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| ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27  MSC Computer Science-III SEMESTER  **SEMESTER EXAMINATION: OCTOBER 2022**  **(Examination conducted December 2022)**  **CS 9222-MOBILE COMMUNICATION AND APPLICATIONS**  Time- 2 ½ hrs Max Marks-70  **This question paper contains four printed pages and three parts**  **PART A**  **Answer all the questions. Each carries one mark 1X15=15**  1. What is Mobile communication? a) Allows to communicate from different locations without the use of physical medium b) Allows to communicate from different locations with the use of physical medium c) Allows to communicate from same locations without the use of physical medium d) Allows to communicate from same locations with the use of physical medium  2. Which of the following is a type of wireless communication? a) LAN b) WAN c) PAN d) All of the mentioned  3. Which of the following is not a TDMA standard of 2.5G network? a) GPRS b) GSM c) HSCSD d) EDGE  4. The FDMA channel carries \_\_\_\_\_\_\_\_\_\_\_\_ phone circuit at a time. a) Ten b) Two c) One d) Several  5. Which of the following does not come under the tele services of GSM? a) Standard mobile telephony b) Mobile originated traffic c) Base originated traffic d) Packet switched traffic  6. Which of the following does not come under subsystem of GSM architecture? a) BSS b) NSS c) OSS d) Channel  7. The key mechanisms in mobile IP  a)Agent discovery  b)Agent registration  c)Tunneling  d)all the above  8. For which of the following Android is mainly developed?  a)Servers  b)Desktops  c)Laptops  d)Mobile devices  9. Which of the following virtual machine is used by the Android operating system?  a)Dalvik virtual machine  b)Simple virtual machine  c)None of the above  d)JVM  10. APK stands for -  a)Android Phone Kit  b)Android Page Kit  c)Android Package Kit  d)None of the above  11. What is an activity in android?  a)android class  b)android package  c)A single screen in an application with supporting java code  d)None of the above  12. On which of the following, developers can test the application, during developing the android applications?  a)Third-party emulators  b)Emulator included in Android SDK  c)Physical android phone  d)All of the above  13. Which of the following kernel is used in Android?  a)MAC  b)Windows  c)Linux  d)Redhat  14. Which of the following is not an activity lifecycle callback method?  a)onClick() method  b)onCreate() method  c)onStart() method  d)onBackPressed() method  15. Which of the following is contained in the src folder?  a)XML  b)Java source code  c)Manifest  d)None of the above  **PART B**  **Answer any five questions. Each carries 5 marks. 5X5=25**  16.What are the features of Mobile communication?  OR  16.What are Antennas and Explain its types.  17.What is Localization ? Explain MSISDN in detail?  OR  17.Explain Tunneling and reverse Tunneling  18.What are the limitations of mobile devices?  OR  18.Explain in detail the various layers of Android stack with a neat diagram.  19.Develop an application that uses GUI components, fonts and colors.  OR  19.Develop an application that uses layout managers and event listeners.  20.What are the steps to be considered to install the android and run the application in your emulator or device?  OR  20.Write a Java code for Android activity life cycle.  **PART C** | | | | |

Answer any three questions .Each carries 10 marks 10X3=30

21a. Explain GSM Architecture in detail. [7+3]

b. Create an application that display custom designed opening screen.

22a. Differentiate FDMA and CDMA. Justify and Explain Which one is better . [6+4]

b. Explain the working of Mobile IP.

23a. Illustrate with a suitable java code the function of menu driven program using option menu.   
 b. Explain how audio is included in mobile app ,write a java code snippet. [6+4]

24a.Develop an android app for student registration form consisting of Regno,Name,Class,Dept that makes use of database. [7+3]

b. What is Debugging? How can it be brought in with log messages?