18

B6M19259 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Computer Science Degree Examination, March /April 2019

BCS6B12 – Android Programming

(2016 Admission onwards)

ime: 3 hours Max. Marks: 80

Part A

Answer *all* questions

Each question carries 1 marks

1. Which operating system is used as the base of the Android stack?
2. The Android SDK ships with an Eclipse plug-in called ----------.
3. When intent carries a component name with it, it is called ------ intent.
4. A smaller window that pops up in front of the current window to show an urgent message is called-------
5. ---------- converts Java class files into .dex files.
6. Which is the latest android OS version?
7. State whether true or false. R.java is an automatically generated file.
8. In which directory the string.xml file is stored?
9. ---------- is used to share data between Android applications.
10. On which life cycle state the user can interact with an activity?

(10 x 1=10 Marks)

Part B

Answer *all* questions

Each question carries 2 marks

11. Distinguish between contentprovider and contentresolver?
12. Write XML syntax for defining the Dimension resources.
13. What is AVD in android?
14. List any three components of APK?
15. What is an intent?

(5 x2= 10 Marks)

19

2B6M19260 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Computer Science Degree Examination, March /April 2019

BCS6B13 – Fundamentals of Operating Systems

(2016 Admission onwards)

Time: 3 hours Max. Marks: 80

Part A

Answer* all *questions.

Each question carries 1 mark.

1. List the major functions of operating system.
2. What is process control block?
3. What is meant by mutual exclusion?
4. What is deadlock?
5. What is TLB (Translation Look aside Buffer) hit ratio?
6. What are temporal locality and spatial locality?
7. What is the advantage of using 'Round Robin' scheduling?
8. What is meant by Real Time Operating System?
9. Differentiate between Protection and Security.
10. Name any two mobile OS.

(10 x 1 = 10 marks)

Part B

Answer* all *questions.

Each question carries 2 marks.

11. Compare and contrast parallel and distributed systems.
12. List the major contents of PCB.
13. What is the idea behind using feedback queue process scheduling?
14. What do you mean by 'thrashing'?
15. Explain access matrix.

(5 x 2 = 10 marks)

Part C

Answer *any five* questions

Each question carries 4 marks

16. Explain activities.
17. Explain fragment and fragment manager?
18. Define the Structure of an Android Content URIs.
19. Explain the RadioButton Control with an example.
20. Explain the procedure to run the android application on a real device.
21. Explain the DatePicker and TimePicker Controls.
22. Explain the PreferenceActivity class.
23. How an intent can be used to invoke an activity?

(5 x 4= 20 Marks)

Part D

Answer *any five* questions

Each question carries 8 marks

24. Explain about Android's Common Controls.
25. Explain various Layout Managers available in Android.
26. Explain Adapters with suitable examples.
27. Write short notes on (with example):
    1) Dialog Fragment.
    2) Spinner Control.
    3) Pop-up Menus.
28. Explain Resources Directory Structure.
29. Explain SQLite and SQLite Commands.
30. Explain the life cycle of an Activity.
31. Explain the procedure to setup the environment for developing applications on Android?

(5 x 8= 40 Marks)

Part C

Answer any **five** *questions.*
Each question carries 4 marks.

16. What are the advantages of time sharing OS over batch systems?
17. Explain FIFO page replacement algorithms and find the number of page faults, by simulating the algorithm using three frames, considering the following page references.

    2, 4, 3, 4, 2, 6, 3, 2, 1, 5, 4, 3, 2, 3, 4, 2

18. What are three requirements of any solution to the critical sections problem? Why are the requirements needed?
19. What are the different methods to deal with deadlocks?
20. Describe the sequence of steps that occurs when a timer interrupt occurs that eventually results in a context switch to another application.
21. Name and describe any two processor scheduling algorithms. Critically compare them with each other by taking suitable examples and find out average waiting time and average turn around time (assume required values suitably).
22. Explain indexed file access methods.
23. Explain the differences between traditional OS and mobile OS.

(5 x 4 = 20 marks)

Part D

Answer any **five** *questions.*
Each question carries 8 marks.

24. Describe about the evolution of Operating system.
25. Explain process life cycle with the help of a neat diagram.
26. Explain Bankers algorithm.
27. Explain any one classical synchronization problem along with its solution.
28. Detail about allocation and free space management in file systems.
29. Differentiate dynamic loading and dynamic linking.
30. How paging is implemented? Mention its merits and demerits.
31. Discuss various authentication and authorization methods.

(5 x 8 = 40 marks)

20

6M19261 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Computer Science Degree Examination, March /April 2019

BCS6B14– Computer Networks

(2016 Admission onwards)

me: 3 hours Max. Marks: 80

I. Answer all questions:1 mark each

1. The number of layers in ISO-OSI reference model is _____.
2. Combination of two or more network topologies is known as _____.
3. VRC stands for _____.
4. A Bluetooth network is called as _____.
5. _____ number of bits are used in IPv6 addressing scheme.
6. Bridge can operate on both layers those are physical and _____ layer.
7. SCTP means _____.
8. FTP uses _____ parallel TCP connections to transfer a file.
9. *State true or false:* switch is a not a network edge device.
10. *State true or false:* Optical fiber transmission media has the highest transmission speed in a network.

(10 × 1 = 10 Marks)

II. Answer all questions: 2 mark each

11. What are the different categories of networks?
12. What is CSMA/CA?
13. Explain the function of Gateways.
14. What do you mean by remote login?
15. Distinguish between FTP and TFTP.

(5 × 2 = 10 Marks)

III. Answer any five questions: 4 mark each

16. Compare and contrast packet switching and message switching.
17. Give an account on Huffman code.
18. Write a note on NAT.
19. What is Cryptography? Explain the concept of public and private keys.
20. What is Domain Name Service? Explain its structure.
21. Explain any two networking devices.
22. Explain POP.
23. Distinguish between TCP and UDP.

(5 × 4 = 20 Marks)

IV. Answer any five questions: 8 mark each

24. What is meant by topology? Explain different types of topologies in computer network.
25. Explain the layered architecture of TCP/IP model with a diagram.
26. Explain any two error detection and error correction techniques.
27. What are the differences between IPv4 and IPv6? Also explain the mapping of IPv4 to IPv6.
28. Explain briefly the architecture of WWW.
29. What is an IP address? Explain the different classes of IP addresses.
30. Explain SMTP in detail.
31. Explain the procedure for configuring Network Interface Card.

(5 × 8 = 40 Marks)

21

M19262 (Pages : 2) Reg. No:.....

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Computer Science Degree Examination, March /April 2019

BCS6B17(O2) – System Software

(2016 Admission onwards)

: 3 hours Max. Marks: 80

Part A
Answer *all* questions
Each question carries 1 marks

1. What is dead code elimination?
2. What is parsing?
3. What is binding?
4. What is macro processor?
5. Define call by reference.
6. What is relocation?
7. What is basic block?
8. What is execution gap?
9. What is the use of assembly directive statement LTORG?
10. What is constant folding?

(10 x 1=10 Marks)

Part B
Answer *all* questions
Each question carries 2 marks

1. What is a postfix representation?
2. Explain YAAC.
3. Differentiate between dynamic linking and dynamic loading.
4. Why is multi - pass language processor advised over single pass?
5. What is IR?

(5 x2= 10 Marks)

Part C

Answer *any five* questions

Each question carries 4 marks

16. What is an assembler? State different functions of the assembler.
17. State the advantages of the parameters in macros.
18. Explain the pass structure of macro assembler.
19. Explain program relocation and its significance.
20. What is a compiler? Explain the functions of a compiler.
21. What is intermediate code? Explain its importance in compiling.
22. How does the lexical analyzer created by LEX work?
23. Comment on non-relocatable, relocatable and self relocating programs.

(5 x 4= 20 Marks)

Part D

Answer *any five* questions

Each question carries 8 marks

24. Write notes on :

    (a) Macros and its advantages (b) Lexical analysis.

25. Explain the different phases of a compiler.
26. Describe the compilation of expressions in detail.
27. Explain different loaders schemes.
28. Describe the pass structure of two pass assembler with suitable algorithm.
29. Explain dynamic loading and the advantages in detail.
30. Write notes on :

    (a) Dynamic linking (b) code optimization.

31. What is an overlay? Explain its advantages.

(5 x 8= 40 Marks)