

RGPV (DIPLOMA WING) BHOPAL		OBE CURRICULUM FOR THE COURSE		FORMAT-3	Sheet No. 1/5
Branch	Information Technology			Semester	VI
Course Code		Course Name	Android Application Development		
Course Outcome - 1	Make use of Android application			Teach Hrs	Marks
Learning Outcome 1	Explain Android architecture , tool & features			6	10
Contents	<ul style="list-style-type: none"> • Overview of Android OS, Features, Applications • Android application life cycle, Android Architecture, Android Versions • Android development Tool(ADT) 				
Method Assessment of	External: End semester theory examination (Pen paper test).				
Learning Outcome 2	Explain different components of Android application			6	10
Contents	<ul style="list-style-type: none"> • Android apps components, App Resources • Deploying application package • Manifest file, build.gradle file 				
Method Assessment of	Internal: Mid semester theory examination (Pen paper test).				
Learning Outcome 3	Develop simple application in android environment			12	10
Contents	<ul style="list-style-type: none"> • Installation of Android studio, setting up SDK environment, Creating AVD manager, Launching Emulator • Creating a new "hello Android" application 				
Method Assessment of	External: Laboratory observation and viva voce.				
RGPV (DIPLOMA WING) BHOPAL		OBE CURRICULUM FOR THE COURSE		FORMAT-3	Sheet No. 2/5
Branch	Information Technology			Semester	VI
Course Code		Course Name	Android Application Development		
Course Outcome - 2	Apply UI Design Views & layouts			Teach	Mark

		Hrs	s
Learning Outcome 4	Explain views and layout for android applications	6	10
Contents	<ul style="list-style-type: none"> Layouts overview: Using Linear, Relative & Frame Layout Views: Text view, Image view, List view, Grid View, Stack View Padding & Margin with views & layouts, Sliding drawer 		
Method of Assessment	External: End semester theory examination (Pen paper test).		
Learning Outcome 5	Explain Menus and dialogs for android apps	6	10
Contents	<ul style="list-style-type: none"> Define Menu Structure, Defining Menu items, submenus Using context & Pop-up menus, Adding Dialogs, displaying alert dialog 		
Method of Assessment	Internal: Mid semester theory examination (Pen paper test).		
Learning Outcome 6	Experiment with UI Designs	12	10
Contents	<ul style="list-style-type: none"> Create UI Design by various UI Elements, Widgets , Adding Text view widget Creating buttons like Radio button, check box, Image Button, Date picker 		
Method of Assessment	External: Laboratory observation and viva voce.		
Learning Outcome 7	Develop navigation in android	12	10
Contents	Create Action Bar, Navigation tabs, drop-down list		
Method of Assessment	Internal: Lab Observation/Assignment		
RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 3/5
Branch	Information Technology	Semester	VI
Course Code		Course Name	Android Application Development
Course Outcome - 3	Develop graphics, fragment activities & adapters	Teach Hrs	Marks
Learning Outcome 8	Illustrate graphics and fragments in applications	6	10

Contents	<ul style="list-style-type: none"> Graphics Resources: <ul style="list-style-type: none"> ✓ Images: bitmap images, JPEG & GIF ✓ Transitions, Text Animation Fragments lifecycle & activities(adding, removing & replacing) 			
Method of Assessment	External: End semester theory examination (Pen paper test).			
Learning Outcome 9	Outline adapters in android apps	6	10	
Contents	Adapters: Overview , Types (base adapters, array adapter, list-array adapter, simple cursor adapter)			
Method of Assessment	External: End semester theory examination (Pen paper test).			
Learning Outcome 10	Experiment with UI Events	12	10	
Contents	Implementing onClick listener and Key Events: onKeyUp & onKeyDown by using UI Events like event call-back methods, Event handling , onclick events			
Method of Assessment	External: Laboratory observation and viva voce.			
RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 4/5	
Branch	Information Technology	Semester	VI	
Course Code		Course Name	Android Application Development	
Course Outcome - 4	Illustrate intents , notification services	Teach Hrs	Marks	
Learning Outcome 11	Explain android intent & intent filters	6	10	
Contents	<ul style="list-style-type: none"> Android intent: Introduction, types Intent filters Intents activities: sending intents, broadcast intent 			
Method of Assessment	External: End semester theory examination (Pen paper test).			
Learning Outcome 12	Explain Services and notifications	6	10	
Contents	<ul style="list-style-type: none"> Services: Overview , Types (foreground, background, bound) Life Cycle of Android Services Basics of notification (Push Notification), Create & Send 			

	Notification			
Method Assessment of	External: End semester theory examination (Pen paper test).			
RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 5/5	
Branch	Information Technology	Semester	VI	
Course Code		Course Name	Android Application Development	
Course Outcome - 5	Build android applications with database		Teach Hrs	Marks
Learning Outcome 13	Classify Android database		6	10
Contents	<ul style="list-style-type: none"> • Android database <ul style="list-style-type: none"> ✓ Introduction, ✓ SQLite Database ✓ Content Providers • Android database design consideration <ul style="list-style-type: none"> ✓ Opening & Creating database ✓ Querying a database: adding, updating & deletion 			
Method Assessment of	External: End semester theory examination (Pen paper test).			
Learning Outcome 14	Explain working of Content Providers		6	10
Contents	<ul style="list-style-type: none"> • Android built-in content providers, Registering content providers, Creating content providers database • Case study on available mobile application testing tool like Appium. 			
Method Assessment of	Internal: Mid semester/Quiz theory examination (Pen paper test).			
Learning Outcome 15	Build address book app		12	10
Contents	<ul style="list-style-type: none"> • Creating & picking contacts using content provider • Adding data to contact database • Reading contact details 			
Method Assessment of	Internal: Lab Observation/Assignment			

NOTE: *"available" means latest tools / technology, since tools name mentioned as per current industry trends that may get change over course of time hence faculties are not restricted to teach or follow tools as mentioned, faculties can have their option with change of tool technology.

REFERENCE BOOKS:

S No	Title & Publication	Author
1.	Beginning Android 4 Application Development by Wiley publication	Wei-Meng Lee
2.	Android Programming for Beginners by Packt Publishing	John Horton
3.	Android for Absolute Beginners by Apress	Grant Allen
4.	https://developer.android.com/docs	Web resource
5.	https://www.javatpoint.com/android-tutorial	Web resource
6.	https://docs.microsoft.com/en-us/xamarin/android/	Web resource
7.	E-books/E-tools/Relevant software to be used as recommended by AICTE/RGPV	

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				1	1	
Course Name	Android Application Development												
CO Description	Make use of Android application												
LO Description	Explain Android architecture , tool & features												
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Overview of Android OS, Features, Applications Android application life cycle, Android Architecture, Android Versions Android development Tool(ADT) 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Question paper + Rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculties should aware students about Android operating system abilities & functionalities.													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				1	2	
Course Name		Android Application Development											
CO Description		Make use of Android application											
LO Description		Explain different components of Android application											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Android apps components, App Resources Deploying application package Manifest file, build.gradle file 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	Mid semester theory examination	Pen Paper Test /Quiz / Short Answer	10	Test Paper + rating scale			Internal						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
<ul style="list-style-type: none"> Building of .gradle file taken more time so for improving the performance of gradle , update it's time to time or do the below steps . In Android Studio go to File -> Settings -> Build, Execution, Deployment -> Build Tools -> Gradle Check the 'Offline work' under 'Global Gradle settings' 													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				1	3	
Course Name		Android Application Development											
CO Description		Make use of Android application											
LO Description		Develop simple application in android environment											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Installation of Android studio, setting up SDK environment, creating AVD manager, Launching Emulator Creating a new “hello Android” application 	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, chalk board, PPT, text book, charts, Computer, IDE							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal								
1	Laboratory observation and viva voce.	Laboratory observation / work and viva voce	10	Observation schedule/check-list /rating scales /rubrics	External								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculty can refer the official site (https://developer.android.com/studio/install) for downloading & installation procedure of Android studio & its learning document. After installing the IDE, must enable virtualization technology from BIOS for creating the AVD & launching emulator.													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				2	4	
Course Name		Android Application Development											
CO Description		Apply UI Design Views & layouts											
LO Description		Explain views and layout for android applications											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Layouts overview: Using Linear, Relative & Frame Layout Views: Text view, Image view, List view, Grid View, Stack View Padding & Margin with views & layouts, Sliding drawer 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculties & students can refer official site (https://developer.android.com/guide/topics/ui/declaring-layout) tutorial as learning contents.													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				2	5	
Course Name		Android Application Development											
CO Description		Apply UI Design Views & layouts											
LO Description		Explain Menus and dialogs for android apps											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Define Menu Structure, Defining Menu items, submenus Using context & Pop-up menus, Adding Dialogs, displaying alert dialog 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	Mid semester theory examination	Pen Paper Test /Quiz / Short Answer	10	Test paper + Rating scale			Internal						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculties & students can be referring official site (https://developer.android.com/guide/topics/ui/menus) tutorial for Menus. https://developer.android.com/guide/topics/ui/dialogs for Dialogs													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				2	6	
Course Name		Android Application Development											
CO Description		Apply UI Design Views & layouts											
LO Description		Experiment with UI Designs											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Create UI Design by various UI Elements, Widgets , Adding Text view widget Creating buttons like Radio button, check box, Image Button, Date picker 	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	Lab Observation/Assignment	Laboratory observation / work and viva voce	10	Observation schedule/check-list /rating scales /rubrics			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculties & students can be referring official site (https://developer.android.com/training/basics/firstapp/building-ui) tutorial for learning contents.													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code			Course Code			CO Code	LO Code	Format No. 4
				I	0	4				2	7	
Course Name	Android Application Development											
CO Description	Apply UI Design Views & layouts											
LO Description	Develop navigation in android											
SCHEME OF STUDY												
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks					
1	Create Action Bar, Navigation tabs, drop-down list	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, chalk board, PPT, text book, charts, video film.						
SCHEME OF ASSESSMENT												
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required				External / Internal				
1	Lab Observation/Assignment	Laboratory observation / Work and viva voce	10	Observation schedule/check-list /rating scales /rubrics				Internal				
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)												
Faculties & students can be referring official site (https://developer.android.com/docs) tutorial as learning contents.												

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				3	8	
Course Name		Android Application Development											
CO Description		Develop graphics, fragment activities & adapters											
LO Description		Illustrate graphics and fragments in applications											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> ● Graphics Resources: <ul style="list-style-type: none"> ✓ Images: bitmap images, JPEG & GIF ✓ Transitions, Text Animation ● Fragments lifecycle & activities(adding, removing & replacing) 	Interactive classroom teaching, demonstration , quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculties & Students can be refer site tutorial https://developer.android.com/guide/components/activities/intro-activities													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				3	9	
Course Name	Android Application Development												
CO Description	Develop graphics, fragment activities & adapters												
LO Description	Outline adapters in android apps												
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required						Remarks	
1	Adapters: Overview , Types (base adapters, array adapter, list-array adapter, simple cursor adapter)	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
https://developer.android.com/reference/android/widget/Adapter													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				3	10	
Course Name	Android Application Development												
CO Description	Develop graphics, fragment activities & adapters												
LO Description	Experiment with UI Events												
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Implementing onClick listener and Key Events: onKeyUp & onKeyDown by using UI Events like event call-back methods, Event handling , onclick events 	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	Laboratory test by observation	Laboratory observation / work and viva voce	10	Observation schedule/check-list /rating scales /rubrics			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculty visit android studio official site for documentation https://developer.android.com/jetpack/guide/ui-layer/events													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				4	11	
Course Name		Android Application Development											
CO Description		Illustrate intents , notification services											
LO Description		Explain android intent & intent filters											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Android intent: Introduction, types Intent filters Intents activities: sending intents, broadcast intent 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculty visit android studio official site for documentation https://developer.android.com/guide/components/intents-filters													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				4	12	
Course Name		Android Application Development											
CO Description		Illustrate intents , notification services											
LO Description		Explain Services and notifications											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> Services: Overview , Types (foreground, background, bound) Life Cycle of Android Services Basics of notification (Push Notification), Create & Send Notification 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Pen paper test + rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
Faculty visit android studio official site for documentation For android services https://developer.android.com/guide/components/services for android notification https://developer.android.com/guide/topics/ui/notifiers/notifications													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				5	13	
Course Name		Android Application Development											
CO Description		Build android applications with database											
LO Description		Classify Android database											
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	<ul style="list-style-type: none"> ● Android database <ul style="list-style-type: none"> ✓ Introduction, ✓ SQLite Database ✓ Content Providers ● Android database design consideration <ul style="list-style-type: none"> ✓ Opening & Creating database ✓ Querying a database: adding, updating & deletion 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required			External / Internal						
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale			External						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
https://developer.android.com/reference/android/database/package-summary													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No. 4
					I	0	4				5	14	
Course Name	Android Application Development												
CO Description	Build android applications with database												
LO Description	Explain working of Content Providers												
SCHEME OF STUDY													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required						Remarks	
1	<ul style="list-style-type: none"> Android built-in content providers, Registering content providers, Creating content providers database Case study on available mobile application testing tool like Appium. 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.							
SCHEME OF ASSESSMENT													
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required								External / Internal	
1	Mid semester theory examination	Pen Paper Test /Quiz / Short Answer	10	Question paper + rating scale								Internal	
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
https://developer.android.com/guide/topics/providers/content-provider-basics Available mobile application testing tool like appium usage can be demonstrate to test app developed by student													

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code		Course Code		CO Code	LO Code	Format No. 4
					I	0	4				
Course Name		Android Application Development									
CO Description		Build android applications with database									
LO Description		Build address book app									
SCHEME OF STUDY											
S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks				
1	<ul style="list-style-type: none"> Creating & picking contacts using content provider Adding data to contact database Reading contact details 	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate address book in android studio inside the lab to students, students will practice, provide predefine problems, models their solutions etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, PPT, development IDE					
SCHEME OF ASSESSMENT											
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal						
1	Lab Observation/Assignment	Lab Observation/work and Assignment	10	Observation schedule/check-list /rating scales /rubrics	Internal						
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)											
https://developer.android.com/training/contacts-provider/retrieve-names											