

NGM COLLEGE
PG DEPARTMENT OF COMPUTERSCIENCE
18PCS101-ANDROID PROGRAMMING

K1 Level Multiple Choice Questions with Answers

Unit-I

1 . Explain android activity life cycle?

- A onCreate() -> onStart() -> onActivityCreated() -> onResume() -> onPause() -> onStop() -> onActivityDistroy() -> onDestroy()
- B - onCreate() -> onStart() -> onResume() -> onPause() -> onStop() -> onRestart() -> onDestroy()
- C - onCreate() -> onStart() -> onPause() -> onResume() -> onStop() -> onDestroy()
- D - -> onResume()

Answer : B

2 .How many sizes are supported by Android?

- A - Android supported all sizes
- B - Android does not support all sizes
- C - Android supports small,normal, large and extra-large sizes
- D - Size is undefined in android

Answer : C

3 . How to upgrade SQLite the database from a lower version to higher version in android SQLite?

- A - Using helper Class
- B - Using cursor
- C - Using intent
- D - None of the above

Answer : A

4 . What are commands needed to create APK in android?

- A - No need to write any commands
- B - Create apk_android in command line
- C - Javac,dxtool, aapt tool, jarsigner tool, and zipalign
- D - None of the above

Answer : C

5. Which company developed android?

- A. Apple
- B. Google
- C. Android Inc.
- D. Nokia

Answer : C

6.Which company bought android?

- A. Apple
- B. No company
- C. Nokia
- D. Google

Answer : D

7.Web browser available in android is based on

- A. Chrome
- B. Firefox
- C. Open-source Webkit
- D. Opera

Answer : C

8. Android is based on which kernel?

- A. Linux kernel
- B. Windows kernel

- C. MAC kernel
- D. Hybrid Kernel

Answer : A

9. Is Android available in ROM?

- A. Yes
- B. No

Answer : B

10. Android is based on which language.

- A. C
- B. C++
- C. VC++
- D. Java

Answer : D

Unit-II

11. Which is the latest mobile version of android?

- A. 3.0 (Honeycomb)
- B. 2.3 (Gingerbread)
- C. 2.6
- D. 2.2 (Froyo)

Answer : B

12. What is android?

- A. Desktop Operating System
- B. Programming Language
- C. Mobile Operating System
- D. Database

Answer : C

13. Android doesn't support which format.

- A. MP4
- B. MPEG
- C. AVI
- D. MIDI

Answer : C

14. Android supports which features.

- A. Multitasking
- B. Bluetooth
- C. Video calling
- D. All of the above

Answer : D

15. Which of the following Dialog boxes are supported by Android? 1) AlertDialog 2) ProgressDialog 3) DatePickerDialog 4) TimePickerDialog<

- A. 1 and 2
- B. 3 and 4
- C. all of the above
- D. none of these

Answer : C

16. If you provide a _____, your choice identifier (second parameter) can be 0.

- A. Runnable
- B. Tapas
- C. Includes
- D. Droide

17. If you want to increase the whitespace between widgets, you will need to use the _____ property

- A. Android:padding

- B. Android:digits
- C. Android:capitalize
- D. Android:autoText

Answer : A

18. Using a content provider, which of the following operations are able to perform? 1) create 2) read 3) update 4) delete

- A. 1,2,3
- B. 2,3,4
- C. all of the above
- D. none of these

Answer : C

19. Which of the following don't have any UI component and run as a background process?

- A. Services
- B. simulator
- C. Emulator
- D. none of these

ANSWER: A

20. An Android SDK is required to develop the application for Android.

Yes

No

ANSWER: A

Unit-III

21. Which of the following holds Java source code for the application?

- A. res/
- B. assets/
- C. src/
- D. bin/

ANSWER: C

22. Which of the following(s) is/are component of APK file?

- A. Resources
- B. Dalvik Executable
- C. both a and b
- D. none of above

ANSWER: C

23. Typically MIME type will be

- A. html
- B. text
- C. Text/HTML
- D. Doc

ANSWER: D

24. Eclipse is an _____

- A. Android tool
- B. IDE
- C. Android interface
- D. none of these

ANSWER: B

25. To update contents of content provider using cursor and commit you need to call _____

- A. commitUpdates()
- B. updates()
- C. commit()
- D. none of these

ANSWER: A

26. insert data into a content provider, you need to use_____ 1) insert() 2) bulkInsert() 3) getContentProvider() 4)update()

A 1 and 2

B. 3 and 4

C all of the above

D none of these

ANSWER: A

27.What is mean by ANR?

A Application not Recognized

B Android not recognized

C Application Not Responding

D none of these

ANSWER: C

28.ADB stands for

A Android Debug Bridge

B Application Debug Bridge

C Android data bridge

D Application data bridge

ANSWER: A

29. In _____, sender specifies type of receiver.

A Implicit intent

B Explicit intent

C a and b

D none of these

ANSWER: A

30. Which of the following are different storage methods available in Android? 1) Shared Preferences 2) Internal Storage 3) External Storage 4) SQLite Databases 5) Network Connection 6)Intermediate storage

A. 1,2,3,4,6

B. 2,3,4,5,6

C. 1,2,3,4,5

D. all of above

ANSWER: C

Unit-IV

31.For creating user interface in Android, you have to use

A. Eclipse

B. java and XML

C. java and SQL

D. Java and Pl/sql

ANSWER: B

32.Android provides a few standard themes, listed in_____

A R.style

B X.style

C menifest.XML

D application

ANSWER: A

33.For _____ , code used by Android is not a open source

A Device driver

B video driver

C WiFi driver

D Bluetooth driver

ANSWER: C

34 .What is Android?

Android is a stack of software for mobile devices which includes an Operating System, middleware and some key applications. The application executes within its own process and its own instance of Dalvik Virtual Machine.

35.What is An android manifest file?

Every application must have an AndroidManifest.xml file (with precisely that name) in its root directory. The manifest file presents essential information about your app to the Android system, information the system must have before it can run any of the app's code.

36. How to launch an activity in android?

Using with intent, we can launch an activity.

```
Intent intent = new Intent(this, MyTestActivity.class);  
startActivity(intent);
```

37. How to update UI from a service in android?

Use a dynamic broadcast receiver in the activity, and send a broadcast from the service. Once the dynamic receiver is triggered update UI from that receiver

38. What is BroadcastReceivers?

BroadcastReceiver is a component that does nothing but receive and react to broadcast announcements.

39. What is the importance of XML-based layouts?

The use of XML-based layouts provides a consistent and somewhat standard means of setting GUI definition format. In common practice, layout details are placed in XML files while other items are placed in source files.

40. What is a Fragment?

A fragment is a part or portion of an activity. It is modular in a sense that you can move around or combine with other fragments in a single activity. Fragments are also reusable.

Unit-V

41. Where will you declare your activity so the system can access it?

Activity is to be declared in the manifest file. For example:

```
<manifest></manifest>  
<application></application>  
<activity android:name=".MyIntellipaat">
```

42. What is an anonymous class in android?

A - Interface class

B - A class that does not have a name but have functionalities in it

C - Java class

Answer : B

43. What are return types of startActivityForResult() in android?

A - RESULT_OK

B - RESULT_CANCEL

C - RESULT_CRASH

D - A & B

Answer : D

44. What is an activity in Android?

A - Activity performs the actions on the screen

B - Manage the Application content

C - Screen UI

D - None of the above

Answer : A

45. DEFINE- Linear Layout

LinearLayout is a view group that aligns all children in a single direction, vertically or horizontally.

46. DEFINE- Relative Layout

RelativeLayout is a view group that displays child views in relative positions.

47. What is An Intent?

It is connected to either the external world of application or internal world of application ,Such as, opening a pdf is an intent and connect to the web browser.etc.

48. What is a content provider in android?

A content provider component supplies data from one application to others on request. Such requests are handled by the methods of the ContentResolver class. A content provider can use different ways to store its data and the data can be stored in a database, in files, or even over a network.

49 ..DEFINE Android Application Architecture?

Android application architecture has the following components:

Services – It will perform background functionalities

Intent – It will perform the inter connection between activities and the data passing mechanism

Resource Externalization – strings and graphics

Notification – light, sound, icon, notification, dialog box and toast

Content Providers – It will share the data between applications

50. *Difference between onCreate() and onStart()?*

The onCreate() method is called once during the Activity lifecycle, either when the application starts, or when the Activity has been destroyed and then recreated, for example during a configuration change.

The onStart() method is called whenever the Activity becomes visible to the user, typically after onCreate() or onRestart().

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K2 Level Short Questions with Answers

Unit-I

1) Explain Android.

It is an open-sourced operating system that is used primarily on mobile devices, such as cell phones and tablets. It is a Linux kernel-based system that's been equipped with rich components that allows developers to create and run apps that can perform both basic and advanced functions.

2) Explain Google Android SDK.

The Google Android SDK is a toolset that developers need in order to write apps on Android enabled devices. It contains a graphical interface that emulates an Android driven handheld environment, allowing them to test and debug their codes.

3) Specify the Android Architecture.

Android Architecture is made up of 4 key components:

- Linux Kernel
- Libraries
- Android Framework
- Android Applications

4) Describe the Android Framework.

The Android Framework is an important aspect of the Android Architecture. Here you can find all the classes and methods that developers would need in order to write applications on the Android environment.

5) How AAPT is applied in Android?

AAPT is short for Android Asset Packaging Tool. This tool provides developers with the ability to deal with zip-compatible archives, which includes creating, extracting as well as viewing its contents.

6) Mention is the importance of having an emulator within the Android environment?

The emulator lets developers "play" around an interface that acts as if it were an actual mobile device. They can write and test codes, and even debug. Emulators are a safe place for testing codes especially if it is in the early design phase.

7) Give the use of an activityCreator.

An activityCreator is the first step towards the creation of a new Android project. It is made up of a shell script that will be used to create new file system structure necessary for writing codes within the Android IDE.

8) Describe Activities.

Activities are what you refer to as the window to a user interface. Just as you create windows in order to display output or to ask for an input in the form of dialog boxes, activities play the same role, though it may not always be in the form of a user interface.

9) Why Intents are used?

Intents displays notification messages to the user from within the Android enabled device. It can be used to alert the user of a particular state that occurred. Users can be made to respond to intents.

10) Differentiate Activities from Services.

Activities can be closed, or terminated anytime the user wishes. On the other hand, services are designed to run behind the scenes, and can act independently. Most services run continuously, regardless of whether there are certain or no activities being executed.

Unit-II

11) Which items are important in every Android project?

These are the essential items that are present each time an Android project is created:

- AndroidManifest.xml
- build.xml
- bin/
- src/
- res/
- assets/

12) Specify the importance of XML-based layouts.

The use of XML-based layouts provides a consistent and somewhat standard means of setting GUI definition format. In common practice, layout details are placed in XML files while other items are placed in source files.

13) Explain containers.

Containers, as the name itself implies, holds objects and widgets together, depending on which specific items are needed and in what particular arrangement that is wanted. Containers may hold labels, fields, buttons, or even child containers, as examples.

14) What is Orientation?

Orientation, which can be set using `setOrientation()`, dictates if the `LinearLayout` is represented as a row or as a column. Values are set as either `HORIZONTAL` or `VERTICAL`.

15) What is the importance of Android in the mobile market?

Developers can write and register apps that will specifically run under the Android environment. This means that every mobile device that is Android enabled will be able to support and run these apps. With the growing popularity of Android mobile devices, developers can take advantage of this trend by creating and uploading their apps on the Android Market for distribution to anyone who wants to download it.

16) What do you think are some disadvantages of Android?

Given that Android is an open-source platform, and the fact that different Android operating systems have been released on different mobile devices, there's no clear cut policy to how applications can adapt with various OS versions and upgrades. One app that runs on this particular version of Android OS may or may not run on another version. Another disadvantage is that since mobile devices such as phones and tabs come in different sizes and forms, it poses a challenge for developers to create apps that can adjust correctly to the right screen size and other varying features and specs.

17) What is adb?

Adb is short for Android Debug Bridge. It allows developers the power to execute remote shell commands. Its basic function is to allow and control communication towards and from the emulator port.

18) What are the four essential states of an activity?

- Active – if the activity is at the foreground
- Paused – if the activity is at the background and still visible

- Stopped – if the activity is not visible and therefore is hidden or obscured by another activity
- Destroyed – when the activity process is killed or completed terminated

19) What is ANR?

ANR is short for Application Not Responding. This is actually a dialog that appears to the user whenever an application have been unresponsive for a long period of time.

20) Which elements can occur only once and must be present?

Among the different elements, the and elements must be present and can occur only once. The rest are optional, and can occur as many times as needed.

Unit-III

21) How are escape characters used as attribute?

Escape characters are preceded by double backslashes. For example, a newline character is created using '\n'

22) What is the importance of settings permissions in app development?

Permissions allow certain restrictions to be imposed primarily to protect data and code. Without these, codes could be compromised, resulting to defects in functionality.

23) What is the function of an intent filter?

Because every component needs to indicate which intents they can respond to, intent filters are used to filter out intents that these components are willing to receive. One or more intent filters are possible, depending on the services and activities that is going to make use of it.

24) Enumerate the three key loops when monitoring an activity

- Entire lifetime – activity happens between onCreate and onDestroy
- Visible lifetime – activity happens between onStart and onStop
- Foreground lifetime – activity happens between onResume and onPause

25) When is the onStop() method invoked?

A call to onStop method happens when an activity is no longer visible to the user, either because another activity has taken over or if in front of that activity.

26) Is there a case wherein other qualifiers in multiple resources take precedence over locale?

Yes, there are actually instances wherein some qualifiers can take precedence over locale. There are two known exceptions, which are the MCC (mobile country code) and MNC (mobile network code) qualifiers.

27) What are the different states wherein a process is based?

There are 4 possible states:

- foreground activity
- visible activity
- background activity
- empty process

28) How can the ANR be prevented?

One technique that prevents the Android system from concluding a code that has been responsive for a long period of time is to create a child thread. Within the child thread, most of the actual workings of the codes can be placed, so that the main thread runs with minimal periods of unresponsive times.

29) What role does Dalvik play in Android development?

Dalvik serves as a virtual machine, and it is where every Android application runs. Through Dalvik, a device is able to execute multiple virtual machines efficiently through better memory management.

30) What is the AndroidManifest.xml?

This file is essential in every application. It is declared in the root directory and contains information about the application that the Android system must know before the codes can be executed.

Unit-IV

31) What is the proper way of setting up an Android-powered device for app development?

The following are steps to be followed prior to actual application development in an Android-powered device:

- Declare your application as "debuggable" in your Android Manifest.
- Turn on "USB Debugging" on your device.
- Set up your system to detect your device.

32) Enumerate the steps in creating a bounded service through AIDL.

1. create the .aidl file, which defines the programming interface
2. implement the interface, which involves extending the inner abstract Stub class as well as implanting its methods.
3. expose the interface, which involves implementing the service to the clients.

33) What is the importance of Default Resources?

When default resources, which contain default strings and files, are not present, an error will occur and the app will not run. Resources are placed in specially named subdirectories under the project res/ directory.

34) When dealing with multiple resources, which one takes precedence?

Assuming that all of these multiple resources are able to match the configuration of a device, the 'locale' qualifier almost always takes the highest precedence over the others.

35) When does ANR occur?

The ANR dialog is displayed to the user based on two possible conditions. One is when there is no response to an input event within 5 seconds, and the other is when a broadcast receiver is not done executing within 10 seconds.

36) What is AIDL?

AIDL, or Android Interface Definition Language, handles the interface requirements between a client and a service so both can communicate at the same level through interprocess communication or IPC. This process involves breaking down objects into primitives that Android can understand. This part is required simply because a process cannot access the memory of the other process.

37) What data types are supported by AIDL?

AIDL has support for the following data types:

- string
- charSequence
- List
- Map
- all native Java data types like int,long, char and Boolean

38) What is a Fragment?

A fragment is a part or portion of an activity. It is modular in a sense that you can move around or combine with other fragments in a single activity. Fragments are also reusable.

39) What is a visible activity?

A visible activity is one that sits behind a foreground dialog. It is actually visible to the user, but not necessarily being in the foreground itself.

40) When is the best time to kill a foreground activity?

The foreground activity, being the most important among the other states, is only killed or terminated as a last resort, especially if it is already consuming too much memory. When a memory paging state has been reached by a foreground activity, then it is killed so that the user interface can retain its responsiveness to the user.

Unit-V

41) Is it possible to use or add a fragment without using a user interface?

Yes, it is possible to do that, such as when you want to create a background behavior for a particular activity. You can do this by using `add(Fragment,string)` method to add a fragment from the activity.

42) How do you remove icons and widgets from the main screen of the Android device?

To remove an icon or shortcut, press and hold that icon. You then drag it downwards to the lower part of the screen where a remove button appears.

43) Write the core components under the Android application architecture.

There are 5 key components under the Android application architecture:

- services
- intent
- resource externalization
- notifications
- content providers

44) Which are all composes a typical Android application project?

A project under Android development, upon compilation, becomes an .apk file. This apk file format is actually made up of the AndroidManifest.xml file, application code, resource files, and other related files.

45) Explain Sticky Intent.

A Sticky Intent is a broadcast from sendStickyBroadcast() method such that the intent floats around even after the broadcast, allowing others to collect data from it.

46) Do all mobile phones support the latest Android operating system?

Some Android-powered phone allows you to upgrade to the higher Android operating system version. However, not all upgrades would allow you to get the latest version. It depends largely on the capability and specs of the phone, whether it can support the newer features available under the latest Android version.

47) Give the uses of is portable wi-fi hotspot.

Portable Wi-Fi Hotspot allows you to share your mobile internet connection to other wireless device. For example, using your Android-powered phone as a Wi-Fi Hotspot, you can use your laptop to connect to the Internet using that access point.

48) Explain an action.

In Android development, an action is what the intent sender wants to do or expected to get as a response. Most application functionality is based on the intended action.

49) Give the difference between a regular bitmap and a nine-patch image?

In general, a Nine-patch image allows resizing that can be used as background or other image size requirements for the target device. The Nine-patch refers to the way you can resize the image: 4 corners that are unscaled, 4 edges that are scaled in 1 axis, and the middle one that can be scaled into both axes.

50) Which language is supported by Android for application development?

The main language supported is Java programming language. Java is the most popular language for app development, which makes it ideal even for new Android developers to quickly learn to create and deploy applications in the Android environment.

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K3 Level Questions:

Unit-I:

1. Discuss about the evolution of Android.
2. Examine Android's Fundamental Components.
3. Discuss about the Structure of an Android Application
4. Examine the Application Life Cycle.
5. Discuss about a simple Android Application.
6. Discuss about defining UI through Layout Files.
7. Examine how to specify Comments in Layout Files
8. Discuss Control Properties in Layout Files.
9. Compare Views and View groups in Layout Files.
10. Examine Resources and Backgrounds.

Unit-II:

11. Discuss about UI Development in Android
12. Examine building a UI Completely in Code.
13. Examine building a UI Completely in XML.
14. Discuss about building a UI in XML with Code.
15. Examine Text Control and Button Control in Android.
16. Discuss about Date and Time Controls in Android.
17. How do you implement the MapView Control in Android?
18. Discuss about SimpleCursorAdapter.
19. Write notes on ArrayAdapter.
20. Discuss about Styles and Themes.

Unit-III:

21. Give the uses of Fragments in Android.
22. Explain the Structure of Fragment.
23. Write an example program for Fragment.
24. Explain about Broadcast Receivers.
25. How do you code a Simple Receiver? Give example.
26. Explain how to registering a Receiver.
27. Discuss about saving state using SQLite.
28. List all the SQLite Packages and Classes.
29. Discuss about creating an SQLite Database.
30. Discuss about Content Providers in Android.

Unit-IV:

31. Discuss about Motion Events with example.
32. Discuss about Motion Event Object with example.
33. Discuss about recycling Motion Events.
34. Discuss about Velocity Tracker with example.
35. Examine Multitouch with example.
36. Examine Gestures with example.
37. Examine Drag and Drop with example.
38. Discuss about detecting Sensors.
39. Examine Sensor Events with example.
40. Write notes on interpreting Sensor Data.

Unit-V:

41. Examine the concept of Security in Android.
42. Classify the types of Permissions in Android.
43. Discuss about the Android Security Model.
44. How do you perform Runtime Security Checks in Android?
45. Write notes on deploying the Android Application.
46. Write the steps for becoming a Android Application Publisher.

47. Discuss about preparing the Application for sale.
48. Explain payment options in Android Application.
49. Explain the rules to be followed during uploading the Android Application.
50. Write notes on uploading the Android Application.

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K4 and K5 Level Questions:

Unit-I:

1. Explain Android's Fundamental Components.
2. Explain about the structure of an Android Application.
3. Classify the different ways of designing the User Interface in Android.
4. Explain about various Layouts in Android.
5. Explain Resources and Backgrounds in Android.

Unit-II:

6. Explain about various controls in Android.
7. Explain about Adapters and List Controls in Android.
8. Explain the basic List control and List View control.
9. What is Gallery Control? Explain with an example program.
10. Explain Menus and Action bars with example program

Unit-III:

11. What is Fragment? Explain the Structure of Fragment and its uses.
12. Explain about Broadcast Receivers with example program.
13. What is SQLite? What are the Packages and Classes available in SQLite?
14. Explain about exploring databases on the Emulator and available devices.
15. Explain about Content Providers in Android.

Unit-IV:

16. What is MotionEvent? Explain about MotionEvent Object with example.
17. Explain about Velocity Tracker with example.
18. Write an Android program to display the available sensors in an Android device.

19. Explain Multitouch. Write an Android program to implement the concept of Multitouch.
20. Explain the concept of Drag and Drop with example program.

Unit-V:

21. Explain the concept of Security in Android. Discuss about the Android Security model.
22. Write notes on deploying the Android Application.
23. Explain payment options in Android Application. Discuss about preparing the Application for sale.
24. Explain how to perform Runtime Security Checks in Android.
25. Create an Android Application for Chat Server and Client. Write the steps for uploading the Android Application on Google Play Store.