

(FOR CANDIDATES ADMITTED IN
DURING THE ACADEMIC YEARS 2016 ONLY)

(NO. OF PAGES: 2)

16 UCT 517

REG.NO.

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

END-OF-SEMESTER EXAMINATIONS: NOVEMBER 2018

B.Sc. – COMPUTER TECHNOLOGY

MAXIMUM MARKS: 75

SEMESTER: V

TIME: 3 HOURS

PART -III
VB.NET PROGRAMMING

SECTION – A

(10 X 1 =10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS

- 1) Visual Studio .NET provides which feature:
a.) Debugging. b.) Application deployment. c.) Syntax checking. d.) All of the above.
- 2) The function procedures are _____ by default.
a) .public b). Private. c) Protected d) Inherited
- 3) A GUI
a.) Uses buttons, menus, and icons. b.) Should be easy for a user to manipulate.
c.) Stands for graphic user interaction. d.)Both a and b
- 4) _____ combines the features of the text box and list box.
a) Picture box b) Check box c) Combo box d) Option button
- 5) Which one is a database program?
a) Oracle b) SQL Server c) Microsoft ODBC Data Source d) All of the above

SHORT ANSWERS

- 6) What is entry point method of VB.NET program?
- 7) Define sub procedure
- 8) Can we change the size of an array at run time?
- 9) What is multiselect property?
- 10) What is SQL?

SECTION – B

(5 X 5 = 25 MARKS)

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

- 11.a) Discuss Microsoft .NET

[OR]

- b) What is a memory concept?

- 12.a) Describe DO-While with example.

[OR]

- b) Explain Argument promotion.

(CONTD....2)

(2)

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13.a) Discuss passing arrays to procedures.

[OR]

b) Brief control properties and layout.

14.a) Explain List views.

[OR]

b) Describe data hierarchy..

15.a) Discuss relational database model.

[OR]

b) Design a GUI and write the following code in VB.NET(ADO.NET) without wizard
i) Accept player- details like players-No, player – name, No-of-Runs-Scored, No-of-Time-out and save these details in the player table.

SECTION – C

(5 X 8 = 40 MARKS)

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

16.a) What are different types of errors in VB.Net with examples

[OR]

b) Design a program to display a simple message in VB.NET

17.a) Discuss assignment operators.

[OR]

b) Explain classes and procedures .

18.a) Design GUI and write code in VB. Net for the following.

- Accept two no. in two text boxes.
- Display prime No. among them in message box.

[OR]

b) Describe arrays with examples.

19.a) Discuss MDI windows ..

[OR]

b) Brief how to read data from a sequential file with examples.

20.a) Illustrate ADO.NET object model.

[OR]

b) Discuss Session tracking .

M3/-

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**PART -III
COMPUTER GRAPHICS**

SECTION – A

(10 X 1 =10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS

1. A_____ is small hand-held box used to position the screen cursor
a) Keyboards b) Mouse c) Joy sticks d) Trackball
2. A _____symbol is a single character that can be displayed in different colors and in different sizes
a) Marker b) Stroke c) Shapes d) String
3. An area on display devices to which a window is mapped is called a _____
a) Transformation b) Window c) View port d) Panning
4. _____ can be obtained by reflecting a raster image from a vibrating flexible mirror
a) Cutaway views b) Visible line c) Three dimensional d) Exploded
5. Radiant energy is related to the _____ of the sources
a) Luminance b) Dominant c) Frequency d) Wave length

SHORT ANSWERS

6. Define shadow mask
7. What is filing
8. Define shift vector
9. What is surface rendering method?
10. Define depth field

SECTION – B

(5 X 5 =25 MARKS)

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

- 11.a) Describe random scale displays

[OR]

- b) Explain color CRT monitors.

- 12.a) Discuss loading frame buffer

[OR]

- b) Describe gray scale.

(CONTD....2)

(2)

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13.a) Brief about two dimensional viewing functions.

[OR]

b) Illustrate text clipping.

14.a) Write a note on blobby objects.

[OR]

b) Discuss scaling.

15.a) Describe back face detection.

[OR]

b) Explain binary space partitioning tree method.

SECTION – C

(5 X 8 = 40 MARKS)

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

16.a) Describe raster scan systems.

[OR]

b) Write a note on three dimensional viewing devices.

17.a) Discuss Bresenham's line algorithm

[OR]

b) Discuss i) Line Type ii) Line width

18.a) Brief on composite transformations

[OR]

b) Write a note on i) Translation ii) Scaling

19.a) Describe rotation.

[OR]

b) Illustrate polygon surfaces.

20.a) Discuss HSV color model.

[OR]

b) Write short note on i) octree method ii) Ray casting method

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PART -III
CLOUD COMPUTING

SECTION – A (10 X 1 =10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS

1. The _____ is the collection of servers where the application to which you subscribe is housed.
a) Data center b) Data Object c) Data Method d) All of the above
2. _____ also runs java script up to six times faster than other browser.
a) Chrome b) Internet c) Safari d) Firefox
3. Which of the following is most complete cloud computing service model ?
a)PaaS b)IaaS c)CaaS d) SaaS
4. Adobe system offers its _____.
a) SRC b) AIR c) LSI d)ARI
5. Skytap offers a _____ in the cloud.
a) picnic b) Blist c) Twitter d) Virtual lab
6. Define Bot attackers.
7. What is meant by web service?
8. Define Saas with example.
9. Define VMware.
10. Define Migration.

SECTION – B

(5 X 5 = 25 MARKS)

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

11. a) Short notes on Application of Cloud.

(Or)

- b) Explain about Limitation of Cloud.

(CONTD....2)

(2)

(16 UCT 520)

12. (a) Discuss on Clients on hardware and infrastructure.

(Or)

b) Short notes on Web Applications.

13. a) Short notes on Microsoft Line with examples.

(Or)

b) Give tips for Evaluation of Saas.

14. a) Discuss on Software plus service.

(Or)

b) Write a short note on Server Solutions.

15. (a) Short notes on Migration.

(Or)

b) Briefly explain about Analysis your server.

SECTION – C

(5 X 8 = 40 MARKS)

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

16. (a) Explain in detail on Platform as a Service with examples.

(Or)

b) Illustrate the Benefits of Cloud with proper explanation.

17. (a) Briefly explain about Security of Hardware and Infrastructure.

(Or)

b) Illustrate the Over view of the Cloud Storage.

18. (a) Explain in detail about Software As a Service.

(Or)

b) Demonstrate on Cloud Services with neat diagram.

19. (a) what are the company offering for Cloud Computing at work? .

(Or)

b) Demonstrate on Thin Clients with neat diagram.

20. (a) Explain in detail on Enterprise Cloud Offering.

(Or)

b) Illustrate the Cloud Computing Security and Challenges.

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SEMESTER: V

TIME: 3 HOURS

**PART -III
SOFTWARE ENGINEERING**

SECTION – A

(10 X 1 =10 MARKS)

**ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS**

1. _____ is an instruction that when executed provide desired features.
a) Software b) Hardware c) Design d) All of these
2. _____ is a technique that translates the needs of the customer.
a) QFD b) QFA c) QRA d) none
3. A data _____ is a representation of almost any composite information.
a) Method b) Object c) Connection d) None
4. Software is an interactive process through which requirements one translated in to a _____.
a) Blue Print b) Engineering c) Mapping d) None
5. _____ testing sometimes called glass box testing.
a) White-Box b) Black-Box c) Stress d) All of the above
6. Define Process Frameork.
7. Define State diagram.
8. Define Sawimlane diagrams.
9. Define Archetype.
10. Define Black Box Testing.

SECTION – B

(5 X 5 =25 MARKS)

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

11. a) Short notes on Software Myths with examples.

(Or)

- b) Explain about Water Fall Model with diagram

(CONTD....2)

(2)

(16 UCT 519)

12. (a) Short notes on Computer based system .

(Or)

b) Short notes on Initiating the Requirements Engine Process.

13. a) Short notes on Data Model Concepts .

(Or)

b) Give a brief explains about Creating a Data Flow Model.

14. a) Discuss on Software Architecture with examples .

(Or)

b) Explain about Architectural Patterns with examples.

15. (a) Short notes on Validation Testing.

(Or)

b) Discuss on Flow Graph Notation with diagram.

SECTION – C

(5 X 8 = 40 MARKS)

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

16. (a) Explain in detail on Unified process with neat diagram.

(Or)

b) Illustrate the Incremental Process Model with diagram.

17. (a) Briefly explain about the Requirement Engineering Tasks.

(Or)

b) Illustrate the Building the Analysis Model with diagram.

18. (a) Explain in detail about Creating Behavioral Model.

(Or)

b) Demonstrate on Requirement Analysis with neat diagram.

19. (a) Illustrate the Design Model with neat diagram.

(Or)

b) Demonstrate on a Briefly Taxonomy of Architecture Styles.

20. (a) Explain in detail on Black box Testing with neat diagram.

(Or)

b) Illustrate the Art of Debugging with proper examples.

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SEMESTER: III

TIME: 3 HOURS

PART -III

COMPUTER SYSTEM ARCHITECTURE

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. An _____ code is a binary code that specifies a sequence of micro-operations for the computer
(a) Instruction (b) Operation (c) Accumulator (d) None of the above
2. There are 14 binary selection inputs in the unit, and their combined value specifies a _____
(a) ALU (b) Control Word (c) SELA (d) SELD
3. What is the 2's complement of 00100001?
(a) 11011001 (b) 11011110 (c) 11011101 (d) 11011111
4. _____ have high – speed rotational surfaces coated with magnetic material
(a) Printer (b) Floppy Disk (c) Magnetic Disk (d) Magnetic Tape
5. Devices that provide backup storage are called _____.
(a) Main Memory (b) Auxiliary Memory (c) CPU Memory (d) RAM
6. Mention four phases of instruction cycle in basic computer.
7. Give any two examples of Micro-operations.
8. Multiply the following two fixed-point binary numbers 10111 X 10011..
9. What is handshaking agreement in Asynchronous Data Transfer?
10. Draw a block diagram of typical RAM chip.

SECTION – B

(5 X 5 = 25 MARKS)

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

11. (a) Demonstrate of Direct and Indirect Address

(Or)

- (b) How to transfer the information to and from AC register using Input-Output instructions?

(CONTD....2)

12. (a) How many categories are classified the computer instructions? List out the categories with an example.

(Or)

(b) What are the types of Data Manipulation Instructions?

13. (a) Give the flow chart for Multiply Algorithm

(Or)

(b) What is Booth Multiplication Algorithm? Give a numerical Example

14. (a) Short note on Strobe control in Asynchronous Data Transfer

(Or)

(b) Draw a flowchart of CPU – IOP Communication

15. (a) Short notes on Magnetic Disk and Tape

(Or)

(b) Mention the types of mapping procedures of cache memory and also write an example of cache memory.

SECTION – C (4 X 10 =40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Qn. No : 17 to 21).

16. **Compulsory Question:** How the program is executed in the computer through Instruction Cycle?

17. Explain the following:

- | | |
|--------------------------------|------------------------------|
| 1) Three – Address Instruction | 2) Two – Address Instruction |
| 3) Zero – Address Instruction | 4) RISC Instructions |

18. Explain in details about Addition and Subtraction with Signed – Magnitude Numbers.

19. Explain in detail about Division Algorithm for Binary Numbers

20. What is Direct Memory Access? Explain its block diagram

21. How the information's are transferred between internal and external storage devices using the method of Input – Output Interface?

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SEMESTER: III

TIME: 3 HOURS

PART -III

JAVA PROGRAMMING

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. The size of byte data type is _____.
a) 1 byte b) 2 bytes c) 4 bytes d) 8 bytes
2. Which function is used to compare two strings?
a) substring b) equals c) toString d) CharAt
3. ____ exception is thrown by stream class.
a) IOException b) SecurityException
c) NumberFormatException d) MemoryException
4. In _____ state, an Applet is removed from memory.
a) Display b) Running c) Dead d) Stop
5. Which of the following is a Character Stream Class?
a) DataInput b) DataOutput c) InputStream d) Reader

Short Answers.

6. Why is Java known as platform-neutral language?
7. What is method overloading?
8. What is a thread?
9. Mention the class that has methods to draw shapes?
10. What is an Input stream?

SECTION – B

(5 X 5 =25 MARKS)

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

11. a) How Java differs from C++?

[OR]

- b) Write a short note on Switch statement with example.

(CONTD....2)

(2)

(17 UCT 307)

SECTION-B

(5 X 5 =25 MARKS)

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

12. a) Discuss on method overloading.

[OR]

- b) Write about Single inheritance with suitable example.

13. a) Explain about Thread Exceptions and Thread priority.

[OR]

- b) What is a finally block? When and how it is used?

14. a) Explain the life cycle of an Applet.

[OR]

- b) Write a note on any four Graphics methods used to draw various shapes.

15. a) List and explain the methods in InputStream class.

[OR]

- b) Explain character stream classes.

SECTION – C

(4 X 10 =40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Qn. No : 17 to 21)

16. Elaborate on Thread life cycle.
17. Give a detailed note on data types in Java.
18. Describe on Packages in java.
19. Discuss the error handling mechanism in Java.
20. How will you design a web page using applet? Explain.
21. Write a Java program to copy the contents of an existing file into another file. (use FileInputStream and FileOutputStream).

(17UCT307)

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PART -III

WEB DESIGNING (HTML, DHTML, XML, JAVASCRIPT)

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. What are the two required attributes of HTML tag?
(a) src and alt (b) alt and mark (c) Canvas and src (d) Caption and src
2. The attribute of <form> tag
(a) Method (b) Action (c) Both (a) and (b) (d) None of these above
3. If we want define style for an unique element, then which CSS selector will we use?
(a) Id (b) text (c) class (d) name
4. Which of the following code creates an object?
(a) Var book = Object(); (b) var book = new Object();
(b) Var book = new OBJECT(); (d) var book – new Book();
5. What does DTD stand for?
(a) Direct Type Definition (b) Document Type Definition
(c) Do the Document (d) Dynamic Type Definition

Short Answer.

6. Define Image Map in HTML programming
7. What are the attributes of <frame> tag?
8. What is the difference between inline and external style sheet?
9. Define the new operator in Java Script programming
10. What is the Markup Declaration in XML programming?

(CONTD....2)

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

11. (a) Demonstrate the following: (i) List Tags (ii) Hyper Link Tags

(Or)

(b) How to create table in HTML programming?

12. (a) How to place content in frames with the <FRAME> Tag?

(Or)

(b) Short notes on Form Field Event Handlers

13. (a) Give the different types of style sheets with example

(Or)

(b) Mention any five style sheet software tools

14. (a) Short notes on Java Script Web Browsers

(Or)

(b) Short notes on Java Script Objects

15. (a) Draw the anatomy of an XML Document

(Or)

(b) Explain the concept of DTDs validation

SECTION – C**(4 X 10 =40 MARKS)****ANSWER ANY FOUR OUT OF SIX QUESTIONS****(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Qn. No : 17 to 21)****16. Compulsory Question:**

How to create XML DTDs? Give its structure

17. Write the program to implement image mapping with a diagrams

18. Explain the following: (i) Floating Frames (ii) Hidden Frames

19. How to link style information in a separate file?

20. Explain the Java Script Object Model with examples

21. How to create XML documents? Write an example program

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PART -III

OPERATING SYSTEMS

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. In UNIX, _____ command starts a new process.
a) exec b) fork c) open d) begin
2. Which process is affected by the other processes executing in the system?
a) Parent b) child c) Independent d) Cooperating
3. In Segmentation, each address is specified by _____.
a) a segment number and offset b) an offset and value
c) a value and segment number d) a key and value
4. doc extension refers to _____ file type.
a) Batch b) Library c) Text d) Archive
5. Management of meta data information is done by _____.
a) File organization module b) Logical file system
c) Basic file system d) Application programs

Short Answers.

6. What is an Operating system?
7. What are the operations of a semaphore?
8. Give an example for Deadlock avoidance algorithm.
9. Write the use of Virtual memory.
10. What is Seek time?

SECTION – B

(5 X 5 =25 MARKS)

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

11. a) Write down the Operating system services.

[OR]

b) Write a short note on Process management.

(CONTD....2)

(2)

(17 UCT 309)

12. a) What are the criteria for CPU Scheduling algorithm? Explain.

[OR]

b) Explain about the Critical-section problem.

13. a) What is deadlock? What are the necessary conditions for deadlock?

[OR]

b) Write a note on multiple-partition memory allocation.

14. a) Explain the FIFO page replacement algorithm.

[OR]

b) What are the file operations? Explain.

15. a) Explain linked disk space allocation method.

[OR]

b) Give a brief note on Disk management.

SECTION – C (4 X 10 =40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Qn. No : 17 to 21).

16. Describe on the following CPU Scheduling algorithms:

a) FCFS [5 Marks]

b) SJF [5 Marks]

17. Explain the categories of Operating system calls.

18. Elaborate on Process Control Block.

19. Give a detailed note on Paging.

20. Explain about Demand paging in detail.

21. Describe on Disk scheduling algorithms.

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I SEMESTER

TIME : 3 HOURS

PART –III

MATHEMATICAL STRUCTURES FOR COMPUTER SCIENCE

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS.

- 1) If $a = \begin{pmatrix} \alpha & 0 \\ 1 & 1 \end{pmatrix}$ and $B = \begin{pmatrix} 1 & 0 \\ 5 & 1 \end{pmatrix}$, Then $A^2 = B$ for
a) $\alpha = 4$ b) $\alpha = 1$ c) $\alpha = -1$ d) no α
- 2) The order of convergence of Regula Falsi method is
a) 1.816 b) 1.168 c) 1.618 d) 1.186
- 3) In Simpson's three-eighth rule $y(x)$ is a polynomial of degree
a) three b) eight c) two d) one
- 4) Which one is not a measure of Central Tendency?
a) Mean b) Median c) Harmonic Mean d) Arithmetic Progression
- 5) The Co-Efficient of Correlation _____
a) has no limits b) can be less than 1 c) can be more than 1 d) Varies between ± 1
- 6) Find all the eigen values of the matrix $A = \begin{pmatrix} 3 & -2 \\ 6 & -4 \end{pmatrix}$
- 7) State the criterion for the convergence in Newton-Rapson method.
- 8) State the conditions of applying Trapezoidal Rule.
- 9) Define Weighted Arithmetic Mean.
- 10) State the difference between Standard Deviation and Standard Error

SECTION-B

(5 X 5 =25 MARKS)

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

- 11.) a) Let $P = \begin{pmatrix} 4 & -6 \\ -2 & 8 \end{pmatrix}$ Find i) $2P$ ii) P^2

(OR)

- b) Find all the values of x so that the following matrix A is a singular matrix.

$$A = \begin{bmatrix} x & x^2 & 1 \\ 2 & 3 & 1 \\ 0 & -1 & 1 \end{bmatrix}$$

- 12.a) Solve the equation $x \tan x = -1$ by Regula Falsi method starting with $a=2.5$ and $b=3$ correct to 3 decimal places.

(OR)

- b) Using the Newton Rapson method find the root between 0 and 1 of $x^3 = 6x - 4$ correct to five decimal places.

(CONTD....2)

(2)

(18 UCT 1A1)

13. a) Evaluate the integral $I = \int_4^{5.2} \log x \, dx$ using i) Trapezoidal , ii) Simpson's Rules

(OR)

b) Find the first two derivatives of $(x)^{1/3}$ at $x = 50$ and $x = 56$ given the table below.

X	50	51	52	53	54	55	56
$Y = x^{1/3}$	3.6840	3.7084	3.7325	3.7563	3.7798	3.8030	3.8259

14 a) Calculate Quartile deviation and its coefficient of A's monthly earnings for a year

Months	1	2	3	4	5	6	7	8	9	10	11	12
Monthly earnings	239	250	251	251	257	258	260	261	262	262	273	275

(OR)

b) Calculate the mean deviation from the following data:

Class interval	2 -4	4-6	6-8	8-10
Frequency	3	4	2	1

15 a) Calculate the coefficient of correlation between age and annual maintenance cost.

Age of Cars (years)	2	4	6	7	8	10	12
Annual maintenance cost (Rupees)	1600	1500	1800	1900	1700	2100	2000

(OR)

b) State the difference between Correlation and regression.

SECTION – C**(4 X 10 = 40 MARKS)****ANSWER ANY FOUR OUT OF SIX QUESTIONS****(16TH QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS FROM Qn.NO : 17 to 21)**

16. Calculate mean deviation from mean and median for the following data. Also calculate coefficient of mean deviation

X	100	150	200	250	360	490	500	600	671
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17. Solve the equations using matrix inverse method

$$x_1 - 2x_2 + x_3 = 3$$

$$2x_1 + x_2 - x_3 = 5$$

$$3x_1 - x_2 + 2x_3 = 12$$

18. Solve by Gauss-Elimination method: $3x+4y+5z=18$, $2x-y+8z=13$, $5x-2y+7z=20$.

19. The table below gives the results of an observations; θ is the observed temperature in degrees centigrade of a vessel of cooling water ; t is the time in minutes from the beginning of observations.

t	1	3	5	7	9
θ	85.3	74.5	67.0	60.5	54.3

Find the approximate rate of cooling at $t = 3$ and 3.5

20) Compute the standard deviation and mean deviation from the following data:

Class (x)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	12	17	14	9	7	4

21. Price indices of cotton and wool are given below for the 12 months of a year. Obtain the equation of lines of regression between the indices.

Price index of cotton (X)	78	77	85	88	87	82	81	77	76	83	97	93
Price index of wool (Y)	84	82	82	85	89	90	88	92	86	89	98	99

(FOR CANDIDATES ADMITTED IN

(NO. OF PAGES: 2)

DURING THE ACADEMIC YEARS 2018 ONLY)

18 UCT 101

REG.NO.

N.GM. COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS: NOVEMBER - 2018

B.Sc. – COMPUTER TECHNOLOGY

MAXIMUM MARKS : 75

I SEMESTER

TIME : 3 HOURS

PART –III

CORE I: C PROGRAMMING

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. Who is the father of C Language.
a) Bjarne Stroustrup b) James A Gosling c) Dennis Ritchie d) Dr.E.F.Codd
2. Array is:
a) Set of consecutive memory location b) set of random memory location
c) memory unit d) none of the above
3. Strings are
a) Set of characters in single quotes b) Set of characters in double quotes
c) Single character in double quotes d) none of above
4. Structures can be used
a.To hold different data types b.have pointers to structures
c. to assign to one another d. all of above
5. A pre-processor command
a) Need not start a new line b) Need not start on the first column
c) Has # as the first character d) comes before the first executable statement

Short Answers

6. Define a constant.
7. Define an array.
8. Define a function.
9. Define a String.
10. Define a file.

(CONTD....2)

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

11. a) Brief the history of C language.
(OR)
b) Explain the structure of C Program.
12. a) Explain break & continue statements with an example program.
(OR)
b) Brief array & its declarations.
13. a) Brief strings with an example program.
(OR)
b) State library functions in C programming.
14. a) Define pointers with an example program.
(OR)
b) Explain call by reference with an example program.
15. a) Elucidate open/close operations of file.
(OR)
b). Explain files & its declaration of variables.

SECTION-C**(4 X 10 = 40 MARKS)****ANSWER ANY FOUR OUT OF SIX QUESTIONS****(16 th QUESTION IS COMPULSARY AND ANSWER ANY THREE QUESTIONS FROM Qn.No:17 TO 21)**

16. Explain various data types in C.
17. Brief precedence of operator in C.
18. Explain two dimensional arrays with an example program.
19. Explain recursive functions with an example program.
20. Brief the difference between structure & union.
21. Explain random file operations.

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PART –III

CORE II: DIGITAL COMPUTER FUNDAMENTALS

SECTION-A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS:

MULTIPLE CHOICE QUESTIONS:

1. Octal system has a base of-----
a) 4 b) 1 c) 8 d) None
2. A Karnaugh map (K-Map) is an abstract form of ____ diagram organized as a matrix of square.
a) Venn diagram b) Cycle diagram c) Block diagram d) None of the above
3. In which operation carry is obtained
a) Sub b) Add c) Mul d) Both sub & add
4. The D Flip flop is only activated by
a) A negative edge trigger b) A positive edge trigger
c) Both edge trigger d) None of these
5. A BCD counter is a
a) Binary counter b) Full module counter
c) Decounter d) None of the above

Short Answers

6. Expand the term BCD.
7. Brief De-Morgans Theorem.
8. Define Half adder.
9. Define the use of Encoder.
10. Define memory unit.

(CONTD....2)

(2)

(18 UCT 102)

SECTION-B

(5 X 5 =25 MARKS)

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

11. a) Brief binary to decimal conversions with examples.
(OR)
b) Explain integrated circuits.
12. a) State and prove De-morgans theorem.
(OR)
b) State karnaugh-map and its structure.
13. a) Draw the circuit of a full adder and give its truth table.
(OR)
b) Brief half adder with its circuit and truth table.
14. a) Define multiplexer. Explain 4 to 1 line multiplexer.
(OR)
b) Explain the function of demultiplexer with its truth table.
15. a) Explain ripple counter with its circuit .
(OR)
b). Explain ring counter with its circuit.

SECTION-C

(4 X 10=40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS.

(16 th QUESTION IS COMPULSARY AND ANSWER ANY THREE QUESTIONS FROM Qn.No:17 TO 21)

16. Brief the working of JK Flip flop.
17. Explain any four number conversion systems.
18. Explain OR gate and AND gate with its truth table.
19. Explain binary multiplier with an example.
20. Explain the working of D Flip flop
21. Explain memory unit with using registers.

M3/-
