MANAV RACHNA vidyanatarikshat | MANAV RACHNA UNIVERSITY
FORMERLY MANAV RACHNA COLLEGE OF ENGINEERING
NAAC ACCREDITED 'A' GRADE INSTITUTION
Declared as State Private University under section 2f of the UGC act, 1956

DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY

ODD SEMESTER (JULY-DEC-2020)

QUESTION PAPER STRUCTURE (QPS)

FACULTY NAME: ANKUR KUMAR AGGARWAL		NAME OF COURSE COORDINATOR: ANKUR KUMAR AGGARWAL			Exam Platform : MS-Team
COURSE NAME: MOBILE COMPUTING WITH ANDROID	COURSE CODE: CSH303B-T	CREDIT: 4	MAX. MARKS: 30	TIME DURATION: 90 MINUTES	DATE OF EXAM: 23 JUN 2020 (11:00 AM)

Q.NO.		QUESTIONS	MARKS	CO ADDRESSED	BLOOM'S LEVEL
PART-A	1(A)	Which of the following are examples of layers and/or elements found in Android's middleware infrastructure (choose all that apply): (A) Power Management (B) Native C/C++ libraries (C) Binder (IPC) Driver (D) Activity Manager Service (E) Android Run-Time (ART) (F) Hardware abstraction layer	1	CO1	BT1 Remembering
	1(B)	Which of the following are examples of Android app components (choose all that apply): (A) Dalvik Virtual Machine (B) Broadcast Receivers (C) Content Providers (D) Package Manager (E) Activities (F) Services	1	CO2	BT2 Understanding
	1(C)	Which of the following correctly describe what an intent is in Android (choose only one): (A) A component that runs in the background to perform long-running (B) operations or access remote resources (C) An event handler that responds to system-side broadcast announcements (D) A message that describes an action to perform or an event that has occurred (E) A message that provides a screen within which users can interact in order to do something	1	CO1	BT1 Remembering
	1(D)	Which of the following correctly describe what an intent is in Android (choose only one): (A) URL (B) Data (C) Service (D) Stack (E) Extras (F) Flags (G) Action (H) Name	1	CO3	BT2 Understanding
	1(E)	Which of the following statements are true for an "implicit" intent (choose any one): (A) The action must not be specified (B) The name must not be specified (C) The category must not be specified (D) The data must not be specified	1	CO1	BT1 Remembering
	1(F)	Which of the following correctly describe what an activity is in Android (choose any one): (A) A component that runs in the background to perform long-running operations or access remote resources (B) A message that describes an action to perform or an event that has occurred (C) A component that defines a user-facing operation that's displayed on a device screen (D) An event handler that responds to system-side broadcast announcements	1	CO1	BT1 Remembering
	1(G)	Which of the following are lifecycle methods provided by Android's activity framework (choose all that apply): (A) onStop() (B) onResume() (C) onPause() (D) onBind() (E) onCreate() (F) onReceive() (G) onDestroy() (H) onStart()	1	CO2	BT2 Understanding
	1(H)	Which of the following lifecycle methods may not be called in low memory situations (choose all that apply): (A) onDestroy() (B) onStop() (C) onResume() (D) onPause()	1	CO3	BT2 Understanding
	1(I)	Which of the following is the correct order of function call in lifecycle of an android activity (Choose any one): (A) onCreate–>onStart–>onActivityStarted–>onResume–>onPause–>onStop–>onActivityDistroy–>onDestroy (B) OnCreate–> onStart–>onResume–>onPause–>onStop–>onRestart–>onDestroy (C) onCreate–>onStart–>onPause–>onResume–>onStop–>onDestroy->onRestart (D) onStart–>onPause–>onCreate->onResume–>onStop–>onDestroy->onRestart	1	CO2	BT2 Understanding

	1(J)	**Which of the following is the default LayoutManager in Android application after 2.6 version (Choose any one):** **(A) RelativeLayout** **(B) LinearLayout** **(C) ConstraintLayout** **(D) GridLayout**	**1**	**CO1**	**BT1 Remembering**
PART-B	Q2(A)	**Consider the below scenarios and explain what operations will be performed to handle such scenarios in Activity lifecycle (attempt all scenario):** **a. Activity goes to background** **b. Activity comes in foreground** **c. Notification bar is opened above the Activity** **d. Background activity moved to foreground** **e. When high resource consumption is done by Activity**	**5**	**CO2**	**BT3 Applying**
	2(B)	**Explain the functioning of Activity to Activity call by Explicit intent using code snippet example for below scenario:** **"User provides EmpID detail on Activity1 and clicks the SendID button, which starts the Activity2 that reads the information shared by Activity1 and if EmpID is not equal to 2234 Activity2 replies the result with Error message otherwise, adds a new Welcome message to the EmpID detail and replies back to Activity1. Same operation is performed between Activity1 (SendID button; same button for above scenario) and Activity3 (check for EmpID: 2243).**	**5**	**CO3**	**BT4 Analyzing**
	Q3(A)	**Examine a scenario of UI screen where users can enter details of a product (product_name, product_category, product_id, product_price, product_count; all are private members of class) and on click of button Activity raise a Toast with all information. Now the developer is facing a challenge that when the user changes the orientation of the device the detail of activity gets lost and all the field details are empty after orientation change. Being the Android developer you have to handle the above situation and preserve the detail of the product entered by the user every time s/he changes the device orientation. (Write only the required Java code, assume the GUI for user application as per above scenario)**	**5**	**CO3**	**BT4 Analyzing**
	3(B)	**Contemplate a user scenario who asks a developer to create an application where the user can enter the details of his/her favorite location (longitude and latitude) and on click of a button only opens the Google Map (use setPackage() function to handle this situation) in his/her device even if there are more apps to handle geo data based action. Being the Android developer you need to create such an application as per above scenario. (Write only the required Java code, assume the GUI for user application as per above scenario)**	**5**	**CO2**	**BT3 Applying**
********** END **********					

BT1 Remembering
BT2 Understanding
BT3 Applying
BT4 Analyzing
BT5 Evaluating
BT6 Creating

CO1) Ability to identify general programming knowledge to develop mobile applications and recall their skills of using Android software development tools.
CO2) Understanding of the specific requirements, possibilities and challenges when developing for a mobile context and describe their ability to generalize software with reasonable complexity on mobile platform.
CO3) Demonstrate the interaction between user interface and underlying application components and infrastructure.
CO4) Classify the plan and carry out a design work including developing a prototype that can be evaluated with a specified user group and illustrate the deployment of app on various mobile API level.
CO5) Have developed practical skills and knowledge to construct software for a mobile application and justify their ability to debug program/application running on mobile devices
CO6) Have the ability to reflect over possibilities and demands in collaborative Android mobile application development.