

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

END-OF-SEMESTER EXAMINATIONS : MAY – 2017

**B.Sc – COMPUTER TECHNOLOGY
VI SEMESTER**

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

**PART – III
VB. NET PROGRAMMING**

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

Multiple Choice Questions:

1. The _____ contains information about the storage of data types, and objects.
a. Framework class library or FCL b. Common Language Specification (CLS)
c. Common Language Runtime (CLR) d. Active Server Pages (ASP)
2. A _____ occurs when an executed statement does not directly follow the previously executed statement in the written program.
a.break b.error c.transfer of control d.exception
3. When used to declare a value-type parameter, keyword _____ causes the value of the argument to be copied to a local variable in the procedure.
a.ByVal b.ByRef c.dim d.new
4. The _____ control combines Text Box features with a drop-down list.
a. List box b.Checked List Box c. Combo Box d. List view
5. A _____ is an integrated collection of data that is centrally controlled.
a. information b.database c. meta data d. data dictionary

Short Answers:

6. What is file synchronization?
7. What are the two types of logic errors?
8. Define array.
9. What is a link label?
10. Define foreign key.

SECTION - B (5 X 5 = 25 MARKS)

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

11. a)Write short notes on .NET Framework.
(OR)
11. b)What is the purpose of menu bar? Explain the menus in it.
12. a)Explain the types of selection structures with examples.
(OR)
12. b)Briefly explain the procedures and functions in VB.Net.

(CONTD....2)

(2)

(14 UCT 27)

13. a) Write a program that sums the values contained in a 5-element integer array.
(OR)
13. b) What are Windows Forms? Explain.
14. a) How will you create hyperlinks using the Link Label control? Explain.
(OR)
14. b) Write short notes on Data Hierarchy.
15. a) Explain briefly the Relational Database Model .
(OR)
15. b) What is a Simple HTTP Transaction? Explain.

SECTION - C

(5 X 8 = 40 MARKS)

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

16. a) Explain Visual studio.NET IDE environment with necessary diagrams.
(OR)
16. b) List the operators in Visual Basic and Explain each with an example.
17. a) List the repetition structures and Explain each category with an example.
(OR)
17. b) Discuss the following.
i) Argument Promotion → 4 marks
ii) Option strict → 4 marks
18. a) Write a detailed note on Passing Arrays to Procedures.
(OR)
18. b) Explain the features of Check Boxes and Radio Buttons.
19. a) Explain how to create multiple-document-interface (MDI) programs.
(OR)
19. b) Explain Random access files with example.
20. a) Explain the basic database queries written in Structured Query Language (SQL).
(OR)
20. b) How will you read and write an XML file? Explain.

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**B.Sc – COMPUTER TECHNOLOGY
VI SEMESTER**

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

PART – III

CORE ELECTIVE – II: EMBEDDED SYSTEMS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

1. A keypad has upto maximum of ____ keys.
a. 16 b. 32 c. 104 d. 100
2. The _____ is used in a system to save the current time and date.
a. Counting device c. Timer device
b. Watchdog timer d. Real time clock
3. The last instruction of any routine or function is always a _____.
a. main b. function call c. return d. End
4. A _____ represents each process in DFG.
a. Arc b. Edge c. Token d. Circle
5. Asynchronous IO operations are at the _____ data transfer rates.
a. Fixed b. Multiple c. Variable d. Single

SHORT ANSWERS

6. Define Multiplexer.
7. What are the functions of a Timer cum Counting device?
8. What are the two parts that an interrupt service can be done?
9. What are the structural elements of a C program
10. What can be the functions outside the kernel?

SECTION – B (5 X 5 = 25 MARKS)

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

11. a. Explain Hardware and Software components of Automatic Chocolate Vending Machine.

(OR)

- b. List out ten examples of Small Scale Embedded Systems.

(CONTD....2)

12. a. Explain Counting device and Watchdog timer.

(OR)

b. Explain Parallel Port Interfacing with LCD Controller with a neat diagram.

13. a. Discuss Device Drivers.

(OR)

b. List the information that must be available when writing a device control and configuring and driver codes.

14. a. Explain the advantages and disadvantages of JAVA programming

(OR)

b. Write short notes on Program Models?

15. a. Explain Interprocess Communication.

(OR)

b. Discuss Real-Time Operating System Services.

SECTION – C

(5 X 8 = 40 MARKS)

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

16. a. Explain in detail Embedded Hardware units and devices in a system.

(OR)

b. Discuss in detail the Processors Embedded into a system with suitable diagrams.

17. a. List out any 8 uses of a Timer device and explain the meaning of each use.

(OR)

b. With suitable diagrams describe the various types of Serial Buses.

18. a. Explain in detail Context Switching, Interrupt Latency and Deadline.

(OR)

b. Explain in detail Interrupt Servicing Mechanism with suitable diagrams.

19. a. Explain in detail State Machine Programming models for Event-Controlled program flow.

(OR)

b. Discuss in detail Program Elements

i. Data types

iii. Data structures

ii. Modifiers

iv. Loops

20. a. Discuss in detail Real Time Operating System Scheduling Models.

(OR)

b. Discuss in detail Shared Data.

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PART – III
CORE ELECTIVE – III: INFORMATION SECURITY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS:

1. _____ is a potential for violation of security, which exists when there is a circumstance, Capability, action, or event that could breach security and cause harm.
a) Threat b) Attack c) Hacking d) Security
2. _____, a word with Greek origin, means “secret writing”.
a) Firewall b) Cryptography c) Plain text d) Threat
3. Expand SHTTP.
a) Safety Hyper Text Transmission Protocol b) Secure Hyper Text Transmission Protocol
c) Standard Hyper Text Transmission Protocol d) Strong Hyper Text Transmission Protocol
4. What is MIME?
a) Multiple Intranet Mail Extension b) Management Internet Mail Extension
c) Multiple Internet Mail Extension d) Management Internet Mode Extension
5. A _____ applies a set of rules to each incoming and outgoing IP packet and then forwards or discards the packet.
a) Firewall b) VPN c) Kerberos d) Packet filtering router

SHORT ANSWERS.

6. Define Passive Attacks.
7. What is Asymmetric Key?
8. Describe the use of Time Stamping Protocol.
9. What do you mean by 3G?
10. Define the term Intrusion.

SECTION – B

(5 X 5 = 25 MARKS)

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

11. a) Write a short notes on two types of Attacks.
(OR)
b) What do you mean by Virus? Explain.

(CONTD....2)

(2)

(14 UCT 29)

12. a) List down the Symmetric Key Algorithms and its Modes.
(OR)
b) What do you mean by Blowfish?
13. a) What do you mean by Digital Signature?
(OR)
b) Write short notes on SHTTP.
14. a) Explain the term Email Security.
(OR)
b) Describe the term Single Sign On Approach.(SSO)
15. a) Write short notes on TCP/IP.
(OR)
b) Write a brief note on Intrusion.

SECTION – C

(5 X 8 = 40 MARKS)

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

16. a) Explain the Security Approaches and its Mechanisms in detail.
(OR)
b) Explain the concepts of Cryptography in detail.
17. a) Illustrate the Data Encryption Standard[DES] Algorithm.
(OR)
b) Elaborate the Asymmetric Key Algorithms.
18. a) Explain the public key and private key management in detail.
(OR)
b) Discuss the various Internet Security Protocols in detail.
19. a) Discuss PGP and its Working Methodology.
(OR)
b) What is User Authentication and Kerberos? Explain with suitable example.
20. a) Sketch in detail on Virtual Private Networks(VPN).
(OR)
b) Illustrate on Firewalls with its types and mechanism.

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PART – III

MICROPROCESSOR AND ALP

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

1. The CPU sends out a ____ signal to indicate that valid data is available on the data bus:
a. Read b. Write c. Both A and B d. None of these
2. The Accumulator is 16 bit wide and is called:
a. AX b. AH c. AL d. DL
3. The cache usually gets its data from the _____ whenever the instruction or data is required by the CPU:
a. Main memory c. Case memory
b. Cache memory d. All of these
4. _____ stores the instruction currently being executed:
a. Current register c. Instruction register
b. Address register d. None of these
5. A 16 bit address bus can generate ____ addresses:
a. 32767 b. 25652 c. 65536 d. none of these

SHORT ANSWERS

6. Expand BIU .
7. What is the size of each segment in 8086?
8. Which memory has to be refreshed?
9. What does the term gigabyte refer to?
10. What is the result of MOV AL, 65.

SECTION – B (5 X 5 = 25 MARKS)

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

11. [a] Compare CISC and RISC processors.

[OR]

[b] Write a short note about 8086 based computer systems.

(CONTD ...2)

12. [a] What is Segment over ride ? Explain in detail.

[OR]

[b] Write an Assembly Language Program for finding the largest number in a group of array?

13. [a] Explain the Virtual Memory in detail.

[OR]

[b] Explain the Register Organisation of 80486 in detail.

14. [a] Write a short note about Cyrix Processor in detail

[OR]

[b] Explain the RAM address decoding procedure in detail

15. [a] Explain the Sample and Hold Circuits in detail.

[OR]

[b] Write a short note about Motorola 68040 processor.

SECTION – C (5 X 8 = 40 MARKS)

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

16. [a] Explain the evolution of microprocessor in detail.

[OR]

[b] What do you mean by Addressing Modes? Explain the various addressing modes in detail.

17. [a] Write the Assembly Language Program to arrange the numbers in descending order .

[OR]

[b] Explain the following instructions of 8086 microprocessor in detail.

[i] AAM

[ii] LEA

[iii] SAL

[iv] DAA

18. [a] Discuss the Addressing modes available in Intel 80486 in detail

[OR]

[b] Write in detail about the Interrupts available in advanced processor

19. [a] Explain the Architecture of IC8255 with a neat functional diagram.

[OR]

[b] Write a short note about the following.

[i] Pentium Processor

[ii] Pentium Pro Processor

20. [a] Write a short note about the following.

[i] ADC 808 interfacing

[ii] Motorola 68000

[OR]

[b] Discuss in detail the Measurement of physical quantity with relevant programs.

(FOR THE CANDIDATES ADMITTED

(NO. OF PAGES: 2)

DURING THE ACADEMIC YEARS 2011 & 2015 ONLY) 2011 – BATCH

11 UCT 16

2015 – BATCH

15 UCT 412

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END-OF-SEMESTER EXAMINATIONS : MAY – 2017

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IV SEMESTER

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PART – III

WEB TECHNOLOGY (PHP & MYSQL)

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

1. Who is the father of PHP?
a) Rasmus Lerdorf b) Willam Makepiece c) Drek Kolkevi d) List Barely
2. Which of the functions is used to sort an array in descending order?
a) sort() b) asort() c) rsort() d) dsort()
3. A function in PHP which starts with double underscore is know as_____
a) Magic Function b) Inbuilt Function c) Default Function d) User Defined Function
4. You can add a row using SQL in a database with which of the following?
a) ADD b) CREATE c) INSERT d) MAKE
5. _____Commonly caused due to syntax mistakes in codes e.g. missing semicolon, mismatch brackets,etc.
a) Parse error b) Fatal Error c) Warning Error d) Notice error

SHORT ANSWERS.

6. How many Arithmetic Operators are in PHP?
7. How to declare an array in PHP?
8. Which PHP function is used to determine a file's last access time?
9. What does SQL stand for?
10. How to Retrieve a Cookie Value?

SECTION – B

(5 X 5 = 25 MARKS)

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

11. a) Explain Unique features of PHP.

[Or]

- b) How to create a PHP constant? Explain with examples.

(CONTD ...2)

12. a) Discuss PHP - The if Statement.
[Or]
b) Explain PHP Indexed Arrays with examples.
13. a) Discuss how to Create a User Defined Function.
[Or]
b) Discuss in detail reading files with examples.
14. a) Write a note on database with examples.
[Or]
b) Describe Handling Errors with examples.
15. a) What is a Cookie? Create Cookies with PHP.
[Or]
b) Explain Basic Use of Exceptions.

SECTION – C (5 X 8 = 40 MARKS)

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

16. a) Discuss PHP Data Types with examples.
[Or]
b) Write a short note on i) Arithmetic operators ii) Assignment operators.
17. a) Explain Simple Date function with examples.
[Or]
b) Discuss in detail working with array functions with an example program.
18. a) Explain writing files with examples.
[Or]
b) Write a PHP Functions program for Returning values.
19. a) Explain creating and populating a database.
[Or]
b) Brief about Modifying data.
20. a) Write short notes on i) Logging Errors ii) Debugging errors.
[Or]
b) Describe session with an example program.

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TIME : 3 HOURS

PART – III
DATA COMMUNICATION AND NETWORKS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

1. ----- data must travel from the sender to the receiver in a finite amount of time.
a) Current delivery b) Timely delivery c) Transmission medium
d) Accurate delivery
2. Complete topology is also called -----
a) Tree topology b) Star topology c) Mesh topology d) Ring topology
3. ----- is synchronous protocol.
a) x.25 b) x.21 c) flow control d) None of the above.
4. The best speeds widely offered currently are 1.5 mbps downstream and ----- upstream.
a) 63 – 330 kbps b) 64 – 644 kbps c) 64 – 640 kbps
d) 64 – 630 kbps
5. ----- is the e-mail system that performs their reporting task as well.
a) Transfer b) composition c) Reporting d) Disposition

SHORT ANSWERS:

6. Define Digital line.
7. Define satellite communication.
8. Expand PTI.
9. Expand DSL.
10. Define socket.

SECTION – B (5 X 5 = 25 MARKS)

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

11. a) Discuss the difference between Terms baud rate and Bits per second.
(OR)
b) Explain Go – back – n method.

(CONTD ...2)

12. a) What are the advantages and disadvantages of optical fibers?
(OR)
b) Discuss circuit switching in detail.
13. a) Explain MAC What is its purpose?
(OR)
b) Explain the DE bit.
14. a) Explain in details Internet topology.
(OR)
b) How do repeaters work in OSI protocol?
15. a) Explain ports.
(OR)
b) Explain differences between UDP and TCP.

SECTION – C (5 X 8 = 40 MARKS)

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

16. a) Discuss in detail Types of multiplexing.
(OR)
b) Explain the term bandwidth & the use of it.
17. b) Explain the OSI Model functions.
(OR)
b) Discuss different approach for routing.
18. a) Describe the congestion control algorithm.
(OR)
b) Explain DQDB.
19. a) Explain the Internal Architecture of an ISP.
(OR)
b) Discuss in detail Address Resolution protocol.
20. a) What is an Electronic Mail? Explain.
(OR)
b) Discuss in detail web browser architecture.

**(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR
2015 ONLY)**

**(NO.OF PAGES:1)
15 UCT 4N2**

**NGM COLLEGE (AUTONOMOUS) : POLLACHI
END – OF – SEMESTER EXAMINATIONS : MAY- 2017**

UG DEGREE COURSES (SF)

MAXIMUM MARKS: 50

IV SEMESTER

TIME: 2 HOURS

**PART – IV : NON - MAJOR ELECTIVE PAPER – II
INTERNET AND WEB TECHNOLOGY**

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

1. Collection of computers and devices connected via communications devices and transmission media is called -----.
a) Network b) LAN c) WAN d) MAN
2. An IP address is used to access -----.
a) Source b) Port c) Destination d) Network
3. Every web server has unique ----- which identifies machines on the network.
a) IP address b) URL c) Host name d) HTTP
4. An ----- is a specific content on a web page.
a) Head b) Title c) Element d) Hypertext
5. Receiving updates about the content of a particular site regularly is called -----
a) Follow b) Like c) Subscribe d) None
6. List down two types of switching technologies.
7. Expand FTP
8. What is firewall?
9. What is CSS?
10. What is spatial navigation?

SECTION – B

(5 X 8 = 40 MARKS)

ANSWER ANY FIVE OF THE FOLLOWING QUESTIONS.

11. With neat diagram, explain the topologies of network.
12. Explain about WWW and its features.
13. Write a brief note of events in Dynamic HTML?
14. What are the layers in networking? Explain OSI model.
15. What is proxy server? Explain its architecture with neat diagram.
16. Briefly explain the process of Email.
17. Write a brief note on web server architecture and its types.
18. Write in detail about search engine and list some of the search tools available.

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PART – III

DISCRETE MATHEMATICS

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

1. $\{0\}$ is ----- set.
a) Finite b) Infinite c) Null d) None of the above
2. $p \wedge q$ is called -----
a) Disjunction b) Conjunction c) Negation d) None of the above
3. The relation (x,y) , where “x is the sister of y” is -----
a) Reflexive b) symmetric c) transitive d) None of the above
4. Which of the following is not regular?
a) String of 0's whose length is a perfect square
b) Set of all palindromes made up of 0's and 1's
c) Set of all 0's whose length is a prime number
d) All of these
5. In any undirected graph, the sum of degrees of all vertices -----
a) Must be even b) Is twice the number of edges
c) Must be odd d) Both (a) and (b)
6. Define singleton set.
7. Define atomic proposition.
8. Define universal relation.
9. Define length of string.
10. Define the degree of a vertex.

SECTION – B

(5 X 5 = 25 MARKS)

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

11. a) If $A = \{a, c, d, f, g\}$ and $B = \{a, b, d, e, f\}$ then find $(A \cup B)$ and $(A \cap B)$

(OR)

- b) Prove by using Venn diagram $(A \cap B)^c = A^c \cup B^c$

(CONTD ...2)

(2)

(16 UCT 2A2)

12. a) Define tautology and contradiction by giving examples.
(OR)
b) Construct the truth table for $(P \wedge (Q \vee R) \rightarrow (P \wedge Q))$
13. a) Bring out the difference between relations and functions.
(OR)
b) show that the relation $\subseteq$ (subset) defined on the power set $P(A)$ of the set A is a partial order relation.
14. a) Explain the operations on languages by giving examples.
(OR)
b) Define regular expressions and regular languages by giving examples.
15. a) Explain path and cycles in graphs by giving example.
(OR)
b) Explain null graph and complete graph with example.

SECTION – C (5 X 8 = 40 MARKS)

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

16. a) If $A = \{1,3,4,5,7\}$, $B = \{1,2,5,9,10\}$ and $C = \{2,4,5,6,8\}$, then verify
 $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$
(OR)
b) In a group of 200 people, each of whom is at least accountant or management consultant or sales manager, it was found that 80 are accountants, 110 are management consultants and 130 are sales managers, 25 are accountants as well as sales managers, 70 are management consultants as well as sales managers, 10 are accountants, management consultants as well as sales managers. Find the number of those people who are accountants as well as management accountants but not sales managers.
17. a) Prove that $\neg (P \wedge Q) \rightarrow (\neg P \vee (\neg (P \vee Q))) \Leftrightarrow (\neg P \vee Q)$
(OR)
b) Show that the statement $(P \wedge Q) \Rightarrow (P \vee Q)$ is a tautology but $(P \vee Q) \Rightarrow (P \wedge Q)$ is not.
18. a) Describe any four types of relations by giving examples.
(OR)
b) Let A and B be two non - empty sets. If f is one – one onto function from A to B , then prove that $f^{-1}: B \rightarrow A$, is also one – one onto.
19. a) Explain the construction of a state diagram of an automation by giving example.
(OR)
b) Define finite state automation. Give an example.
20. a) Explain connected undirected graphs with example.
(OR)
b) Prove that graph G with 'n' vertices and k components cannot have more than $(n-k)(n-k+1)/2$ edges.

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PART – III
OBJECT ORIENTED PROGRAMMING WITH C++

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

1. The C++ program is a collection of _____.
a) keywords b) header files c) functions d) files
2. _____ is a function that is expanded in line when it is invoked.
a) Variable b) Header c) inline function d) main()
3. _____ is a special member function whose task is to initialize the objects of its class.
a) Constructor b) Destructor c) Objects d) inline function
4. A derived class with only one base class is called _____ inheritance.
a) Single b) Multiple c) hierarchical d) Multilevel
5. _____ can be used to open multiple files that use the same stream objects.
a) Close() b) open() c) fopen() d) steam Class
6. Define keyword.
7. What is array?
8. Define Overloading.
9. What is the use of 'this' pointer?
10. Define stream.

SECTION – B (5 X 5 = 25 MARKS)

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

11. a) Write the structure for C++ with an example program.

[Or]

- b) Write a short note on Object oriented Programming Paradigm.

12. a) Write a short note on main () function.

[Or]

- b) Differentiate between private and static member functions. **(CONTD ...2)**

13. a) Discuss copy constructor with example.

[Or]

b) List out the rules for overloading operator.

14. a) Write short notes on Derived class.

[Or]

b) Explain '**this**' pointer with example.

15. a) Explain C++ Streams.

[Or]

b) Write about File pointers.

SECTION – C

(5 X 8 = 40 MARKS)

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

16. a) Briefly explain Basic concepts of OOPS.

[Or]

b) Explain Tokens with examples.

17. a) Discuss Return by Reference and Inline functions.

[Or]

b) Explain Defining member functions.

18. a) Discuss in detail copy and dynamic constructor with examples.

[Or]

b) Explain in detail Operator overloading with suitable examples.

19. a) What is an inheritance? Explain its types with examples.

[Or]

b) Discuss Pointers to objects and Virtual functions with examples.

20. a) Explain in detail Formatted console I/O Operations.

[Or]

b) Discuss in detail Opening and closing a file with examples.

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(FOR THE CANDIDATES ADMITTED

(NO. OF PAGES: 2)

DURING THE ACADEMIC YEARS 2015 &
2016 ONLY)

2016 – Batch
2015 – Batch

16 UCT 205
15 UCT 205

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PART – III

DATA STRUCTURES AND ALGORITHMS

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

1. The function ----- produces a new, empty array.
a) CREATE b) RETRIEVE c) STORE d) None
2. ----- operation is used to remove the element in queue.
a) REAR b) FRONT c) BOTH A & b d) NONE
3. How many types of linked list exist ? -----
a) 5 b) 3 c) 4 d) 2
4. In Binary tree representation nodes on any level are numbered from -----
a) Left to Right b) Right to Left c) Top to bottom d) Bottom to Top
5. There are ----- types of basic file operations.
a) 5 b) 3 c) 4 d) 1

Short Answers:

6. List the 5 rules of data structure algorithm.
7. Define stack.
8. Define linked list.
9. What are the 2 types of graphs?
10. List the types of sorting.

SECTION – B

(5 X 5 = 25 MARKS)

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

11. a) Describe Data structures & Algorithms.
(OR)
b) Discuss in detail Arrays with examples.

(CONTD ...2)

12. a) Explain any one application of stack.
(OR)
b) Explain Queue and its operations.
13. a) Write short notes on Linked List.
(OR)
b) Explain circular linked list.
14. a) Write short notes on Representation of Trees.
(OR)
b) Explain Threaded Binary trees.
15. a) Write about basic file operations.
(OR)
b) Explain Merge sort.

SECTION – C (5 X 8 = 40 MARKS)

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

16. a) Explain in detail Definition & classification of Data structures.
(OR)
b) Write about Representation of Arrays in Memory & applications.
17. a) Explain in detail Stack & its operations.
(OR)
b) Explain circular Queue .
18. a) Describe in detail
i) Linked list example ii) Singly with an
(OR)
b) Explain Doubly linked list with an example.
19. a) Explain in detail the types of Binary Trees
(OR)
b) Discuss in detail the basic terminologies of Graphs.
20. a) Explain the different types of File organizations.
(OR)
b) Discuss in detail Linear search & Binary Search with examples.