

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2022

(CBCSS—UG)

Computer Science

BCS 6B 16(d)—Computer Graphics

(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answer Type Questions)*Answer atleast eight questions.**Each question carries 3 marks.**All questions can be attended.**Overall Ceiling 24.*

1. What is display processor ? List out its components.
2. What is gray scale in graphics ?
3. What do you mean by frame in graphics ?
4. Explain the technology behind LCD monitor.
5. What do you mean by scan conversion ?
6. Explain basic idea behind scan line polygon filling algorithm.
7. What is reflection transformation ? Explain with example.
8. What is the primary use of clipping ?
9. What are the basic transformations types in computer graphics ?
10. Describe windows and view ports.
11. What is the use of clipping in computer graphics ?
12. What do you mean by CMY color mode ?

(8 × 3 = 24 marks)

Turn over

Section B (Short Essay Type Questions)

Answer atleast five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

13. Briefly explain various display devices in computer graphics ?
14. Differentiate between DDA and Bresenham's line drawing algorithm.
15. Explain any *one* polygon filling algorithm in computer graphics.
16. Explain any *two* in connection with 2D transformation :
 - (a) Translation.
 - (b) Rotation.
 - (c) Scaling.
17. What is homogeneous transformation ?
18. Discuss in detail any *two* color models.
19. Explain the key features of GIMP.

(5 × 5 = 25 marks)

Section C (Essay Type Questions)

Answer any one questions.

Each question carries 11 marks.

20. Explain scan conversion of Bresenham's circle generating algorithm.
21. Explain in detail Cohen Sutherland Polygon clipping algorithm.

(1 × 11 = 11 marks)

SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 16 (D)—COMPUTER GRAPHICS

(2017 and 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

1. The operation of most video monitors was based on the standard _____ design.
2. _____ monitors are also referred to as vector displays.
3. Those functions in a graphics package that we use to describe the various picture components are called the _____.
4. In circle generating algorithms computations can be reduced by considering the _____ of circles.
5. Operations that are applied to the geometric description of an object to change its position, orientation, or size are called _____.
6. _____ is a rigid-body transformation that moves objects without deformation.
7. A world-coordinate area selected for display is called a _____.
8. _____ allows us to reduce computations by first concatenating the various transformation matrices.
9. Each frequency value within the visible band of electromagnetic spectrum corresponds to a distinct _____.
10. If low frequencies are predominant in the reflected light, the object is described as _____.

(10 × 1 = 10 marks)

Part B*Answer all questions.**Each question carries 3 marks.*

11. Explain aspect ratio.
12. What are the two basic approaches to area filling on raster systems ?
13. Explain the use of Modeling transformation with an example.

Turn over

14. State the different procedures in line clipping.
15. Write a brief note on electromagnetic spectrum.

(5 × 3 = 15 marks)

Part C

*Answer any five questions.
Each question carries 5 marks.*

16. Differentiate the working of LCD and LED monitors.
17. Discuss the architecture of raster scan systems.
18. Explain Bresenham's circle generating algorithm.
19. Briefly describe the rotation of an object about an arbitrary pivot position.
20. What are homogeneous coordinates ? Why is it used ?
21. Define line clipping. State the algorithm for Cohen Sutherland line clipping.
22. What are the different characteristics of colour ?
23. Briefly explain CMYK Colour model with a diagram.

(5 × 5 = 25 marks)

Part D

*Answer any three questions.
Each question carries 10 marks.*

24. Briefly explain the different approaches to display colour pictures in a colour CRT monitor.
25. Differentiate Boundary fill and Flood fill algorithm.
26. Briefly explain with examples :
(a) Reflection. (b) Shear.
27. What are the different colour models available ? Explain any two.
28. What is GIMP ? How do you manipulate images using GIMP ?

(3 × 10 = 30 marks)

SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 16 (B)—MICROPROCESSOR AND APPLICATIONS

(2017 and 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. The 8086 works with _____ bit words, while 8088 work with _____ bit words.
2. MIPS stand for _____, and it measures the performance of _____.
3. Opcode stands for _____.
4. How many bits are there in a double word (Intel) ? _____
5. _____ is the Maximum clock frequency in 8086.
6. The microprocessor 8086 uses _____ bits memory addresses ; but its registers are _____ bits. (8-bits, 16-bits, 20-bits, 24-bits)
7. What are the four memory segments in 8086 ?
8. If a segment ending address is BFFFFH, the very next segment starting address will be _____ H.
9. The 8086 was _____ than 8088 in communication speed with the other computer components.
10. Because of Pentium's Superscalar architecture, the number of instructions that are executed per clock cycle is _____.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 3 marks.*

11. What is Microprocessor ? Give the power supply and clock frequency of 8085.
12. Explain the purpose of the I/O instructions IN and OUT.
13. What is an Assembler ?

Turn over

14. What is the use of modem control unit in 8251 ?
15. List any two advanced features of 80286 microprocessor compared to the earlier models.
(5 × 3 = 15 marks)

Part C

*Answer any five questions.
Each question carries 5 marks.*

16. Explain briefly about bus structure of 8086.
17. Write short notes of Key Debounce.
18. Explain the multiple interrupts and priorities of 8086 microprocessor.
19. Write an assembly language program to subtract two 8 bit numbers.
20. Write short notes on Macros with an example.
21. Write an Assembly language program to generate a delay of 200 ms using an 8086 system that runs on 10 MHz frequency.
22. Distinguish between Maskable and Non-Maskable interrupt.
23. Write short notes on 80486 processor.

(5 × 5 = 25 marks)

Part D

*Answer any three questions.
Each question carries 10 marks.*

24. Explain the features of 8086 in detail.
25. Explain how the instructions are classified in 8086 microprocessors.
26. Discuss the various ways of returning attributes in an Assembly language program with an example.
27. Explain the block diagram of 8259 Programmable interrupt controller with a diagram.
28. Explain the primitive differences between Pentium and Premium Pro processors.

(3 × 10 = 30 marks)

SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 16 (A)—SYSTEM SOFTWARE

(2017 and 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. A system program that set-up executable program in main memory ready for execution is called _____.
(a) Compiler. (b) Loader.
(c) Linker. (d) Text editor.
2. Which of the following loader is executed when the system first turned on or restarted ?
(a) Boot loader. (b) Compile and go loader.
(c) Bootstrap loader. (d) Relocating loader.
3. The translator which performs macro expansion is called _____.
4. The assembler stores all the names and their corresponding values in _____.
5. The process of assigning a label or macro name to the string is called _____.
6. A system program that combines the separately compiled modules of a program into a form suitable for execution is _____.
(a) Assembler. (b) Linking loader.
(c) Cross compiler. (d) Load and go.
7. Parsing is also known as _____.
(a) Lexical analysis. (b) Syntax analysis.
(c) Semantic analysis. (d) Code generation.
8. An analysis, which determines the syntactic structure of the source statement is known as _____.
(a) Semantic analysis. (b) Syntax analysis.
(c) Process analysis. (d) Function analysis.

Turn over

9. A compiler has _____ phases.
- (a) 7. (b) 5.
(c) 6. (d) 8.
10. The _____ table is created by YACC.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 3 marks.*

11. What are assemblers? Give its functions.
12. What are macros? Explain its use.
13. What is meant by dynamic binders?
14. What is meant by semantic analysis?
15. What is YACC tools?

(5 × 3 = 15 marks)

Part C

*Answer any five questions.
Each question carries 5 marks.*

16. What is Location Counter? Explain its use in assembler.
17. Explain the differences between compilers and interpreters.
18. Explain about different types of conditional macro expansion statements.
19. Write a note on overlays.
20. What is linking loader? Explain.
21. Explain the concept of input buffering in lexical analysis of a compiler.
22. What are the different code optimization techniques? Explain.
23. Explain the differences between static binding and dynamic binding.

(5 × 5 = 25 marks)

Part D

*Answer any three questions.
Each question carries 10 marks.*

24. Discuss in detail the design of multi-pass assembler.
25. State and explain the algorithm for one pass macro processor.
26. Explain program relocation concept with suitable example program.
27. Explain the design of a two-pass compiler.
28. What is LEX? Explain the different sections of LEX with example.

(3 × 10 = 30 marks)

SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 13—COMPUTER NETWORKS

(2017 and 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. Expand the term OSI.
2. DTE stands for _____.
3. In _____ a block of bits is divided into rows and a redundant row of bits is added to the whole block.
4. VRC means _____.
5. IPv4 address scheme uses _____ bits.
6. Repeater operates in _____ layer of OSI reference model.
7. _____ protocol provides a connection-oriented reliable service for sending messages.
8. In transport layer, a message is normally divided into transmittable
9. In cryptography _____ function takes an arbitrary block of data and returns a fixed size bit string.
10. DES means _____.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 3 marks.*

11. What are the different categories of networks ?
12. What wireless LAN ?
13. Explain the functions of Gateways.
14. What is SNMP ? Explain
15. What do you mean by hash function ? Give its use.

(5 × 3 = 15 marks)

Turn over

Part C

*Answer any five questions.
Each question carries 5 marks.*

16. Give an account on different network topologies.
17. Find CRC code for the message-M = 10100001 with polynomial function $p(x) = X^3 + 1$.
18. Explain the differences between Pure and Slotted ALOHA.
19. Explain the transition issues from IPv4 address to IPv6 addressing schemes.
20. What is DNS ? Explain how it resolves domain name into TP address.
21. Compare and contrast Remote Login and FTP protocol.
22. Differentiate between block cipher and stream cipher.
23. What are the fundamental elements of public key cryptosystem ? Explain.

(5 × 5 = 25 marks)

Part D

*Answer any three questions.
Each question carries 10 marks.*

24. Compare and contrast OSI and TCP/IP reference models.
25. Explain any two error detection and correction techniques with examples.
26. Discuss about Distance Vector Routing and Link State Routing algorithms.
27. Explain the various services offered by transport layer.
28. Describe RSA Digital Signature Scheme.

(3 × 10 = 30 marks)

SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 12—OPERATING SYSTEMS

(2017 and 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

- Operating System is the most common type of _____ software.
 - Application.
 - Utility.
 - System.
 - Symbian.
- A binary semaphore is a semaphore with integer value is _____.
 - 1.
 - 0.8.
 - 1.
 - 0.5.
- _____ command in UNIX is used to list all the files in the system.
 - Cat.
 - ls.
 - Touch.
 - Tar.
- Shell is _____.
 - Command Interpreter.
 - Interface between Kernel and Hardware.
 - Interface between user and applications.
 - Command Compiler.
- Which scheduling algorithm allocates the CPU first to the process that requests the CPU first ?
 - First-come, first-served scheduling.
 - Shortest job scheduling.
 - Priority scheduling.
 - None of the above.

6. The size of virtual memory is based on which of the following ?
- (a) CPU. (b) RAM.
(c) Address bus. (d) Data bus.
7. With _____ is brought into main memory only when the reference is made to a location on that page.
- (a) Demand page. (b) Swapping.
(c) Caching. (d) None of the above.
8. _____ is an open-source software.
- (a) UNIX. (b) Linux.
(c) MAC. (d) Windows.
9. RR stands for _____.
10. NT in windows NT stands for _____.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 3 marks.*

11. What is semaphore ? Explain its use.
12. What is meant by shell programming? List any two shells in Unix.
13. What do you mean by process synchronization ?
14. What do you mean by thrashing ? Explain any one cause for thrashing.
15. What is UNIX kernel ?

(5 × 3 = 15 marks)

Part C

*Answer any five questions.
Each question carries 5 marks.*

16. Distinguish between multiprogramming and time sharing operating systems.
17. What do you mean by PCB? Where is it used ? What are its contents ? Explain.
18. Describe the salient features of UNIX Operating System.

19. Explain how will you remove a directory tree even when it is not empty without using `rmdir` command.
20. What is process synchronization ? Explain its hardware.
21. What is segmentation ? Explain how it differ from paging.
22. Explain the features of Android operating system.
23. Give short account on dynamic linking and loading.

(5 × 5 = 25 marks)

Part D

*Answer any three questions.
Each question carries 10 marks.*

24. Explain the four necessary conditions for the occurrence of deadlock.
25. What is Linux File system ? Explain the way setting different file permissions in Linux.
26. State dining philosopher's problem and give a solution using semaphores. Write the structure of philosopher.
27. Explain the concept and implementation of virtual memory.
28. Explain the architecture of mobile operating system.

(3 × 10 = 30 marks)

SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 11—ANDROID PROGRAMMING

(2017 and 2018 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. Android is modified version of _____.
 - (a) Linux.
 - (b) Windows 95.
 - (c) DOS.
 - (d) Apple.
2. Which file references all the resources found in a project ?
3. What is ID in Android ?
4. Name any one method used for navigation in the case of Cursor.
5. Name the super class of Spinner class.
6. What are the states of RadioButton ?
7. When the fragment goes into background mode it goes through _____ and _____ states.
8. What is icon menu ?
9. What is the permission you need to declare when writing files to external storage ?
10. Which preference is equivalent of a spinner ?

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 3 marks.*

11. What are the contents of Android SDK ?
12. What is Content Provider? How do you create a new Content Provider ?
13. Explain the purpose of Views and View Groups.

Turn over

14. Briefly explain Dialog Fragment with its purpose.
15. What are Shared Preferences ?

(5 × 3 = 15 marks)

Part C

*Answer any five questions.
Each question carries 5 marks.*

16. Write a short note on the features of Android.
17. Explain Explicit and Implicit Intents.
18. Write a note on Layout Manager and also discuss about Linear Layout and Absolute Layout.
19. What is the purpose of Adapters ? Explain any two types of Adapters in Android.
20. Explain the features of SQLite and also explain any five data types supported in SQLite with examples.
21. How do you retrieve a single Contact from a Table ? Explain with the help of Android code.
22. What is Tabbed Action bar ? Explain with the help of code.
23. Explain how to respond to XML-Based Menu Items? Explain with example.

(5 × 5 = 25 marks)

Part D

*Answer any three questions.
Each question carries 10 marks.*

24. Explain the Architecture of Android with the help of a neat diagram.
25. Briefly explain the following Android resources :
 - (a) Colors.
 - (b) Strings.
 - (c) Plurals.
 - (d) Images.
 - (e) Dimensions.
26. What are check boxes and radio buttons ? Write a code to show the usage of check boxes and radio buttons in Android.
27. Briefly explain the types of menus are available in the Android SDK. Write a code to demonstrate how to create menu and add items.
28. How do you store data to External Storage ? Write appropriate code to demonstrate it.

(3 × 10 = 30 marks)

SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 17 (03)—MICROPROCESSOR AND APPLICATIONS

(2014 to 2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A**I. Answer all questions in One Word :**

- 1 The _____ unit in 8086 makes the system bus signals available for external interfacing of devices.
- 2 _____ pin in 8086 indicates that the other system bus masters will be prevented from gaining the system bus.
- 3 If _____ flag is set, the 8086 processor enters the single step execution mode.
- 4 The _____ is able to handle a number of simultaneously appearing interrupt requests.
- 5 The recurrence of the numerical values or constants in a program code is reduced by _____.
- 6 When the PS(active low)/EN(active low) pin of 8259A used in buffered mode, then it can be used as a _____.
- 7 When a key is pressed, a _____ logic comes into operation in scanned keyboard mode with 2 key lockout.
- 8 In 8251 A, the pin that controls the rate at which the character is to be transmitted is _____.
- 9 In fetch-decode unit of pentium, the number of parallel decoders that accept the stream of fetched instructions and decode them is _____.
- 10 The stage in which the CPU fetches the instructions from the instruction cache in superscalar organisation is _____.

(10 × 1 = 10 marks)

Turn over

Section B

II. Write short answers on the following questions :

- 11 Explain the significance of HOLD, RESET and READY signals in 8086 processor.
- 12 What is Interrupt Request Register ?
- 13 Distinguish between macro and subroutine.
- 14 What is the function of DMA address register ?
- 15 Discuss the use of modern control unit in 8251 ?

(5 × 2 = 10 marks)

Section C

III. Write short essay on any *four* of the following questions :

- 16 Discuss the function of instruction queue in 8086 ?
- 17 Explain the 8086 maximum mode configuration.
- 18 List the machine control instructions of 8086 and their functions.
- 19 Explain the purpose of assembler directives.
- 20 Explain the Intel Pentium processor's pipelining and superscalar architecture.
- 21 Write short notes on : Programmable interrupt controller - 8259.
- 22 Explain INT 21H - DOS interrupt.
- 23 Write 8086 assembly language program to perform the following a. To move a string of words from offset 1000h to offset 6000h. The Length of the string is 0Ch.

(5 × 4 = 20 marks)

Section D

IV. Write Essay on any *five* of the following questions :

- 24 Describe any *five* addressing modes of 8086 with suitable examples.
- 25 What are the functions of Bus Interface Unit (BIU) in 8086 ?
- 26 What are the different flags available in status register of 8086 ?
- 27 How the 20 bit effective address is calculated in 8086 processor ?

- 28 What are the various programmed data transfer methods ?
- 29 What are the basic modes of operation of 8255 ?
- 30 Give the different types of command words used in 8259a ?
- 31 Explain the architecture of Pentium processor.

(5 × 8 = 40 marks)

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SIXTH SEMESTER (CUCBCSS-UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 17 (02)—SYSTEM SOFTWARE

(2014 to 2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

*Answer all the questions.
Each question carries 1 mark.*

1. _____ divides the given source code into some meaning full words.
2. The process of evaluating the constant expression at compile time is called _____.
3. The process of adjusting the code and data in the program to reflect the assigned address is called _____.
4. In a compiler, keywords of a language are recognized during _____ of the program.
5. Which data structure in a compiler is used for managing information about variables and their attributes?
6. Type Checking is done during _____.
7. In a *two* pass assembler, address resolution of local symbols are done using _____.
8. Forward Reference Table is arranged like _____.
9. Object modules generated by assembler that contains unresolved external references are resolved for two or more object module by _____.
10. _____ is a computer program that generates lexical analyzers.

(10 × 1 = 10 marks)

Turn over

Section B (Short Answer Questions)

*Answer all the questions.
Each question carries 2 marks.*

11. Define Scanning.
12. What is the purpose of OPCODE TAB ?
13. Write the function of Loader.
14. Define Parsing.
15. Write the need of Lexical Analyzer.

(5 × 2 = 10 marks)

Section C (Short Essays)

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

16. Explain in detail about the role of Lexical Analyser.
17. Define Symbol Table.s Explain about data structures used for Symbol table.
18. Explain Dynamic Linking in detail.
19. What are the benefits of interpretation ?
20. Explain advantages of using macros.
21. How the Assembler gives Program Relocation Information to the Loader ?
22. Explain global and local optimization in detail.
23. Give a detailed explanation about Overlay.

(5 × 4 = 20 marks)

Section D (Long Essays)

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

24. (a) Explain Symbol table.
(b) What are the principle sources of code optimization ?
25. Explain different data structures used in an assembler.

26. Explain linking in detail.
27. Explain different types of parsing in detail.
28. Explain lexical and syntax analysers in detail.
29. What is Compiler ? Explain the structure of compiler in detail.
30. Explain Global data flow analysis in detail.
31. (a) Explain general concept of system software.
(b) Explain about macros and macro processors.

(5 × 8 = 40 marks)

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**SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
MARCH 2022**

(CUCBCSS—UG)

Computer Science

BCS 6B 17 (01)—COMPUTER GRAPHICS

(2014 to 2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. _____ is used to produce illustrations for reports or to generate 35-mm slides or transparencies for use with projectors.
2. The maximum number of points that can be displayed without overlap on a CRT is referred to as the _____.
3. A _____ is defined as the set of points that are all at a given distance r from a centre position.
4. The _____ is a scan-conversion line algorithm based on calculating either Δy or Δx .
5. What alters the coordinate descriptions of objects ?
6. Name another terminology used for geometric transformation.
7. A world-coordinate area selected for display is called a _____.
8. Name one of the oldest and most popular line-clipping procedures.
9. _____ of the colour are produced by adding both black and white pigments.
10. Name the colour model used by Television.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 2 marks.*

11. Define refresh CRT.
12. What are the two methods in filling colours in Boundary filling ? Explain.

Turn over

13. Define Translation.
14. What is a Viewing transformation ?
15. Define RGB Colour model.

(5 × 2 = 10 marks)

Part C

Answer any five questions.

Each question carries 4 marks.

16. Briefly explain refresh buffer.
17. Differentiate between emissive and non-emissive displays.
18. Write the algorithm for Bresenhanv s line drawing.
19. Briefly explain the different properties which has to be kept in mind for generating circle.
20. How do you convert a Cartesian point to a homogeneous representation ?
21. Differentiate Window and Viewport.
22. Write a note on Dierent colour models.
23. State the different steps in applying GIMP for image processing.

(5 × 4 = 20 marks)

Part D

Answer any five questions.

Each question carries 8 marks.

24. Explain with a diagram Shadow mask CRT.
25. Discuss any *two* applications of Computer Graphics.
26. Differentiate boundary filling and flood filling algorithm.
27. Explain the 2D viewing transformation pipeline.
28. Briefly explain Cohen Sutherland line clipping.
29. Define Polygon clipping. Explain an algorithm for polygon clipping.
30. What are the different properties of Light ? Briefly explain.
31. Explain RGB and CMY colour model with a diagram.

(5 × 8 = 40 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
MARCH 2022**

Computer Science

BCS 6B 14—COMPUTER NETWORKS

(2014 to 2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. WAN stands for _____.
2. How many layers are there in TCP/IP Reference model ?
3. Expand CSMA/CD.
4. CRC stands for _____.
5. _____ layer in OSI reference model provides accounting, addressing and routing functions.
6. IPv4 addresses have size of _____ bits.
7. _____ TCP/IP protocol is used for transferring files form one machine to another.
8. DNS stands for _____.
9. Expand NIS.
10. The basic objective of the _____ is to store, process and deliver web pages to the users.

(10 × 1 = 10 marks)

Part B

Answer all questions.

Each question carries 2 marks.

11. What is Internet ?
12. What do you mean by Vertical Redundancy Check ?
13. Define the term Gateway.

14. What is TCP ?
15. What is NFS ?

(5 × 2 = 10 marks)

Part C

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

16. Give an account on different categories of network.
17. Compare and contrast packet switching and message switching.
18. What is single bit error ? Explain how it differ from Burst error.
19. Write a note on Bluetooth technology.
20. Give a short account on Dijkstra algorithm.
21. Explain any *two* internetworking devices.
22. Explain the structure of TCP header.
23. What is DHCP ? Explain how it configure hosts dynamically.

(5 × 4 = 20 marks)

Part D

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

24. Explain the layered architecture of TCP/IP reference model with a diagram.
25. Explain the functions provided by physical layer of OSI Reference model.
26. What is CRC ? If the generating polynomial for CRC code is $X^4 + X^3 + 1$ and message word is 11110000, determine check bits and coded word.
27. Compare and contrast CSMA/CD and CSMA/CA.
28. Differentiate between IPv4 and IPv6 Addressing schemes.
29. What is cryptography ? Explain the use of private and public keys in cryptography mechanism.
30. Discuss the steps for configuring the network interface card using *ifconfig* command in Linux.
31. Explain the procedure for configuring NFS in Linux.

(5 × 8 = 40 marks)

SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 13—FUNDAMENTALS OF OPERATING SYSTEMS

(2014 to 2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. What is Operating System ?
2. The program in execution is regarded as a _____.
3. The process of moving processes in and out of main memory to disk is called _____.
4. The memory management technique segmentation implements _____ linking of data and instructions.
5. Which of the following is true for dynamically linked library ?
 - A) Loading is postponed until execution time.
 - B) System language libraries are treated like any other object module.
 - C) More disk space is used than the option of using a statically-linked library.
 - D) A stub is included in the image for each library-routine reference.
6. _____ follows that page should only be brought into memory if the executing process demands them.
7. NT in Windows NT stands for _____.
8. CLI means _____.
9. State True or False : Server is the machine that seeks services from other machines.
10. State True or False : Page offset is used as an index into a page table which contains base address of each page in physical memory.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 2 marks.*

11. What is time sharing operating systems ?
12. Define the term Mutual exclusion.

Turn over

13. What is SJF ?
14. What are Overlays ?
15. What is tiny OS ?

(5 × 2 = 10 marks)

Part C

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

16. Explain the evolution of Operating Systems.
17. Explain the features of distributed operating system.
18. Draw the process transition diagram and explain the conditions.
19. Explain the concept of threads in Operating System.
20. What is thrashing ? Explain the causes for thrashing.
21. What is page fault ? What happens when a page fault occurs ?
22. Give an account on UNIX Kernel.
23. Explain the salient features of Android Operating System.

(5 × 4 = 20 marks)

Part D

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

24. Discuss the various services offered by an Operating System.
25. What is dead lock ? Explain how it can be prevented.
26. Explain the uses of semaphores in concurrent systems.
27. Apply SJF and FCFS scheduling and find the average waiting time and turnaround time for executing the following processes :

Process	Burst Time	Arrival Time
P1	4	0
P2	2	1
P3	1	1.5
P4	1	3
P5	4	4

28. What is virtual memory ? Explain any one technique for managing virtual memory.
29. Explain any two page replacement algorithms.
30. Give an account on different concurrency principles in Operating System.
31. Explain the architecture of mobile operating systems.

(5 × 8 = 40 marks)

SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MARCH 2022

Computer Science

BCS 6B 12—ANDROID PROGRAMMING

(2014 to 2016 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

1. Name any two Android devices.
2. AAPT stands for _____.
3. What is an Intent ?
4. What are plurals ?
5. Name the states of Check box.
6. Name the super class of Spinner class.
7. What is Toast ?
8. Name the special fragment subclass that is designed for creating and hosting dialogs.
9. What is a File ?
10. You need to use _____ method before reading any data from a cursor.

(10 × 1 = 10 marks)

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

11. What is Android Debug Bridge ?
12. What is the purpose of Layout resource ?
13. What is TimePicker ?
14. What is a ListFragment ?
15. What is Persistent state in Android ?

(5 × 2 = 10 marks)

Turn over

Part C

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

16. Write a brief note on any four libraries in Android.
17. Write a note on Android Virtual Device Manager.
18. What is Cursor ? Mention any four navigation functions included in cursor class.
19. How do you create and pick contacts using Intents ? Illustrate with the help of code.
20. Explain Styles and Themes in Android.
21. Explain LinearLayout and AbsoluteLayout.
22. Write short note on : DialogFragment and ListFragment.
23. Give an account on data types supported in SQLite.

(5 × 4 = 20 marks)

Part D

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

24. How do you develop end user application using Android SDK ? Demonstrate.
25. What is Cursor ? Explain inserting, updating and delete operations.
26. How do you link Activities with Intents ? Briefly Explain the steps involved in this process.
27. What is Radio Button ? Write a code segment to show the creation of group of Radio buttons in Android.
28. Write note on the following :
 - i) Date and Time control.
 - ii) Map view control.
 - iii) Image view.
 - iv) Checkbox control.
29. Explain how to respond to XML-Based Menu Items ? Explain with example.
30. What are the types of menus in Android ? Explain the process of creating menus in Android.
31. Write a code using SQLite which adds, removes a book and also displays all the books.

(5 × 8 = 40 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 16(D)—COMPUTER GRAPHICS

(2017 Admissions)

Time : Three Hours

Maximum 80 Marks

Section A

*Answer all questions.
Each question carries 1 mark.*

1. What are used in virtual reality environments to determine how vehicle operators are affected by motion ?
2. Name the memory where picture definition is stored.
3. How do you reduce the computation in circle generating algorithms ?
4. Name the transformation along a straight line path from one co-ordinate location to another.
5. What is the transformation that distorts the shape of an object ?
6. What are Translational vectors ?
7. What is an area on a display device to which a window is mapped called ?
8. Name an algorithm for Line clipping.
9. Which one has lowest frequency in Electromagnetic spectrum ?
10. "Speed of light and the wavelength are material-independent", State if it is True or False.

(10 × 1 = 10 marks)

Section B

*Answer at least four questions.
Each question carries 4 marks.
All questions can be attended.
Overall Ceiling 16.*

11. Briefly explain Raster scan display.
12. What are the advantages of DDA line drawing algorithm ?
13. Write the transformation matrix for reflection about the diagonal $y = -x$.

Turn over

14. Write a short note on Window to View port transformation.
15. Define Color Gamut.

(4 × 4 = 16 marks)

Section C

Answer at least four questions.

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 24.

16. Briefly explain the application of Computer Graphics in Education and Training.
17. Write the algorithm used for scan conversion of a circle using Bresenham's algorithm.
18. Derive the transformation equations for rotating a point at position (x, y) through an angle θ about the origin.
19. Briefly describe RGB color model.
20. Define Polygon Clipping. Why line clipping cannot be applied for Polygons ?
21. Briefly describe the working of a LED.
22. Define Scaling. Differentiate Uniform and Differential scaling with their applications.
23. Explain in brief the architecture of a simple raster graphics system.

(4 × 6 = 24 marks)

Section D

Answer any two questions.

Each question carries 15 marks.

24. What are the two techniques for producing color displays with a CRT ? Explain.
25. Explain Scan line polygon filling algorithm with diagram.
26. Prove that the multiplication of transformation matrices for each of the following sequence of operations is commutative :
 - (a) Two successive rotations.
 - (b) Two successive translations.
 - (c) Two successive scaling's.
27. Explain Sutherland-Hodgeman Polygon clipping.
28. Explain the various color models with its advantages.

(2 × 15 = 30 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 16 (A)—SYSTEM SOFTWARE

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. What converts programs into machine language ?
2. Name the most significant system program that performs as an interface among the users and the system.
3. What convert macros instructions into its definition ?
4. Name the loader in which relocated object files are created.
5. What is the process of updating the addresses used in the address sensitive instructions of a program ?
6. Name the program which performs allocation, relocation and linking.
7. What are overlays ?
8. Which table keeps information about identifiers ?
9. Is YACC a compiler ?
10. What is officially known as a Parser ?

(10 × 1 = 10 marks)

Section B

Answer at least four questions.

Each question carries 4 marks.

All questions can be attended.

Overall Ceiling 16.

11. Illustrate the functions of assemblers with example.
12. What are the features of macros ?

Turn over

13. Define the concept of relocations.
14. Define the working of a scanner.
15. What is LEX ?

(4 × 4 = 16 marks)

Section C

Answer at least four questions.

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 24.

16. Briefly explain functions of an operating system.
17. What are the data structures for the design of a macro processor ? Explain.
18. What is absolute loader ? Illustrate its advantages and disadvantages.
19. Write a short note on Symbol table.
20. What are the error correcting routine of a compiler ?
21. Briefly explain YACC with a small example.
22. Explicate the loader scheme of transforming the source program to object program by some translator (assembler).
23. Briefly explain the functions of a Semantic analyzer with an example.

(4 × 6 = 24 marks)

Section D

Answer any two questions.

Each question carries 15 marks.

24. Make distinction between compilers and interpreters with examples.
25. What is macro preprocessor ? Explain steps of macro preprocessor design.
26. Explain the process of Linking and Loading with a diagram.
27. What are the different data structures handled by a Compiler ?
28. Explain how YACC can be used to generate a Parser ?

(2 × 15 = 30 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE (SPECIAL) EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 13—COMPUTER NETWORKS

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A*Answer all questions.**Each question carries 1 mark.*

1. What is MAN ?
2. How many layers are there in TCP/IP reference model ?
3. What is LRC ?
4. What is CSMA/CD ?
5. Give any two internetworking devices.
6. What is NAT ?
7. What is the use of FTP ?
8. What is UDP stands ?
9. What is digital signature ?
10. What is cryptography ?

(10 × 1 = 10 marks)

Section B*Answer at least four questions.**Each question carries 4 marks.**All questions can be attended.**Overall Ceiling 16.*

11. What is message switching ? Explain.
12. Explain the differences between 3G and 4G mobile networks.

Turn over

13. Explain the functions of Bridges.
14. Give a short account on SNMP.
15. Differentiate between asymmetric and symmetric key encryption.

(4 × 4 = 16 marks)

Section C

*Answer at least **four** questions.*

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 24.

16. What are the different types of network topologies ? Explain the advantages and disadvantages of each.
17. Explain any *two* internetworking devices.
18. Write a short note on Huffman code.
19. Compare and contrast IPv4 and IPv6 addressing schemes.
20. Explain about distance vector routing algorithm.
21. Explain the structure of TCP header with a diagram.
22. Differentiate between block cipher and stream cipher.
23. Explain the use of public and private keys in Cryptography

(4 × 6 = 24 marks)

Section D

*Answer any **two** question.*

Each question carries 15 marks.

24. Explain the layered architecture of TCP/IP Reference model with a neat diagram.
25. What is CRC ? If the generating polynomial for CRC code is $X^4 + X^3 + 1$ and message word is 11110000, determine check bits and coded word.
26. Differentiate between IPv4 and IPv6 addressing schemes.
27. What is DNS ? Explain the different components of DNS.
28. What is DES ? Explain the factors that determine the strength of DES algorithm.

(2 × 15 = 30 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 12—OPERATING SYSTEMS

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. What is an Operating System ?
2. What is client-server system ?
3. Which Linux command is used for moving a file from one folder to another ?
4. What is the use of *rmkdir* command in Linux ?
5. Expand FCFS.
6. What do you mean by critical region ?
7. An illusion of an extremely large memory is Known as _____.
8. In a paged memory system, if the page size is increased, then the internal fragmentation becomes _____.
9. What is TinyOS ?
10. What is the use of Kernel in UNIX ?

(10 × 1 = 10 marks)

Section B

Answer at least four questions.

Each question carries 4 marks.

All questions can be attended.

Overall Ceiling 16.

11. What is Distributed Operating System ?
12. Write a short note on file permissions in Linux.

Turn over

13. What do you mean by process synchronization ? Explain.
14. Explain demand paging.
15. Explain the differences between authentication and authorization.

(4 × 4 = 16 marks)

Section C

Answer at least four questions.

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 24.

16. Explain process state diagram with suitable diagram.
17. Explain the various services offered by an Operating System.
18. Explain the steps for creating and executing a shell script in Linux with example.
19. What is the use of **ps** command in Linux ? Explain its different options.
20. What is Semaphore ? Explain its implementation.
21. Explain any *one* method for free space management.
22. What is Thrashing ? Explain
23. Explain the salient features of Android Operating System.

(4 × 6 = 24 marks)

Section D

Answer any two questions.

Each question carries 15 marks.

24. What is Deadlock ? Explain the necessary and sufficient conditions for the occurrence of a deadlock.
25. What are the different types of shells in Linux ? Explain any *two* loop control statements in shell programming with suitable examples.
26. Explain Round Robin Algorithm.
27. Describe about paging and segmentation in detail.
28. Explain the access matrix model used for protecting the operating system.

(2 × 15 = 30 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 11—ANDROID PROGRAMMING

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. Which method of your activity is called when the user decides to move to another activity ?
2. What is a view in Android ?
3. Which method is called when the activity is freshly created ?
4. When *onStop()* method is called ?
5. Define Intent in Android.
6. Name the basic button class in Android.
7. Name the adapter which is generally used to populate a list with static data (possibly from resources) ?
8. What is the first undo callback on fragment ?
9. What is a Toast in Android ?
10. What method of a dialog fragment do you use to display the dialog ?

(10 × 1 = 10 marks)

Section B

Answer at least four questions.

Each question carries 4 marks.

All questions can be attended.

Overall Ceiling 16.

11. List the features of Android UI.
12. Write a brief note on Cursors in Android.
13. What is Map View Control ? How do you instantiate Map View Control ?

Turn over

14. How do you create menus in Android ? Briefly explain.
15. Briefly explain data types in SQLite.

(4 × 4 = 16 marks)

Section C

*Answer at least four questions.
Each question carries 6 marks.
All questions can be attended.
Overall Ceiling 24.*

16. Write a note on Life cycle methods of an activity.
17. Discuss on how to implement Insert, Update and Delete methods in a content provider.
18. Explain the rules for resolving intents to their components.
19. Explain String and String Arrays by giving examples.
20. What is Layout Manager ? Give brief description of any 3 layouts.
21. Write a Code to show how to work with a Pop-up Menu.
22. Write a note on Fragment's *startActivity()* and *setTargetFragment()*.
23. Explain the features of SQLite.

(4 × 6 = 24 marks)

Section D

*Answer any two questions.
Each question carries 15 marks.*

24. Write a note on history of Android. Also mention some key aspects of Android 4.0.
25. Explain the feature of Android cursor and also explain the methods provided by Android to navigate through cursor.
26. Write short notes on the following Controls :
 - A) Spinner.
 - B) Gallery.
 - C) Adapters.
27. What is *DialogFragment* ? Write code which overrides *onCreateView* of a *DialogFragment*.
28. Briefly explain the types of menus are available in the Android SDK. Write a code to demonstrate how to create menu and add items.

(2 × 15 = 30 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 17 (01)—COMPUTER GRAPHICS

(2014 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. The process of repositioning an object along a circular path is called _____.
2. Clipping in computer graphics is primarily used for _____.
3. How many phosphor colors dots at each pixel position in a shadow mask CRT ?
4. The video device with reduced volume, power consumption and weight are _____.
5. CMYK models are used for _____.
6. CRT Stands for _____.
7. Beam penetration method used in _____.
8. What is the name of the temporary memory where the graphics data is stored to be displayed on the screen ?
9. LCD is an _____ device.
10. Plasma devices convert _____.

(10 × 1 = 10 marks)

Part B (Short Answer Questions)

Answer all questions.

Each question carries 2 marks.

11. Define Computer Graphics.
12. Define Pixel.
13. What is Translation ?

Turn over

14. Explain Shear.
15. Explain passive matrix LCD.

(5 × 2 = 10 marks)

Part C (Short Essay)

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

16. Write a short note on raster scan display.
17. Explain LCD and LED monitors
18. Explain shadow mask and beam penetration method ?
19. What do you know about scaling ? Derive the matrix equation for scaling ?
20. Explain various steps of Cohen Sutherland line clipping algorithm.
21. Explain horizontal and vertical retrace ?
22. Write a short note on GIMP.
23. Explain the Applications of computer graphics.

(5 × 4 = 20 marks)

Part D (Essays)

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

24. What is CRT ? Explain with suitable diagram
25. Differentiate Raster Scan and Random Scan Display.
26. Explain Midpoint Circle Algorithm.
27. Explain various flat panel devices with their advantages and disadvantage.
28. Discuss About Cohen-Sutherland Line clipping in detail with example.
29. Explain in detail Die rent Color model.
30. Explain in detail various clipping techniques.
31. Write Essay on 2D transformations.

(5 × 8 = 40 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 14—COMPUTER NETWORKS

(2014 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A

*Answer all the questions.
Each question carries 1 mark.*

1. _____ allows a host to discover its internet address when it knows only its physical address.
2. The _____ is responsible for the process-to-process delivery of the entire message.
3. The _____ identifies a process on a host.
4. Define Single-bit error.
5. The access method used in the point coordination function MAC sublayer is _____.
6. To avoid looping in the network, every packet is sent with some _____.
7. _____ combines several network into one large one.
8. Define Gateways.
9. Define Ciphertext.
10. Write the purpose of TELNET.

(10 × 1 = 10 marks)

Section B (Short Answer Questions)

*Answer all the questions.
Each question carries 2 marks.*

11. Define Hamming Distance with example.
12. What are the functions of FTP ?
13. Explain DNS.
14. Define Switch and need for switching.
15. What are the functions of transport layer and network layer ?

(5 × 2 = 10 marks)

Turn over

Section C (Short Essays)

Answer any **five** questions.

Each question carries 4 marks.

16. What is the difference between logical address, physical address and port address ?
17. Explain Huffman coding with example.
18. Compare Piconet and Scatternet.
19. Compare multiplexing and demultiplexing.
20. Explain flow control and error control responsibilities of data link layer in detail.
21. Explain framing and the reason for its need.
22. What is NAT ? How can NAT help in address depletion ?
23. Explain about cryptography and its uses.

(5 × 4 = 20 marks)

Section D (Long Essays)

Answer any **five** questions.

Each question carries 8 marks.

24. Explain about Random Access Protocols in detail.
25. Explain IEEE 802.11 in detail.
26. Give a detailed explanation about IPv6.
27. Explain different strategies used to handle the transition from IPv4 to IPv6.
28. Explain circuit switching and packet switching in detail.
29. Explain TCP in detail.
30. Give a detailed explanation about HTTP.
31. Explain different services provided by network security.

(5 × 8 = 40 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE (SPECIAL) EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 13—FUNDAMENTALS OF OPERATING SYSTEMS

(2014 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. _____ allows many users to share the computer simultaneously.
2. _____ increases CPU Utilization by organizing execution of jobs always.
3. A process is a _____ entity.
4. Deadlock can be detected by directed graph called _____.
5. TLB is _____.
6. Inter process communication allows _____.
7. Address generated by the CPU is called _____.
8. FIFO Stands for _____.
9. Dirty bit is used to show the _____.
10. Page-Table length register (PTLR) indicates size of _____.

(10 × 1 = 10 marks)

Part B (Short Answer Questions)

Answer all questions.

Each question carries 2 marks

11. Name two differences between logical and physical addresses.
12. What is file system ?
13. Define process.

Turn over

14. Define Thrashing.
15. What is PCB ?

(5 × 2 = 10 marks)

Part C (Short Essay)

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

16. What is the main advantage of multiprogramming ?
17. What are overlays ?
18. Explain process state with neat diagram.
19. What are the dead lock prevention methods ?
20. What are the three main purpose of an operating system ?
21. What is FCFS explain with example ?
22. Explain various scheduling criteria.
23. Define the difference between preemptive and non-preemptive scheduling.

(5 × 4 = 20 marks)

Part D(Essays)

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

24. What is dead lock ? Explain the characteristics of dead lock.
25. Explain critical section problem with example ?
26. Explain the functions and types of operating system.
27. What is segmentation, explain in detail.
28. Explain the difference between internal and external fragmentation.
29. Explain Round Robin scheduling with example.
30. What is file ? Explain various file organizations.
31. Describe the following allocation algorithm.
 - (a) First fit.
 - (b) best fit.
 - (c) worst fit.

(5 × 8 = 40 marks)

**SIXTH SEMESTER (CUCBCSS—UG) DEGREE [SPECIAL] EXAMINATION
MARCH 2021**

Computer Science

BCS 6B 12—ANDROID PROGRAMMING

(2014 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. Android Java package that implements the application model for android :
(A) Android.app. (B) Android.app.admin.
(C) Android.accounts. (D) None of these.
2. _____ are user interface elements that form the basic building blocks of a user interface.
(A) Activities. (B) Views.
(C) Fragment. (D) Intent.
3. The resource type of video files is :
(A) Anim. (B) Raw.
(C) xml. (D) Drawable.
4. Which of the following is not a resource-type namespaces available in R.java ?
(A) R.drawable. (B) R.plural.
(C) R.layout. (D) R.array.
5. Which of the following is not a button control in Android ?
(A) Basic button. (B) Image button.
(C) Submit button. (D) Toggle button.
6. Which adapter is generally used to populate a list with static data ?
(A) Curser adapter. (B) Simple adapter.
(C) Resource cursor adapter. (D) Simple curser adapter.

Turn over

7. Which among the following is not a menu category ?
- (A) Secondary. (B) System.
(C) Container. (D) Canvas.
8. A context menu differs structurally from the standard options menu :
- (A) True. (B) False.
9. Android is developed by :
- (A) Apple. (B) Microsoft.
10. Which media format is not supported by Android ?
- (A) MP4. (B) AVI.
(C) MIDI. (D) MPEG.

(10 × 1 = 10 marks)

Part B

*Answer all questions.
Each question carries 2 marks.*

11. What do you mean by fragment ?
12. What are resources in Android ?
13. What is a textview ? List any *two* attributes.
14. Which are the different ways for responding to menus ?
15. What is SQL Lite ?

(5 × 2 = 10 marks)

Part C

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

16. Explain Android SDK Software Stack from a developer's perspective with a diagram.
17. Explain the life cycle of Android application.
18. Explain each of the following :
- (a) CATEGORY_DEFAULT
(b) CATEGORY_BROWSABLE
(c) CATEGORY_LAUNCHER
(d) CATEGORY_HOME

19. Briefly explain about content providers in Android.
20. Write notes on (a) Check Box Control ; and (b) Radio Button Control.
21. Write short notes on (a) Spinner control ; and (b) Gallery control.
22. Explain the anatomy of ActionBar.
23. Briefly explain storage types of SQLite ?

(5 × 4 = 20 marks)

Part D

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

24. Explain the following. A) View ; B) Activity ; C) Fragment ; and D) Intent.
25. Briefly explain about any eight properties of AVD.
26. Explain ACTION-PICK.
27. Write notes on a) TextView ; b) EditText ; c) AutoCompleteTextView ; and d) Button.
28. Write notes on a) RadioGroup ; b) ProgressBar ; c) Time Picker ; and d) Date Picker.
29. What is Linear Layout Manager ?
30. Briefly explain RelativeLayout layout manager.
31. Write short note on different types of menus.

(5 × 8 = 40 marks)