet Resources – Connecting to internet resource, using download manager

Location Based Services – Finding Current Location and showing location on the Map, updating location

SUGGESTED TEXT BOOKS:

1. Professional Android 4 Application Development, Reto Meier, Wiley India, (Wrox) , 2012
2. Android Application Development for Java Programmers, James C Sheusi, Cengage Learning, 2013

REFERENCE BOOKS:

Beginning Android 4 Application Development, Wei-Meng Lee, Wiley India (Wrox), 2013

NPTEL Web Course:

1. https://www.nptel.ac.in/courses/106106156/

VIII. COURSE PLAN:

Sl No	Unit	Week	Topic	Course Learning outcomes	Teaching Methodologies	Reference
1	I	1	Introduction to Android OS design and Features	Understanding android framework	Chalk and Talk	TB1
2			Android development framework		Chalk and Talk	TB1
3			Android SDK features		Chalk and Talk	TB1
4			Installing and running applications on		Chalk and Talk	TB1

			Eclipse platform			
5		2	Creating AVDs, Types of Android Applications. Best practices in Android programming, Android tools	describe various android tools	Chalk and Talk	TB1
6			Creating AVDs, Types of Android Applications. Best practices in Android programming, Android tools		Chalk and Talk	TB1
7			Android Manifest file, Externalizing resources like values, themes, layouts, Menus etc	Understanding various layouts and components	Chalk and Talk	TB1
8			Android Manifest file, Externalizing resources like values, themes, layouts, Menus etc		Chalk and Talk	TB1
9		3	Resources for different devices and Languages, Runtime Configuration Changes	Apply android tools on devices	Chalk and Talk	TB1
10			Resources for different devices and Languages, Runtime Configuration Changes		Chalk and Talk	TB1
11			Android Application		Chalk and Talk	TB1

			Lifecycle – Activities, Activity lifecycle,			
12			activity states, monitoring state changes		Chalk and Talk	TB1
13		4	Android User Interface: Measurements – Device and pixel density independent measuring units.	design and develop user interface	Chalk and Talk	TB1
14			Android User Interface: Measurements – Device and pixel density independent measuring units.		Chalk and Talk	TB1
15	II		User Interface (UI) Components – Editable and non-editable Text Views, Buttons,		Chalk and Talk	TB1
16			User Interface (UI) Components – Editable and non-editable Text Views, Buttons,		Chalk and Talk	TB1
17		5	Layouts – Linear, Relative, Grid and Table Layouts.	understand various layouts and components	Chalk and Talk	TB1
18			Layouts – Linear, Relative, Grid and Table Layouts.		Chalk and Talk	TB1
19			Radio and Toggle Buttons,		Chalk and Talk	TB1

			Checkboxes, Spinners, Dialog and pickers			
20			Radio and Toggle Buttons, Checkboxes, Spinners, Dialog and pickers		Chalk and Talk	TB1
21		6	Event Handling – Handling clicks or changes of various UI components	apply event handling to user interface component's	Chalk and Talk	TB1
22			Event Handling – Handling clicks or changes of various UI components		Chalk and Talk	TB1
23			Fragments – Creating fragments, Lifecycle of fragments, Fragment states		Chalk and Talk	TB1
24			Adding fragments to Activity, adding, removing and replacing fragments with fragment transactions		Chalk and Talk	TB1
25		7	Adding fragments to Activity, adding, removing and replacing fragments with fragment transactions		Chalk and Talk	TB1
26			interfacing between fragments and Activities, Multi-screen	describe multi-screen activates	Chalk and Talk	TB1

			Activities			
27			interfacing between fragments and Activities, Multi-screen Activities		Chalk and Talk	TB1
28			Intents and Broadcasts: Intent – Using intents to launch Activities,		Chalk and Talk	TB1
29			Explicitly starting new Activity, Implicit Intents, Passing data to Intents,		Chalk and Talk	TB1
30		8	Getting results from Activities, Native Actions,	create new activities	Chalk and Talk	TB1
31			Getting results from Activities, Native Actions,		Chalk and Talk	TB1
32	III		using Intent to dial a number or to send SMS		Chalk and Talk	TB1
33			Broadcast Receivers – Using Intent filters to service implicit Intents,		Chalk and Talk	TB1
34			Broadcast Receivers – Using Intent filters to service implicit Intents,	understand intent filters	Chalk and Talk	TB1
35			Resolving Intent filters,		Chalk and Talk	TB1
36		9	finding and using Intents received within an Activity		Chalk and Talk	TB1

37			Notifications – Creating and Displaying notifications, Displaying Toasts	demonstrate various notifications	Chalk and Talk	TB1
38	IV	10	Persistent Storage: Files – Using application specific folders and files	illustrate files usage	Chalk and Talk	TB1
39			creating files, reading data from files, listing contents of a directory		Chalk and Talk	TB1
40			Shared Preferences – Creating shared preferences,		Chalk and Talk	TB1
41		11	saving and retrieving data using Shared Preference		Chalk and Talk	TB1
42			Database – Introduction to SQLite database, creating and opening a database	illustrate database usage	Chalk and Talk	TB1
43			Database – Introduction to SQLite database, creating and opening a database		Chalk and Talk	TB1
44			creating tables, inserting retrieving and deleting data,		Chalk and Talk	TB1
45		12	creating tables, inserting retrieving and deleting data,		Chalk and Talk	TB1

46			Registering Content Providers	explain content providing	Chalk and Talk	TB1
47			Using content Providers (insert, delete, retrieve and update)		Chalk and Talk	TB1
48			Using content Providers (insert, delete, retrieve and update)		Chalk and Talk	TB1
49	V	13	Advanced Topics: Alarms – Creating and using alarms	demonstrate alarm usage	Chalk and Talk	TB1
50			Advanced Topics: Alarms – Creating and using alarms		Chalk and Talk	TB1
51			Using Internet Resources – Connecting to internet resource		Chalk and Talk	TB1
52			using download manager		Chalk and Talk	TB1
53		14	Location Based Services – Finding Current Location	understanding location based services	Chalk and Talk	TB1
54			Location Based Services – Finding Current Location		Chalk and Talk	TB1
55			showing location on the Map, updating location		Chalk and Talk	TB1
56			showing location on the Map, updating location		Chalk and Talk	TB1

TEXT BOOKS: 1. Professional Android 4 Application Development, Reto Meier, Wiley India,

(Wrox) , 2012 2. Android Application Development for Java Programmers, James C Sheusi, Cengage Learning, 2013

REFERENCE: 1. Beginning Android 4 Application Development, Wei-Meng Lee, Wiley India (Wrox), 2013

IX. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

COs / POs	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
CO1	3	3	1	1	-	-	-	-	-	-	-	-	1	3	-
CO2	3	3	1	1	-	-	-	-	-	-	-	-	1	3	-
CO3	1	1	3	2	-	-	-	-	-	-	-	2	1	3	1
CO5	1	1	3	2	-	-	-	-	-	-	-	2	-	2	1
CO6	1	1	2	2	-	-	-	-	-	-	-	2	-	3	1

X. QUESTION BANK: (JNTUH)

S. No	Question	Blooms Taxonomy Level
UNIT – I		
PART – A (SHORT ANSWER QUESTIONS)		
1	Describe Android Application Architecture	Knowledge
2	What are the advantages of Android?	Knowledge
3	Explain about the exceptions of Android	Understand
4	Describe the APK format.	Knowledge
5	What is .apk extension?	Understand
PART – B (LONGANSWER QUESTIONS)		
1	Explain the procedure of Installing and running applications on Eclipse	Understand
2	Explain the Runtime environment features	Apply
3	Explain Android development framework	Understand
4	Explain how the lifecycle of an android activity works?	Understand
5	What are Best practices in Android programming, Android tools	Apply
S. o	**Question**	**Blooms Taxonomy Level**
UNIT – II		

PART – A (SHORT ANSWER QUESTIONS)		
1	Write a short note on pixel density Measurements	Knowledge
2	Name some components and their use in user Interface	Understand
3	what is a fragment	Understand
4	what are different types of layouts	Knowledge
5	What are fragments Lifecycle states	Knowledge
PART – B (LONGANSWER QUESTIONS)		
1	explain various components in user interface	Understand
2	describe the mechanism of handling events	Understand
3	Explain the usage of intents and activities in fragments.	Understand
4	How does the lifecycle of fragments work?	Understand
5	Write a program which handles the components Checkboxes, Spinners, Dialog and pickers	A analyze

S. No	**Question**	**Blooms Taxonomy Level**
UNIT – III		
PART – A (SHORT ANSWER QUESTIONS)		
1	What is intent?	Know edge
2	What is a broadcast receiver?	Knowledge
3	What are implicit intents	Know edge
4	How to start new activity	Know edge
5	What is adb?	Know edge
PART – B (LONGANSWER QUESTIONS)		
1	Explain the way of creating notification and displaying toast	Understand
2	How to find and use Intents received within an Activity	Understand
3	Explain different intent types? Give an example	Apply
4	Describe how filters are used for broadcast receivers.	Understand
5	Describe how to use activities with example.	Apply

S. No	**Question**	**Blooms Taxonomy Level**
UNIT – IV		
PART – A (SHORT ANSWER QUESTIONS)		
1	How to create files and folders	Know edge
2	what are content providers	Understand
3	what are shared preferences	Understand
4	How to register content providers	Understand
5	How to create tables in SQLite database	Understand
PART – B (LONGANSWER QUESTIONS)		

1	how to store data locally in an android app	Understand
2	explain the procedure of database connection using sqlite	Know edge
3	describe how to use shared preference with an example	Apply
4	describe the way to persist information in an android device	Know edge
5	explain various ways of using content providers in database transactions	Understand

S.NO	**Question**	**Blooms Taxonomy Level**
UNIT – V		
PART – A (SHORT ANSWER QUESTIONS)		
1	Write some methods of Location object	Knowledge
2	What is meant by location based services	Knowledge
3	How to connect to internet resources in android	Knowledge
4	How to include location service in user interface	Understand
5	How to include alarm in user interface	Understand
PART – B (LONGANSWER QUESTIONS)		
1	Explain how to identify location, quality of service and address with an example	Apply
2	How to schedule notifications using alarm Manager. explain with an example	Apply
3	Explain the procedure to connect to network and what are resources can utilized , give an example	Understand
4	Explain various methods used for Current Location and showing location on the Map	Apply
5	Explain the procedure to create and use alarms	Apply

OBJECTIVE QUESTIONS: JNTUH

UNIT-I

1) Android is licensed under which open source licensing license?

A. Gnu's GPL **B. Apache/MIT**
C. OSS D. Sourceforge

2) Although most people's first thought when they think of Android is Google, Android is not actually owned by Google. Who owns the Android platform?

A. Oracle Technology B. Dalvik **C. Open Handset Alliance**
D. The above statement is and Android is owned by Google

3) As an Android programmer, what version of Android should you use as your minimum Development target?

A. Versions 1.6 or 2.0 B. Versions 1.0 or 1.1
C. Versions 1.2 or 1.3 D. Versions 2.3 or 3.0

4) What was Google's main business motivation for supporting Android?

A. To level the playing field for mobile devices
B. To directly compete with the iPhone
C. To corner the mobile device application market for licensing purposes
D. To allow them to advertise more

5) What was the first phone released that ran the Android OS?
   A. Google gPhone **B. T-Mobile G1**
   C. Motorola Droid D. HTC Hero
6) From a phone manufacturer's point of view, what makes Android so great?
   A. Aside from some specific drivers, it provides everything to make a phone work
   B. It makes the hardware work better
   C. It allows them to compete with Apple's iPhone
   D. It allows users to create apps, generating revenue for the companies
7) What is a funny fact about the start of Android?
   A. It was orginaly going to be called UFO
   B. The first version of Android was released without an actual phone on the market
   C. Androids main purpose was to unlock your car door when you left the keys inside of it.
   D. Was going to be a closed source application to make more money for its company.
8) What year was the Open Handset Alliance announced?
   A. 2005 B. 2006
   C. 2007 D. 2008
9) A device with Android installed is needed to develop apps for Android.
   A. True
   B. False
10) Android tries hard to _____ low-level components, such as the software stack, with interfaces so that vendor-specific code can be managed easily.
   A. confound **B. abstract**
   C. modularize D. compound
11) Google licensed some proprietary apps.
   A. True
   B. False
12) What part of the Android platform is open source?
   A. low-level Linux modules
   B**. all of these answers #The entire stack is an open source platform**
   C. native libraries
   D. application frame work
   E. complete applications
13) When did Google purchase Android?
   A. 2007 **B. 2005**
   C. 2008 D. 2010
14) Android releases since 1.5 have been given nicknames derived how?
   A. Adjective and strange animal
   B. Food
   C. Something that starts w/ 'A' -> Something that starts w/ 'B'...
   D. American states
15) Which one is not a nickname of a version of Andriod?

A. cupcake B. Gingerbread C. Honeycomb **D. Muffin**

16) Android doesn't make any assumptions about a device's screen size, resolution, or chipset.: **A. True**

B. False

17) Why are the so few users left with versions 1.0 and 1.1?

A. The first phones were released with version 1.5

B. 1.0 and 1.1 had security holes that forced carriers to recall phones using them

C. 1.0 and 1.1 are just number designations for the version Apple's iPhone is running

D. Everyone with 1.0 and 1.1 were upgraded to 1.5 over the air automatically

18) Which Android version had the greatest share of the market as of January 2011?

A. 1.1 **B. 1.5** C. 2.3 D. 3.4

19) Which piece of code used in Android is not open source?

A. Keypad driver B**. WiFi? driver**

C. Audio driver D. Power management

20) Android is built upon the Java Micro Edition (J2ME) version of Java.

A. True

B. False

UNIT-II

21) Which among these are NOT a part of Android's native libraries?

A. Webkit **B. Dalvik**

C. OpenGL D. SQLite

22) Android is based on Linux for the following reason.

A. Security B. Portability

C. Networking **D. All of these**

23) What operating system is used as the base of the Android stack?

A. Linux B. Windows

C. Java D. XML

24) What year was development on the Dalvik virtual machine started?

A. 2003 **B. 2005**

C. 2007 D. 2006

25) What is a key difference with the distribution of apps for Android based devices than other mobile device platform applications?

A. Applications are distributed by Apple App Store only

B. Applications are distributed by multiple vendors with different policies on applications.

C. Applications are distributed by multiple vendors with the exact same policies on applications.

D. Applications are distributed by the Android Market only.

26) When developing for the Android OS, Java byte code is compiled into what?

A. Java source code B. Dalvik application code

C. Dalvik byte code D. C source code

27) What does the .apk extension stand for?

A. Application Package

B. Application Program Kit

C. Android Proprietary Kit

D. Android Package

28) When you distribute your application commercially, you'll want to sign it with your own key.
A. True
B. False

29) How does Google check for malicious software in the Android Market?
A. Every new app is scanned by a virus scanner
B. Users report malicious software to Google
C. Google employees verify each new app
D. A seperate company monitors the Android Market for Google

30) Which of these are not one of the three main components of the APK?
A. Dalvik Executable B. Resources
C. Native Libraries **D. Webkit**

31) What is the name of the program that converts Java byte code into Dalvik byte code?
A. Android Interpretive Compiler (AIC)
B. Dalvik Converter
C. Dex compiler
D. Mobile Interpretive Compiler (MIC)

32) What was the main reason for replacing the Java VM with the Dalvik VM when the project began?
A. There was not enough memory capability
B. Java virtual machine was not free
C. Java VM was too complicated to configure
D. Java VM ran too slow

33) Android Applications must be signed.
A. After they are installed
B. Before they are installed
C. Never
D. Within two weeks of installation

34) Which of the following are not a component of an APK file?
A. Resources
B. All of these are components of the APK
C. Native Libraries
D. Dalvik executable

35) The AWT and Swing libraries have been removed from the Android library set.
A. True B. False

36) The R.java file is where you edit the resources for your project.
A. True
B. False

37) What is contained within the manifest xml file?
A. The permissions the app requires
B. The list of strings used in the app
C. The source code
D. All other choices

38) What is contained within the Layout xml file?
A. Orientations and layouts that specify what the display looks like.

B. The permissions required by the app.
C. The strings used in the app.
D. The code which is compiled to run the app.

39) The emulated device for android.

A. Runs the same code base as the actual device, all the way down to the machine layer.

B. Is more of a simulator, and acts as a virtual machine for the Android device.
C. Runs the same code base as the actual device, however at a higher level.
D. An imaginary machine built on the hopes and dreams of baby elephants.

40) Your Java source code is what is directly run on the Android device.

A. True **B. False**

UNIT-III

41) The Emulator is identical to running a real phone EXCEPT when emulating/simulating what?

A. Telephony B. Applications **C. Sensors**
D. The emulator can emulate/simulate all aspects of a smart phone.

42) How is a simulator different from an emulator?

A. Emulators are only used to play old SNES games, simulators are used for software development
B. The emulator is shipped with the Android SDK and third party simulators are not
C. The emulator can virtualize sensors and other hardware features, while the simulator cannot
D. The emulator imitates the machine executing the binary code, rather than simulating the behavior of the code at a higher level.

43) The R file is a(an) generated file

A. Automatically B. Manually
C. Emulated D. None of the above

44) An activity can be thought of as corresponding to what?

A. A Java project **B. A Java class**
C. A method call D. An object field

45) To create an emulator, you need an AVD. What does it stand for?

A. Android Virtual Display
B. Android Virtual Device
C. Active Virtual Device
D. Application Virtual Display

46) The Android SDK ships with an emulator.

A. True B. False

47) The _____ file specifies the layout of your screen.

A. Layout file B. Manifest file
C. Strings XML D. R file

48) The manifest explains what the application consists of and glues everything together.

A. True B. False

49) The Android Software Development Kit (SDK) is all you need to develop applications for Android.

A. True B. False

50) What is the driving force behind an Android application and that ultimately gets converted into a Dalvik executable?

A. Java source code. B. R-file.
C. the emulator. D. the SDK

51) While developing Android applications, developers can test their apps on.

A. Emulator included in Android SDK
B. Physical Android phone
C. Third-party Emulators (Youwave, etc.)
D. All three options will work.

52) What file is responsible for glueing everthing together , explaining what the applicatin consists of, what its main building blocks are, ext...?

A. Layout file B. Strings XML
C. R file **D. Manifest file**

53) The XML file that contains all the text that your application uses.

A. stack.xml B. text.xml
C. strings.xml D. string.java

54) Which of the following is the most "resource hungry" part of dealing with Activities on Android.

A. Closing an app
B. Suspending an app
C. Opening a new app
D. Restoring the most recent app

55) What runs in the background and doesn't have any UI components?

A. Intents B. Content Providers **C. Services** D. Applications

UNIT IV

56) What is an Activity?

A**. A single screen the user sees on the device at one time**
B. A message sent among the major building blocks
C. A component that runs in the background without any interface.
D. Context referring to the application environment.

57) When an activity doesn't exist in memory it is in.

A. Starting state B. Running state
C. Loading state D. Inexistent state.

58) Which of the following is NOT a state in the lifecycle of a service?

A. Starting B. Running
C. Destroyed **D. Paused**

59) There is no guarantee that an activity will be stopped prior to being destroyed.

A. True
B. False

Ans: A

60) Intents

A. are messages that are sent among major building blocks
B. trigger activities to being, services to start or stop, or broadcast
C. are asynchronous

D. all of these

61) In an explicit intent, the sender specifies the type of receiver.
A. True
B. False

62) An implicit intent is the sender specifies the type of receiver?
A. True B. False

63) When the activity is not in focus, but still visible on the screen it is in?
A. running state B. Paused state
C. stopped state D. destroyed state

64) An activity in a stopped state is doing nothing.
A. True **B. False**

65) Application contexts are independent of the activity life cycle.
A. True B. False

66) Services have any user interface components
A. True **B. False**

67) Broadcast receivers are Android's implementation of a system-wide publish/subscribe mechanism, or more precisely, what design pattern?
A. Observer B. Facade
C. Mediator D. Command

68) There can be only one running activity at a given time.
A. True B. False

69) YAMBA stands for Yet Another Mobile Banking App.
A. True **B. False**

70) Lists and adapters are more organizational aids than user interface elements in Android.
A. True B. False

UNIT V

71) What built-in database is Android shipped with?
A. SQLite B. Apache
C. MySQL D. Oracle

72) Creating a UI (User Interface) in Android requires careful use of...
A. Java and SQL **B. XML and Java**
C. XML and C++ D. Dreamweaver

73) A good example app should demonstrate most of the aspects of the application framework that are unique to Android.
A. True B. False

74) What will services be used for in the Yamba project?
A. Recompile the source code
B. It will update tweets periodically in the background
C. The services will pause the app
D. Configures the user interface

75) Which answer is not part of the design philosophy talked about in chapter five?
A. Always whole and complete
B. Small increments
C. Lagre increments
D. Refactoring code

76) App Widgets are can be place on the home screen by the user to check for updates are available?

A. True B. False

77) The android OS comes with many useful system services, which include processes you can easily ask for things such as your..

A. All of these and more.

B. Location

C. Sensor Readings

D. WiFi? Hot Spots

78) What does the Gargenta mean in his Design Philosophy when he says that the project will, "Always be whole and complete"?

A. He means that when we finish the entire project we will have a working application, even though there will be points along the way when we will stop and the application will not run.

B. He means that the program must always be able to compile.

C. He means that we will work on the program by adding self contained chunks to it so that at every stopping point the application runs as though it were a whole and complete application. Each additional chunk simply adds a new functionality to the application.

D. None of the above

79) An Android application is a loose collection of content providers, activities, broadcast receivers, and services.

A. True B. False

80) Which of the following is NOT an activity we will be creating for the YAMBA project?

A. Preferences Activity **B. Update Activity**

C. Timeline Activity D. Status Activity

81) The timeline receiver will receive messages from the Android system.

A. True **B. False**

82) Status data will be exposed to the rest of the Android system via:

A. Intents **B. A content provider**

C. Network receivers D. Altering permissions

83) If the UI begins to behave sluggishly or crash while making network calls, this is likely due to... **A. Network latency** B. Hardware malfunctions

C. Virus on the Server D. Activity manager contains too much.

84) How does Gargenta approach the problem of the app acting sluggishly due to network latency? A. Starting over B. Switching API levels

C. Refactoring code D. Multithreading

XI. WEBSITES:

1.http://enos.itcollege.ee/~jpoial/allalaadimised/reading/Android-Programming-Cookbook.pdf

XII. EXPERT DETAILS:

1.https://web.stanford.edu/class/cs193a/videos.shtml

XIII.JOURNALS:

1. Interactive journal of Interactive Mobile Technologies

XIV.LIST OF TOPICS FOR STUENT SEMINARS:

1.Android Operating Systems

2.Android an open handset alliance project

XV.CASE STUDY:

1.A case study of Smartphone OS