

**FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR
2012 ONLY)**

(NO.OF PAGES: 2)

11 UCT 21

**NGM COLLEGE (AUTONOMOUS) : POLLACHI
END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016**

B.Sc. COMPUTER TECHNOLOGY (SF) MAXIMUM MARKS: 75

V SEMESTER TIME: 3 HOURS

**PART - III
J2EE TECHNOLOGIES**

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. What is the use of a Swing component?
2. ----- is the combination of a textfield and a drop down list.
3. What is meant by a Java servlet?
4. Write the various methods in Servlet Life Cycle.
5. Expand JDBC.
6. What is the use of Servlet Chaining?
7. ----- is a simple but powerful technique used to generate dynamic HTML on the server side.
8. Define Session tracking.
9. Expand BDK.
10. What is the use of a Jar File?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Explain the Constructors and Methods of JCheckbox.
(or)
b) Write about the various Scroll Pane Constants in detail.
12. a) What are the reasons to use Java Servlet?
(or)
b) Write about the alternatives for Java Servlet.

(CONTD ...2)

(2)

(12 UCT 21)

13. a) Discuss Two-Tier and Three Tier Database Access Models.

(or)

b) State the uses of Servlet Chaining.

14. a) What are the four Implicit Variables which are automatically available to a JSP file?

(or)

b) How will you perform a session tracking technique using hidden form fields? Explain.

15. a) What are the advantages of Java Beans?

(or)

b) Explain the JAR Utility.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

16.a) Write down the methods that control the behavior of a Button Component.

(or)

b) How will you create a table using JTable Component?

17. a) Explain the Life cycle of the servlet.

(or)

b) Write about the Architecture of Java Servlet.

18. a) What is Servlet Chaining? How will you implement Servlet Chaining?

(or)

b) Explain the Various JDBC driver Types.

19. a) Explain Conditions and Directives in Java Server Pages.

(or)

b) Write about Declarations in JSP with syntax and example.

20. a) Explain Introspection.

(or)

b) Explain the Bean Info Interface.

M7/-

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2013 BATCH:

13 UCT 10

2014 BATCH:

14 UCT 10

2013 & 2014 ONLY)

NGM COLLEGE (AUTONOMOUS) : POLLACHI

END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016

B.Sc.- COMPUTER TECHNOLOGY

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III SEMESTER

TIME: 3 HOURS

PART - III

RELATIONAL DATABASE MANAGEMENT SYSTEM AND ORACLE

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. The facts which describe an entity are known as.....
a) DBMS b) RDBMS c) DATA d) DMS
2. To create and manage “table spaces”is used.
a) Storage manager b) Instance manager c) Security d) Designer
3. INSERT Statement is a..... Language.
a) TCL b) DDL c) DML d) MLD
4. There are Categories of scalar data type.
a) Five b) Four c) Three d) Two
5. A is declared as a SELECT Statement.
a) Cursor b) Function c) Variable d) DBMS
6. Expand BCNF.
7. Expand SQL.
8. What is group function?
9. What is meant by Selection structure?
10. What is meant by exception?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

- 11.a) Explain UNION with examples.
(or)
b) Explain 2NF with example.

(CONTD...2)

12. a) What are the different types of constraints available in SQL?

(or)

b) How will you create an oracle table?

13.a) Explain DISTINCT Function.

(or)

b) What is meant by Numerical functions and explain with example.

14.a) Write about SET Operators.

(or)

b) What are the Transaction Control Statements?

15 .a) Write about PL/SQL VARRAYS.

(or)

b) Write about Data Dictionary Views.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

16. a) Explain the concept of Non Procedural language.

(or)

b) Explain conversion from 1NF to 2NF with example.

17. a) Draw a block diagram of interaction between SQL *plus and SQL.

(or)

b) Discuss Spooling with examples.

18. a) How will you retrieve data from table? Explain it.

(or)

b) Explain substitution variables with example.

19.a) Discuss PL/SQL Data Types.

(or)

b) Write about Data Manipulation in PL/SQL.

20. a) Explain the concept of cursors with suitable example.

(or)

b) Discuss Triggers with an example.

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I SEMESTER

TIME: 3 HOURS

PART – III
‘C’ PROGRAMMING

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. The format identifier ‘%i’ is also used for _____ data type?
A. Char B. int
C. float D. double
2. What is the use of putchar()?
A. The character written B. EOF is an error that occurs
C. Nothing D. Both a & b
3. A pointer is
A. A keyword used to create variables
B. A variable that stores address of an instruction
C. A variable that stores address of other variable
D. All of the above
4. Which of the following is a correct format for declaration of function?
A. Return-type function-name(argument type);
B. Return-type function-name(argument type) { }
C. Return-type (argument type)function-name;
D. Both (a) and (b)
5. #include is called
A. Preprocessor directive B. Inclusion directive
C. File inclusion directive D. None of the mentioned
6. What is the required memory size of **double** data type?
7. What is the use of break statement in switch case structure?
8. What is an array?
9. What operator is used to access the member variable of structure?
10. Give the syntax of #define directive.

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Explain the structure of a C program.
(OR)
b) Write a short note on logical operators in C with suitable examples.

(CONTD ...2)

(2)

(14 UCT 01)

12. a) Write a C program to print whether the given year is leap year or not.
(OR)
b) How while loop differs from do...while loop? Explain.
13. a) Write a program to transpose the elements of 3×3 matrix.
(OR)
b) Write a brief note on library functions for strings with suitable examples.
14. a) Differentiate between call by value and call by reference.
(OR)
b) Explain the array of structures with a program.
15. a) Write a program to write some text into the file using putc() function.
(OR)
b) Write short notes on command line arguments.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

16. a) Explain in brief program development methodologies.
(OR)
b) Explain the list of operators with priority wise in C.
17. a) Discuss formatted and unformatted I/O functions in C.
(OR)
b) Write a program to find the sum and average of five subjects.
18. a) Write a program to perform transpose of matrix elements.
(OR)
b) Write short notes on arithmetic operations with pointers.
19. a) What is a function? Explain briefly the types of functions with suitable programs.
(OR)
b) How can structures be declared in C? Explain array of structures in C.
20. a) Write a program to open a file in append mode and add new records in it.
(OR)
b) Write briefly about preprocessor directives.



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B.Sc.- COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

V SEMESTER

TIME: 3 HOURS

**PART - III
J2EE TECHNOLOGIES**

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. Which of these functions is called to display the output of an applet?
A) display() B) print() C) displayApplet() D) PrintApplet()
2. What is invoked via HTTP on the Web server computer when it responds to requests from a user's Web browser?
A) A Java application B) A Java applet C) A Java servlet D) None of the above
3. What is JDBC?
A) JDBC is a java based protocol.
B) JDBC is a standard Java API for database-independent connectivity between the Java programming language and a wide range of databases.
C) JDBC is a specification to tell how to connect to a database.
D) Joint Driver for Basic Connection
4. Which of the following method JSP can be used to read binary data stream coming from the client?
A) request.getInputStream() B) response.getInputStream()
C) request.getInputStreamData() D) response.getInputStreamData()
5. What is not true of a Java bean?
A) There are no public instance variables.
B) All persistent values are accessed using getxxx and setxxx methods.
C) It may have many constructors as necessary.
D) All of the above are true of a Java bean.
6. How does java applet differ from applications?
7. What are Servlets?
8. What is JDBC Driver?
9. What is JSP?
10. What is JavaBeans?

SECTION – B**(5X5=25 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**

11. a) What is Java Applet? Explain.
(OR)
b) Write a short note on scroll pane in a Swing application.
12. a) What is the reason to use Java servlet with example?
(OR)
b) Explain the Basics servlet.
13. a) Write a short note on JDBC.
(OR)
b) Explain JDBC Driver types.
14. a) Write short notes on Handling variables and objects in a JSP.
(OR)
b) Write a short note on working with Cookies.
15. a) Write advantages of Java Beans.
(OR)
b) Explain the Java Beans API with example.

SECTION – C**(5X8=40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**

16. a) Write overview of J2EE and advantages.
(OR)
b) Write short notes on the following:
(i) Pluggable look and feel in Swing (ii) Containers in Swing
17. a) Explain the Java servlet with example.
(OR)
b) Explain the servlet Architecture.
18. a) Explain the servlet chain with example.
(OR)
b) Explain the J2EE different tiers concepts with example.
19. a) Write in detailed notes on Handling variables and objects in a JSP
(OR)
b) Explain different loops used in a JSP program with example.
20. a) Explain the Bound properties with example.
(OR)
b) Explain the DBK with example.

(NO. OF PAGES: 2)

SUBJECT CODE: 14UCT22

**NALLAMUTHU GOUNDER MAHALINGAM COLLEGE
(AUTONOMOUS) POLLACHI – 642 001
END-OF-SEMESTER EXAMINATIONS : MAY / NOVEMBER – 2016**

**COURSE NAME : B.Sc (C.T)
SEMESTER : V**

**MAXIMUM MARKS : 75
TIME : 3 HOURS**

COMPUTER GRAPHICS

SECTION - A

(10 X 1 = 10 MARKS)

ANSWER ALL OF THE FOLLOWING QUESTIONS.

1. LCD stands for
 - a) Liquid-control displays
 - b) Liquid-crystal displays
 - c) Liquid-content displays
 - d) Liquid-compound displays
2. _____ Algorithm, involves only simple integer operations.
 - a) Bresenham-Line
 - b) Flood-Line
 - c) Parallel-Line
 - d) Line-drawing
3. The devices which converts the electrical energy into light is called _____.
 - a) LCD
 - b) Non-emitters
 - c) Plasma panels
 - d) Emitters
4. The line segment of polygon are called as _____.
 - a) Edges
 - b) Vertices
 - c) Line
 - d) None of these
5. _____ method using image-space and object-space operations.
 - a) Depth-sorting
 - b) Scan-line
 - c) Depth-buffer
 - d) Sorting

Short Answers:

6. What do you mean by Direct-view Storage Tubes?
7. What is Polygon Mesh? Write the 3 ways of representations.
8. Define Viewport.
9. What is a Boundary representation?
10. Define Area-subdivision method.

SECTION - B**(5 X 5 = 25 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**

11. a) Explain the Raster-scan display method with diagram.
(OR)
b) Draw and explain the Stereoscopic and Virtual-Reality system.
12. a) Write short notes on Text Attributes.
(OR)
b) Describe Color and Grayscale Levels.
13. a) Explain the Window-to-viewport Co-ordinate transformations.
(OR)
b) Write a brief note on Point Clipping.
14. a) Briefly explain the Curved Lines and Surfaces.
(OR)
b) What is Translation? Explain in brief.
15. a) Draw CIE chromaticity diagram and explain in detail.
(OR)
b) Explain about the Ray-casting methods.

SECTION - C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**

16. a) Explain any four graphical Input devices.
(OR)
b) Discuss the Refresh Cathode-Ray Tubes.
17. a) Explain the steps of Midpoint Circle Algorithm.
(OR)
b) Briefly explain the Line Attributes.
18. a) Describe the Composite Transformation of 2D with an example.
(OR)
b) Explain the Liang-Barsky Line Clipping algorithm.
19. a) Explain the following:
(i) Parallel Projection
(ii) Perspective Projection
(iii) Surface Rendering
(OR)
b) Discuss about the General 3D Rotations.
20. a) Briefly explain about the Scan-line Method.
(OR)
b) Detailed about CMY and HLS color models.

Continuation Sheet

Page No.1

Sub Code: 14UCT23

Title: Cloud Computing

Time: 3 Hrs

Max. Marks: 75

Section- A

Answer all questions

10x1=10

1. _____are managed at the server and there are fewer points of failure by thin clients
 - a) Lower IT costs
 - b) Lower hardware costs
 - c) Ease of repair or replacement
 - d) None of These
2. Security-wise, _____are more vulnerable to attack than thins
 - a) thick clients
 - b) Thin clients
 - c) mobile client
 - d) None of these
3. _____Create, manage, and share online Google Documents, Google Spreadsheets, and Google Presentations within your sales organization, marketing group, or support team for instant collaboration.
 - a) Salesforce and Google Docs
 - b) Salesforce and Google mail
 - c) Both a and b
 - d) None of these
4. A _____is one in which IT supports the business processes that over current and emerging requirements to run the business end-to-end.
 - a) SaaS
 - b) service-oriented architecture
 - c) Both and b
 - d) None of these
5. _____to happen at predefined times, and without an administrator's presence.
 - a) Schedule migrations
 - b) Prioritize live migrations
 - c) Appirio Search
 - d) Conga Merge
6. Define synchronisation.
7. Expand SSL VPN.
8. Expand SLA.
9. Expand SaaS.
10. List out the application provide in Google Docs.

Section- B

05x05=25

Answer Either (a) Or (b) in each of the following questions

11. a) Explain about Full Virtualization and Paravirtualization .
(OR)
b) Describe notes on databases services.
12. a) Write short note on security in cloud computing.
(OR)
b) Describe cloud storage provider.

Continuation Sheet

Page No.2

Sub Code: 14UCT23

Title: Cloud Computing

13. a) Describe the features of Google App Engine
(OR)
b) List out the operational benefits of cloud computing.
14. a) Describe the overview of SaaS
(OR)
b) List out the advantages of financial institutions which can use the Open Channel strategy.
15. a) Discuss short on cloud services for individual.
(OR)
b) Describe short note on migration to the clouds.

Section- C

05x08=40

Answer Either (a) Or (b) in each of the following questions

16. a) Explain briefly about the cloud applications and its benefits and limitation.
(OR)
b) Explain briefly about the Security concern of cloud computing
17. a) Explain briefly about the services of cloud computing.
(OR)
b) Explain WEB Application frame work in cloud computing.
18. a) Explain briefly about the cloud computing services in Amazon.
(OR)
b) Explain the staffing benefits in cloud computing.
19. a) Discuss briefly about providers.
(OR)
b) Discuss on Microsoft online in Software plus service.
20. a) Discuss about the evolution of cloud computing in future
(OR)
b) Discuss briefly about best practice of cloud services.

2014 ONLY)

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PART – III
CLOUD COMPUTING

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. _____ are managed at the server and there are fewer points of failure by thin clients
 - a) Lower IT costs
 - b) Lower hardware costs
 - c) Ease of repair or replacement
 - d) None of These
2. Security-wise, _____ are more vulnerable to attack than thins
 - a) thick clients
 - b) Thin clients
 - c) mobile client
 - d) None of these
3. _____ Create, manage, and share online Google Documents, Google Spreadsheets, and Google Presentations within your sales organization, marketing group, or support team for instant collaboration.
 - a) Salesforce and Google Docs
 - b) Salesforce and Google mail
 - c) Both a and b
 - d) None of these
4. A _____ is one in which IT supports the business processes that over current and emerging requirements to run the business end-to-end.
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 - b) service-oriented architecture
 - c) Both and b
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5. _____ to happen at predefined times, and without an administrator's presence.
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9. Expand SaaS.
10. List out the application provided in Google Docs.

SECTION – B

(5 x 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Explain Full Virtualization and Paravirtualization .

(OR)

- b) Describe notes on databases services.

(CONTD....2)

12. a) Write a short note on security in cloud computing.

(OR)

b) Describe cloud storage provider.

13. a) Describe the features of Google App Engine.

(OR)

b) List out the operational benefits of cloud computing.

14. a) Describe the overview of SaaS.

(OR)

b) List out the advantages of financial institutions which can use the Open Channel strategy.

15. a) Discuss short on cloud services for individual.

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b) Describe short note on migration to the clouds.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

16. a) Explain briefly the cloud applications and its benefits and limitation.

(OR)

b) Explain briefly the Security concern of cloud computing.

17. a) Explain briefly the services of cloud computing.

(OR)

b) Explain WEB Application frame work in cloud computing.

18. a) Explain briefly the cloud computing services in Amazon.

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(NO.OF PAGES: 2)
2014 BATCH:
2015 BATCH:

14 UCT 12

15 UCT 3A3

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PART – III
COMPUTER SYSTEM ARCHITECTURE

SECTION - A

(10X1=10 MARKS)

ANSWER ALL QUESTIONS.

1. The_____part of an instruction code specifies the operations to be performed.
a)Memory b)Operation c)Instruction d)Program
2. The_____performs the required micro operations for executing the instructions.
a)CPU b)ALU c)Control Unit d)None of the above
3. When two equal numbers are subtracted the result should be_____
a) 0 B)-0 c)+0 d)-1
4. Input or Output devices attached to the computer are called_____
a)Devices b)Input-Output c)Peripherals d)DM A
5. An address space is a set of_____
a)Location b)Virtual Address c)Physical address d)Memory
6. Mention the instruction code formats.
7. What is the use of PUSH operations in a stack?
8. Expand BCD.
9. What is Input Output processor?
10. Define cache memory.

SECTION -- B

(5X5=25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a)Write short notes on instruction and operation code.

(OR)

- b) What are the advantages of timing signals?

(CONTD...2)

12. a) Explain briefly the register stack organization.
(OR)
b) How are arithmetic expressions evaluated using reverse polish notation?
13. a) Write short notes on arithmetic instructions.
(OR)
b) Discuss addition and subtraction with signed 2's complement data.
14. a) Mention any two peripheral devices and discuss.
(OR)
b) Define strobe control and discuss.
15. a) What is cache memory?
(OR)
b) Explain i) RAM chips ii) ROM chips.

SECTION - C**(5X8=40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.**

16. a) Discuss in detail computer registers
(OR)
b) Explain Instruction cycle.
17. a) Describe in detail Addressing Modes?
(OR)
b) Discuss Data transfer and Manipulation.
18. a) How are arithmetic instructions carried out using Addition and subtraction?
(OR)
b) Discuss Division Algorithms.
19. a) Explain Input – Output Interface.
(OR)
b) What are the different modes of transfer? Explain.
20. a) Discuss Auxiliary Memory.
(OR)
b) Define virtual memory and explain in detail.

NGM COLLEGE (AUTONOMOUS) : POLLACHI
END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016

B.Sc.- COMPUTER TECHNOLOGY
I SEMESTER

MAXIMUM MARKS: 75
TIME: 3 HOURS

PART - III
‘C’ PROGRAMMING

SECTION - A

(10X1=10 MARKS)

ANSWER ALL QUESTIONS.

1. The C language follows _____ approach in programming.
a) Top down b) bottom up c) intermediate d) random.
2. Which one of the following is called as ternary operators?
a) ?: b) ?= c) ? : d) ??
3. C language supports one the following _____ statements.
a) to b) ender c) start d) continue
4. _____ is a group of data items that share a common name.
a) Matrix b) Array c) Switch d)function\
5. _____ is an address operator in pointer concept.
a) & b) &&& c) +* d)*&
6. What are the characters set in C?
7. What is the use of break statement?
8. How to combine two strings?
9. Define structure in C.
10. What is the use of # define?

SECTION – B

(5 x 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Write a short note on types of constants.
(OR)
b) Write a short note on I/O statements.
12. a) Explain briefly conditional control statements with example.
(OR)
b) What is an array? Explain with example.

(CONTD....2)

(2)

(15 UCT 101)

13. a) How to read a text input? Explain.
(OR)
b) Explain shortly storage classes.
14. a) Explain in brief operations on pointer.
(OR)
b) Discuss union with example.
15. a) Describe briefly formatted IO statements in file.
(OR)
b) Write a short note on Macro definition.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

16. a) List and explain operators supported in C language.
(OR)
b) Explain the library functions.
17. a) Discuss control structures with an example.
(OR)
b) Describe two-dimensional array with an illustration.
18. a) Explain the string and its manipulations.
(OR)
b) Describe the functions with argument and return form.
19. a) Explain in detail the dynamic memory allocation.
(OR)
b) How to create books detail using structure? Explain with an example.
20. a) Explain how to reverse the content of a file.
(OR)
b) Explain in detail preprocessor.

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NGM COLLEGE (AUTONOMOUS): POLLACHI

END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016

B.Sc.- COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

I SEMESTER

TIME: 3 HOURS

PART – III
DIGITAL COMPUTER FUNDAMENTALS

SECTION - A

(10X1=10 MARKS)

ANSWER ALL QUESTIONS.

1. Gray code is also called as _____.
a) BCD code b) binary code c) Decimal code d) Reflected code.
2. The switching function expressed as sum of all the minterms is called _____.
a) pos b) sop c) k map d) normal wxpression
3. _____ is used to subtract two 4 bits binary numbers.
a) Half subtractor b) full subtractor c) paralalled subtractor
d) 2's complement subtractor
4. _____ is also known as data selector.
a) Encoder b) decoder c) multiplexer d) De-Multiplexer
5. Cache miss is the complement of _____.
a) cache memory b) hit ratio c) cache hit d) memory cycle.
6. What is Excess - 3 code?
7. Define Don't care combinations.
8. What is another name for binary adder?
9. What is purpose of encoders?
10. How to calculate the hit ratio in cache memory?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER 'a' OR 'b' IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Perform 2's complement subtraction.
i) 11011 – 11001
ii) 0.01111 – 0.0100
(OR)
b) Write short notes on BCD.

(CONTD...2)

12. a) Write a brief note on K map.
(OR)
b) State and prove the De Morgan's theorem with a neat diagram and truth table.
13. a) Draw a circuit of half adder and give its truth table.
(OR)
b) Draw the circuit of 4 bit parallel binary adder.
14. a) Write short notes on flip flop.
(OR)
b) With a neat circuit, write short notes on T Flip Flop.
15. a) With a neat diagram explain programmable counter.
(OR)
b) Compare bipolar and MOS - RAMS.

SECTION – C**(5 X 8 =40 MARKS)****ANSWER EITHER 'a' OR 'b' IN EACH OF THE FOLLOWING QUESTIONS.**

16. a) Perform the following:
i) $(625)_{10} = (?)_2$
ii) $(567)_8 = (?)_{10}$
iii) Convert binary number to Gray code
1110010
iv) 11010 10
(OR)
b) Explain in detail 1's complement and 2's complement of a binary number and its subtraction.
17. a) Discuss in detail on K-Map construction and its properties.
(OR)
b) Write in detail Implicants and don't care conditions in Kmap.
18. Explain in detail Full Adder with a neat circuit.
(OR)
Explain in detail full subtractor with a neat circuit.
19. a) Explain in detail master slave JK flip flop.
(OR)
b) Discuss in detail Decoders with a neat circuit.
20. a) With a neat block diagram discuss in detail on memory system.
(OR)
b) Explain in detail Ring counters.

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15 UCT 307

NGM COLLEGE (AUTONOMOUS) :: POLLACHI

END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016

B.Sc.- COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

III SEMESTER

TIME: 3 HOURS

PART - III

JAVA PROGRAMMING

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. Which of the following control expressions are valid for an If statement?
 - a) An integer expression
 - b) a Boolean expression
 - c) Either a or b
 - d) neither a nor b
2. Which of the following assignment is valid?
 - a) float x = 123.4;
 - b) long m = 023
 - c) int n = (int) false
 - d) None of the above
3. Which of the following classes are available in the java.lang package?
 - a)stack
 - b) random
 - c) Math
 - d) vector
4. When we invoke repaint () for a component, the AWT invokes the method:
 - a)draw()
 - b) show()
 - c)update()
 - d) paint()
5. Which javadoc tage is used to denote a comment for a method parameter?
 - a)@param
 - b) @parameter
 - c) @method
 - d) @value
6. Define Object-Oriented Programming.
7. What is meant by Elements?
8. Name the types of Errors.
9. What is a remote applet?
10. Define Concatenating.

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER 'a' OR 'b' IN EACH OF THE FOLLOWING QUESTIONS.

11. A. Explain the advantages about Object- Oriented Paradigm.
(Or)
B. What is a Variable? Explain its types.

(CONTD ...2)

12. A. What is Visibility modifier? Explain with its types.
(Or)
B. What is a Package and list out its benefits?
13. A. Explain the steps involved in extending the thread class.
(Or)
B. Explain briefly about Compile –Time error.
14. A. Write in detail about how to design a Web page.
(Or)
B. Describe the three ways of drawing Polygons.
15. A. Explain:
i) Input stream classes
ii) Output stream classes
(Or)
B. Write notes on:
i) Pushback streams
ii) Filtered streams.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER ‘a’ OR ‘b’ IN EACH OF THE FOLLOWING QUESTIONS.**

16. A) Explain in detail the Java Features.
(Or)
B) Explain in detail the Java Program Structures.
17. A) Write about Inheritance and its different forms.
(Or)
B) Write in detail about creating an array and the steps involved in it.
18. A) What is Exception? List out the common Exception and its causes.
(Or)
B) What is Synchronization? When do we use it?
19. A) Explain Applet life cycle.
(Or)
B) What is Applet? Explain how it is different from applications.
20. A) What is Stream class? Explain the two groups of Stream classes.
(Or)
B) Explain Random Access File.

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END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016**

B.Sc.- COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

III SEMESTER

TIME: 3 HOURS

**PART - III
WEB DESIGNING (HTML, DHTML, XML AND JAVA SCRIPT)**

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. The _____ tag is used to define a client-side image-map.
A. <map> B. <html> C. <image> D. <BODY>
2. The _____ element holds one or more <frame> elements.
A. Image B. Javascript C. <frameset> D. Css
3. In HTML, JavaScript code must be inserted between _____ and _____ tags.
A. <Html> and </Html> B. <Java> and </Java>
C. <script> and </script> D. <frame> and </frame>
4. _____ is combination of HTML, JavaScript, DOM, and CSS.
A. XML B. HTML C. DHTML D. SGML
5. _____ was designed to store and transport data.
A. DOM B. DTD C. DML D. XML
6. What is the purpose of <caption> tag in html?
7. Define Internal Style Sheet.
8. Define java script object.
9. Write any two advantages of Transitions in DHTML?
10. What is a DTD?

SECTION – B

(5 X5 = 25 MARKS)

ANSWER EITHER 'A' OR 'B' IN EACH OF THE FOLLOWING QUESTIONS.

11. A) Write about any four Text Formatting tags in HTML?

(OR)

B) Write a HTML Program to display for the following.

Name	Post	Salary
Geeta	Manager	20000
Ravi	clerk	5000
Mohan	clerk	5000
Shyam	Clerk	5000

12. A) Write a short note on FRAME.

(OR)

B) Write a short note on Inline Style Information.

13. A) What are the merits of using java script?

(OR)

B) Write about java Script Object Properties.

14. A) Define and explain DHTML.

(OR)

B) Explain DOM.

15. A) Write a short note on Physical Structure in XML.

(OR)

B) Write a short note on Standalone XML Documents.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER 'A' OR 'B' IN EACH OF THE FOLLOWING QUESTIONS.

16. A) Write a brief note on Image Maps in HTML.

(OR)

B) Write a brief note on HTML Tables and its Tags with suitable Example.

17. A) Write a HTML Program to create a three FRAMES vertically.

(OR)

B) List out the three Style Sheets in CSS and explain it.

18. A) List out the Merits and De-Merits of the Java Script.

(OR)

B) Write about the Window and History in Java Script.

19. A) How does DHTML Work? Explain with Suitable Example.

(OR)

B) Write a brief note on DHTML CSS.

20. A) Write a brief note on XML.

(OR)

B) Explain XML Documents.

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DURING THE ACADEMIC YEAR
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(NO.OF PAGES: 2)

16 UCT 101

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END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016

B.Sc.- COMPUTER TECHNOLOGY
I SEMESTER

MAXIMUM MARKS: 75
TIME: 3 HOURS

PART - III
‘C’ PROGRAMMING

SECTION - A

(10X1=10 MARKS)

ANSWER ALL QUESTIONS.

1. Instructions are written in 0s and 1s in ____ language.
a) high level b) assembly c) machine d) mnemonic
2. Which of the following is an unconditional control statement?
a) goto b) if c) while d) switch
3. abs() is a ____ function.
a) main b) built in c) library d) standard
4. Which of the following is an indirection operator?
a) / b) \ c) & d) *
5. Which of the following is a pre-defined structure?
a) POINTER b) FILE c) STRUCT d) INT
6. How are comments written in C?
7. What is a nested ‘for’ statement?
8. Define string.
9. What is a structure?
10. What is the use of ‘#define’ preprocessor directive?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER ‘a’ OR ‘b’ IN EACH OF THE FOLLOWING QUESTIONS.

11. a) Define identifier. Which rules are associated with coining identifiers?
(or)
b) What is a unary operator? Explain the various unary operators.

(CONTD...2)

12. a) What is the use of '**continue**' statement?
(or)
b) Explain the syntax of simple if statement.
13. a) Describe the different types of function parameters.
(or)
b) Write a program in C to read a string and explain it.
14. a) How can you call a function using pointers? Explain.
(or)
b) Discuss about arrays of structures.
15. a) Define a macro BIG using conditional operator for finding the biggest of two elements.
(or)
b) Explain the format of **#if** and **#elif** preprocessor directives.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER 'a' OR 'b' IN EACH OF THE FOLLOWING QUESTIONS.**

16. a) Discuss about the backslash characters.
(or)
b) Explain the precedence of operators.
17. a) Discuss about the syntax of switch statement.
(or)
b) Write a C program to add 2 matrices A and B.
18. a) Explain about the '**strlen**' and '**strcpy**' functions with an example.
(or)
b) Write about the different types of functions.
19. a) Write notes on enumerated data type.
(or)
b) Using an example, explain about nested structures.
20. a) Explain the functions used for reading and writing characters in a file.
(or)
b) How would you read and write records in a file? Explain with an example.

M7/-

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NGM COLLEGE (AUTONOMOUS): POLLACHI

END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016

B.Sc.- COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

I SEMESTER

TIME: 3 HOURS

PART – III
DIGITAL COMPUTER FUNDAMENTALS

SECTION - A

(10X1=10 MARKS)

ANSWER ALL QUESTIONS.

1. Half adder consists of _____ & _____ gates.
a) EX-OR&AND b) EX-OR&OR c) EX-OR&NOT d) none of these
2. Subtract $(1010)_2$ from $(1101)_2$ using 1^{st} complement.
a) (1100) b) $(0011)_2$ c) $(1001)_2$ d) $(0101)_2$
3. Karnaughmap(k-map) technique provides a systematic method for simplifying _____.
a) Multiplexers b) logic gates c) Boolean expressions d) none of these
4. Each flip-flop stores _____ bits.
a) 1 b) 8 c) 16 d) 2
5. 8085 has _____ data lines.
a) 8 b) 16 c) 32 d) none of the above
6. The first microprocessor was _____.
a) Intel4004 b) 8080 c) 8085 d) 4008
7. The address/data bus in 8085 is _____.
a) Multiplexed b) Demultiplexed c) decoded d) loaded
8. The flip-flop is also called as _____.
a) stable b) bistable c) tristable e) not stable
9. Status register is also called as _____.
a) Accumulator b) stack c) Counter d) flags
10. Access time is faster for _____.
a) ROM b) SRAM C. DRAM D. ERAM

(CONTD...2)

SECTION – B**(5 X 5 = 25 MARKS)****ANSWER EITHER ‘a’ OR ‘b’ IN EACH OF THE FOLLOWING QUESTIONS.**

11. a) Convert hexadecimal 4B2F in to its equivalent Decimal, octal and binary numbers.
(OR)
b) Write a note on Weighted Code.
12. a) Briefly explain the Don't Care Conditions.
(OR)
b) Explain the Basic Logic Gates.
13. a) Explain Parallel Binary Subtractor.
(OR)
b) Explain half adder with suitable diagram & examples.
14. a) Explain in detail the multiplexers.
(OR)
b) Write about D-Flip-Flops.
15. a) Types of Semiconductor Memories.
(OR)
b) Discuss the cache memory in details.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER ‘a’ OR ‘b’ IN EACH OF THE FOLLOWING QUESTIONS.**

16. a) Explain the concept of BCD code.
(OR)
b) Explain in details Parity method for error detection and correction.
17. a) Simplify the boolean function.
 $F(A, B, C, D) = \sum (0, 1, 2, 4, 5, 7, 11, 15)$ using Karnaugh map
(OR)
b) Explain the Demorgan's Theorems.
18. a) Elaborate the concepts of Full Subtractor Circuit.
(OR)
b) Elaborate the concepts of Full Adder Circuit.
19. a) Explain briefly the RS and JK flip-flops.
(OR)
b) Explain Counter with neat diagram.
20. a) Explain the Synchronous up/Down Counter.
(OR)
b) Explain the Ring Counter with timing Diagram.

NGM COLLEGE (AUTONOMOUS) : POLLACHI
END – OF – SEMESTER EXAMINATIONS : NOVEMBER - 2016
B.Sc. COMPUTER TECHNOLOGY **MAXIMUM MARKS: 75**
III SEMESTER **TIME: 3 HOURS**

PART - III
JAVA PROGRAMMING

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL QUESTIONS.

1. Which of these values can a boolean variable contain?
A. True & False B. 0 & 1
C. Any integer value. D. Both a & b
2. Which of these keywords is used to define packages in Java?
A. pkg B. Pkg
C. package D. Package
3. Which of these keywords is not a part of exception handling?
A. try B. finally
C. thrown D. catch
4. What does AWT stands for?
A. All Window Tools B. All Writing Tools
C. Abstract Window Toolkit D. Abstract Writing Toolkit
5. Which of these classes can return more than one character to be returned to input stream?
A. BufferedReader B. Bufferedwriter
C. PushbachReader D. CharArrayReader
6. In which package, is Math class is defined?
7. What is the use of Vector class?
8. Mention the two broad categories of errors.
9. What is meant by a local applet?
10. What are the two types of Java Streams?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

- 11.a) Describe the general structures of a Java program.
(OR)
b) How does Java differ from C++?

(CONTD ...2)

(2)

(14 UCT 09)

12.a) Write a program for method overriding in java.

(OR)

b) Using command line arguments, write a java program.

1. a) Discuss exception handling in Java.

(OR)

b) Write a java program by extending Thread class.

2. a) Write an applet program to draw circles and ellipses.

(OR)

b) How do applets differ from applications? Explain.

15.a) Explain the ByteStream Classes with the block diagram for its hierarchy of input and output stream classes..

(OR)

b) Describe the functions of a **File** class with a program.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

1. a) Discuss the Salient features of java.

(OR)

b) Explain briefly the java environment.

17. a) Describe the various forms of implementing interfaces. Give examples of java code for any one case.

(OR)

b) Give a brief discussion on string manipulations in java.

18. a). Discuss the user defined exception by using keyword throw.

(OR)

b) Explain in detail about the life cycle of a thread with a neat diagram.

19. a) Write a short note on the importance of Graphics class in an applet program .

(OR)

b) Explain in detail the applet tag.

20. a) Write a brief note on concatenation and buffering of files.

(OR)

b) Write a program to copy characters from one file to another File.

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(NO. OF PAGES: 2)

15 UCT 309

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER – 2016

B.Sc. – COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

III SEMESTER

TIME : 3 HOURS

PART - III

OPERATING SYSTEMS

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER ALL OF THE FOLLOWING QUESTIONS.

1. The Program that runs, when the computer is powered up is called,
a) Operating System b) Bootstrap Program c) Firmware d) Trap
2. Which one of the following is NOT the CPU Scheduling criterion?
a) Throughput b) Waiting Time c) Response Time d) Burst Time
3. An Operating System should ensure that a deadlock should
a) Only once occur b) never occur c) many times occur d) ever occur
4. Demand paging and segmentation are methods to implement
a) Virtual memory b) main memory c) secondary memory d) cache memory
5. ACL is meant for
a) Acrylic Control List b) Access Control List c) Adaptive Control List d) Address Control List

SHORT ANSWERS:

6. What do you mean by Clustered Systems?
7. Define the term CPU Scheduling.
8. Write short notes on Deadlock.
9. Define Demand Paging.
10. Define a File.

SECTION B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

11. a. Write short notes on Distributed Systems.

(OR)

b. List down the types of system calls.

12. a. Illustrate the CPU Scheduling algorithm - FCFS.

(OR)

b. How will you define Semaphores with suitable problem?.

(CONTD 2)

13. a. List down the characterization of deadlocks.

(OR)

b. Does swapping improve the efficient usage of memory? Justify.

14. a. What do you mean by Virtual memory? Explain.

(OR)

b. Describe LRU Page replacement method.

15. a. Write short notes on File system mounting.

(OR)

b. Sketch the disk structure in Linux Operating System.

SECTION- C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

16. a. Discuss the following types of system:

i) Desktop systems ii) Real time systems

(OR)

b. Illustrate the Operating System Services in detail.

17. a. Elaborate the Process Scheduling with suitable diagrams.

(OR)

b. Discuss the Process Synchronization in detail.

18. a. Discuss any two Deadlock avoidance algorithm with diagrams.

(OR)

b. Illustrate Contiguous Memory Allocation with examples.

19. a. What do you mean by Optimal Page Replacement? Discuss in detail.

(OR)

b. List down the different File Access Methods with suitable diagrams.

20. a. What are the File Allocation methods? Explain them.

(OR)

b. Explain the File System Structure in Windows XP.