

(2017 Batch-onwards)

G 601.3

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St Aloysius College (Autonomous)
Mangaluru

B.C.A. Semester III – Degree Examination

October - 2018

WEB DESIGNING

Time: 3 hrs.

Max Marks: 100

PART – A

1. Answer any **TEN** of the following:

(10x2=20)

- What is web server?
- Differentiate <HR> and
 tags.
- Write the usage of <DIV> tag.
- What is use of document object in Java Script?
- List any four categories of Java Script operators.
- Write JavaScript function to find maximum of two numbers.
- What is Cookie?
- How do you create Prompt dialog box?
- What is the use of pop() method in Java Script?
- What do you mean by Inline style? Give example.
- How to embed external style sheet in web page?
- List any four CSS font properties.

PART – B

Answer any **FOUR** of the following:

(4x5=20)

- Explain any five text formatting tags in HTML.
- Write a note on handling mouse events in Java Script.
- Explain any two looping statement in Java Script.
- How to handle string object in Java Script? Explain with example.
- Write a note on different types of style sheets.
- Explain Box model and multi column model of CSS.

PART – C

Answer any **FOUR** full questions of the following:

(4x15=60)

UNIT I

- Explain various <table> related tags in HTML with example. (8)
- Write a note on the following tags. (7)
 - <a>
 -

Contd...2

OR

- 9.a) What are forms? Explain any four form input elements with two attributes each. (8)
- b) Explain different Layout element in HTML With example. (7)

UNIT II

- 10.a) With syntax and a programming example, explain how function is created and invoked in Java Script. (8)
- b) List and explain looping statement in Java Script. (7)

OR

- 11.a) Explain how cookies are created and deleted in Java Script with a programming example. (8)
- b) Explain Java Script Lexical structure. (7)

UNIT III

- 12.a) Explain JavaScript navigator object and history object. (8)
- b) Explain exception handling mechanism in Java Script with a program. (7)

OR

- 13.a) Explain any four events in Java Script with example. (8)
- b) Explain object creation and manipulation in Java Script with example. (7)

UNIT IV

- 14 a) Explain any four list styles in CSS with example. (8)
- b) Explain font and text styles in CSS with example. (7)

OR

- 15 a) How do you apply different font style properties using classes and ID's. Explain with an example. (8)
- b) Explain following properties related to table with examples. (7)
- | | |
|---------------------|---------------------|
| i) Caption side | ii) Border-Collapse |
| iii) Border spacing | iv) Empty cells |

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**St Aloysius College (Autonomous)
Mangaluru**

**B.C.A. Semester III – Degree Examination
October - 2018**

OBJECT ORIENTED PROGRAMMING USING C++

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following:

(10x2=20)

1. a) What is data abstraction and encapsulation?
- b) List any two characteristics of a friend function.
- c) Write the general form of operator function. Give an example.
- d) Write any two rules of operator overloading.
- e) Comment on break and continue.
- f) Write the general form of class declaration. Give an example.
- g) What is a destructor? How it is defined?
- h) Mention the use of abstract class.
- i) List any two file mode parameters along with their meaning.
- j) Write the syntax of multilevel inheritance. Give an example.
- k) List any two rules for virtual function.
- l) What is dynamic binding?

PART – B

Answer any **FOUR** of the following:

(4x5=20)

2. Explain for-loop with syntax and example.
3. What is a structure? Explain array of structures with suitable example.
4. Explain how we can pass objects as arguments to a function.
5. What is function overloading? Explain.
6. Explain multiple inheritance.
7. Explain read and write operations on files.

PART – C

Answer any **ONE FULL** question from each unit

(15x4=60)

UNIT – I

8. a) Write the structure of C++ program and explain. (5)
- b) Explain how we can pass arrays to functions. (5)
- c) Write a note on enumerated data types. (5)

OR

9. a) Explain while loop with syntax and example. (5)
- b) List out the benefits of OOP. (5)
- c) Explain array of structures with suitable example. (5)

Contd...2

UNIT – II

10. a) Explain arrays within a class. Write suitable example. (5)
b) Explain how objects can be returned from a function. (5)
c) Write a note on pointers to members. (5)

OR

11. a) Explain overloaded constructor with suitable example. (5)
b) Explain overloading of unary operator with example. (5)
c) Write a note on inline functions. (5)

UNIT – III

12. a) What is hybrid inheritance? Explain with a programming example. (5)
b) Explain how constructors are implemented in derived classes. (5)
c) Explain pure virtual function with example. (5)

OR

13. a) Explain single inheritance with suitable example (5)
b) Explain virtual base class with example. (5)
c) Write a note on containership. (5)

UNIT – IV

14. a) Write a program to input number of INTEGERS into a file.
Separate even and odd numbers and store them into two files
called EVEN and ODD. (5)
b) Explain appending operation on files. (5)
c) Write a note on binary files. (5)

OR

15. a) Explain how a try block invokes a function that generates an
exception. (5)
b) Explain how various types of exceptions are handled by multiple
catch statements. (5)
c) Write a program to show exception handling. (5)

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St Aloysius College (Autonomous)
Mangaluru
B.C.A. Semester III – Degree Examination
October - 2018

DATA STRUCTURES

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following:

(10x2=20)

1. a) What is data structure? Mention its types.
- b) State any two differences between linear search and binary search.
- c) What do you mean by primitive and non-primitive data types?
- d) List any two types of sorting methods using recursion.
- e) What is a complete binary tree? Give example.
- f) Convert the expression $a + b / c - d * e$ into its postfix form.
- g) What is a heap? Give example.
- h) Mention any two applications of stack.
- i) What is a loop? Give example.
- j) What do you understand by the term linked allocation?
- k) What is BFS?
- l) List the operations that can be performed on stack.

PART – B

Answer any **FOUR** of the following:

(4x5=20)

2. Write a note on algorithm with an example.
3. Write the procedure for inserting a node into an ordered linear list.
4. The following are the traversal of a binary tree:
Preorder: A B D E C F G H
Inorder: D B E A F C H G
Draw the corresponding binary tree.
5. Describe the technique of sorting n numbers using heap sort.
6. Explain doubly linked list with an example.
7. How is a graph represented in memory? Explain.

PART – C

Answer any **ONE FULL** question from each unit

(15x4=60)

UNIT – I

8. a) Explain an array of structures with an example. (8)
- b) Write the algorithm for the evaluation of postfix expression. (7)

OR

9. a) Write an algorithm to convert an infix expression to postfix expression Given an infix expression: $(A + B) * C - (D - E) * (F + G)$. (8)
Convert to postfix using infix to postfix conversion algorithm.
- b) Explain recursion with respect to the applications of a stack. (7)

Contd...2

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UNIT - II

- 10. a) Write an algorithm to find the maximum number in a linked list. (8)
- b) Explain circularly linked linear list with an example. (7)

OR

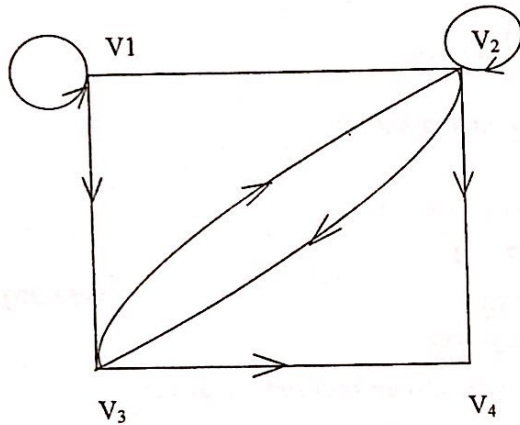
- 11. a) Explain doubly linked list. Write an algorithm to delete an element from the doubly linked list with an example. (8)
- b) Write an algorithm to insert a node in a singly linked list. (7)

UNIT - III

- 12. a) Write the algorithm for tree traversal techniques. (8)
- b) Given: A B C D E F G, construct binary search tree and write the postorder and inorder traversal for the above binary tree. (7)

OR

- 13. a) Write the adjacency matrix for the following graph.



- b) Write the steps for breadth first search traversal with an example. (7)

UNIT - IV

- 14. a) Write a C program to create binary search tree. (8)
- b) Given the array: ST ALOYSIUS. Sort the array using quick sort. (7)

OR

- 15. a) Given the following: 22 3 13 8 6 7 4 3 77 50 40. Sort the elements using merge sort. (8)
- b) Write the procedure for bubble sort. (7)

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St Aloysius College (Autonomous)

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B.C.A. Semester III – Degree Examination

October - 2018

OPERATING SYSTEMS

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any TEN of the following:

(10x2=20)

1. a) Define operating system. Give any two examples.
- b) Write the difference between preemptive and non-preemptive scheduling.
- c) What do you mean by turnaround time and waiting time?
- d) What are clustered systems?
- e) Define context switching.
- f) Define throughput.
- g) What do you mean by aging?
- h) What is deadlock?
- i) What is meant by a safe sequence?
- j) Write the difference between logical address space and physical address space.
- k) What is swapping?
- l) What is thrashing

PART – B

Answer any FOUR of the following:

(4x5=20)

2. What is PCB? Explain any four fields of PCB.
3. Write a note multiprocessor system.
4. Explain multilevel queue scheduling algorithm.
5. What are the methods used to handle deadlock? Explain.
6. Explain the two types of fragmentations and its solutions.
7. Explain the basic concepts of demand paging.

PART – C

Answer any ONE FULL question from each unit

(15x4=60)

UNIT – I

8. a) Explain the following:
 - i) Time sharing systems
 - ii) Real time systems.

(6)
- b) Explain the different services of operating system. (5)
- c) Write a note on benefits of threads. (4)

OR

9. a) Explain operating system activities in connection with following components:
 - i) File Management
 - ii) Secondary storage management.

(6)

Contd...2

- b) What is process? Explain the states of a process with a diagram. (5)
 c) Explain queuing diagram representation of process scheduling. (4)

UNIT - II

10. a) Explain the features of priority CPU scheduling with algorithm. (5)
 b) What is critical section? Explain the requirements of a solution to critical section problem. (5)
 c) Write a note on dining philosopher's problem. (5)

OR

11. a) Explain FIFO and SJF scheduling algorithms with example. (5)
 b) What is semaphore? Explain the usage and types of semaphores. (5)
 c) Explain the Peterson's solution to critical section problem. (5)

UNIT - III

12. a) List and explain the necessary conditions for deadlock to occur. (5)
 b) Explain resource allocation graph with a neat diagram. (5)
 c) What is paging? Explain the basic method for implementing paging. (5)

OR

13. a) Explain the two methods for recovery from deadlock. (5)
 b) Explain the data structures used in banker's algorithm. Also write the purpose of using banker's algorithm. (5)
 c) Write a note on contiguous memory allocation. (5)

UNIT - IV

14. a) Explain the components of windows. (5)
 b) Write a note on windows file system. (5)
 c) Consider the following page reference string:
 1, 2, 3, 4, 5, 3, 4, 1, 6, 7, 8, 7, 8, 9, 7, 8, 9, 5, 4, 5, 4, 2
 How many page faults would occur for LRU page replacement algorithm assuming four page frames? (5)

OR

15. a) Consider the following page reference string:
 7, 0, 1, 2, 0, 3, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1 with three frames of memory. How many page faults would occur for the following replacement algorithms. (6)
 i) LRU algorithm ii) optimal replacement algorithm
 b) Explain the features of windows operating system. (5)
 c) Explain the need for page replacement with a diagram. (4)

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St Aloysius College (Autonomous)

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B.C.A. Semester III – Degree Examination

October - 2018

COMPUTER NETWORKS

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following:

(10x2=20)

1. a) What is the difference between connection oriented and connectionless services?
- b) What is the function of repeater?
- c) Differentiate between half duplex and full-duplex communication.
- d) Define multiplexing and mention any two types of multiplexing.
- e) What is the difference between digital data and digital signal?
- f) Define computer network. Write IEEE standard for wireless LAN.
- g) What is topology? List different types of topology.
- h) Write a note on Ad-hoc networks.
- i) How does baseband transmission differ from broadband transmission?
- j) Differentiate fixed size and variable size framing.
- k) Expand TDM and FDM.
- l) Define firewall and mention the different types.

PART – B

Answer any **FOUR** of the following:

(4x5=20)

2. What are service primitives? Explain.
3. Briefly explain the transmission impairment.
4. Explain packet switching techniques with diagram.
5. Generate a signal for NRZ-L and NRZ-I for the digital data 01100110.
6. Explain the principle of internetworking.
7. What are the advantages and disadvantages of wireless networks?

PART – C

Answer any **ONE FULL** question from each unit

(15x4=60)

UNIT – I

8. a) Explain different types of transmission media. (8)
- b) Explain different types of networks in detail. (7)

OR

9. a) Briefly explain uses of computer networks. (8)
- b) Explain the concept of protocol hierarchy. (7)

Contd...2

UNIT - II

10. a) Generate signal for Manchester and AMI schemes for a data 10100111. (8)
b) Explain point to point and multipoint communication. (7)

OR

11. a) Explain any three types of topologies with diagram. (8)
b) Explain parallel and serial transmission modes with diagram. (7)

UNIT - III

12. a) Explain the use of hamming code for error correction, illustrate with an example. (8)
b) Explain the role of switches and routers in computer networks. (7)

OR

13. a) Write short note on the following: (8)
i) Token ring ii) FDDI
b) Briefly explain the concept of circuit switching technique. (7)

UNIT - IV

14. a) Explain the design issues of layers. (8)
b) What is an IP address? Explain the various classification of IP addressing with example. (7)

OR

15. a) Explain TCP/IP reference model with suitable diagram. (10)
b) Write short note on the following: (5)
i) Electronic Mail ii) Digital signature

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**St Aloysius College (Autonomous)
Mangaluru**

B.A./ B.Sc./B.C.A. Semester III – Degree Examination

October - 2018

FOUNDATION COURSE IN GENDER EQUITY AND VALUE EDUCATION

Time: 3 hrs.

Max Marks: 100

PART – A

GENDER EQUITY

I. Answer any TEN of the following in just one sentence. (10x1=10)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಹತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದು ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

1. What is gender role?

ಸಾಮಾಜಿಕ ಲಿಂಗ ಪಾತ್ರವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.

2. What is gender sensitization.

ಲಿಂಗ ಸಂವೇದನೆ ಎಂದರೇನು?

3. Define gender bias.

ಸಾಮಾಜಿಕ ಲಿಂಗ ಪೂರ್ವಾಗ್ರಹವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.

4. What is sex ratio?

ಲಿಂಗ ಅನುಪಾತವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.

5. Expand ILO.

ಐ.ಎಲ್.ಓ ಎಂಬುದನ್ನು ವಿಸ್ತರಿಸಿ ಬರೆಯಿರಿ.

6. What is Zenana?

ಜೆನೇನ ಎಂದರೇನು?

7. What is abduction.

ಅಪಹರಣವೆಂದರೇನು?

8. Mention the different forms of violence against women.

ಸ್ತ್ರೀಯರ ವಿರುದ್ಧದ ವಿವಿಧ ಹಿಂಸಾಚಾರಗಳನ್ನು ಸೂಚಿಸಿರಿ.

9. What is reproductive health?

ಸಂತಾನೋತ್ಪತ್ತಿ ಆರೋಗ್ಯ ಎಂದರೇನು?

10. Name two patrons of female education in India.

ಭಾರತದಲ್ಲಿ ಮಹಿಳೆಯರ ಶಿಕ್ಷಣದ ಎರಡು ಪ್ರೋತ್ಸಾಹಕರನ್ನು ಹೆಸರಿಸಿರಿ.

11. What is Dowry?

ವರದಕ್ಷಿಣೆ ಎಂದರೇನು?

12. Expand NCW

ಎನ್.ಸಿ.ಡಬ್ಲ್ಯು ಎಂಬುದನ್ನು ವಿಸ್ತರಿಸಿರಿ.

II. Answer any TEN of the following questions in about two sentences each. (10x2=20)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಹತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ತಲಾ ಎರಡು ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

13. What is gender?

ಸಾಮಾಜಿಕ ಲಿಂಗ ಎಂದರೇನು?

Contd...2

14. What is femininity?
ಸ್ತ್ರೀತ್ವ/ಸ್ತ್ರೀತನ ಎಂದರೇನು?
15. Define 'patriarchy'.
ಪ್ರಿತೃಪ್ರಧಾನತೆಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.
16. Expand HIV.
ಎಚ್.ಐ.ವಿ ಎಂಬುದನ್ನು ವಿಸ್ತರಿಸಿ ಬರೆಯಿರಿ.
17. What is honour killing?
ಗೌರವ ಹತ್ಯೆ ಎಂದರೇನು?
18. What is dowry death?
ವರದಕ್ಷಿಣೆ ನಿಧನ ಎಂದರೇನು?
19. What is Immoral trafficking?
ಅನೈತಿಕ ಕಳ್ಳಸಾಗಣೆ ಎಂದರೇನು?
20. What are the offences relating to marriage?
ವಿವಾಹ ಸಂಬಂಧಿತ ಅಪರಾಧಗಳು ಯಾವುವು?
21. What is MTP?
ಎಂ.ಟಿ.ಪಿ ಎಂದರೇನು?
22. What is globalization?
ಜಾಗತೀಕರಣ ಎಂದರೇನು?
23. Define divorce.
ವಿವಾಹ ವಿಚ್ಛೇದನೆಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿರಿ.
24. Mention the two functions of National commission for women.
ರಾಷ್ಟ್ರೀಯ ಮಹಿಳಾ ಆಯೋಜನದ ಎರಡು ಕಾರ್ಯಗಳನ್ನು ಸೂಚಿಸಿರಿ.

III. Answer any FOUR of the following questions in about twenty lines each. (4x10=40)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳಿಗೆ ತಲಾ 20 ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿರಿ.

25. Explain Matriarchy.
ಮಾತೃಪ್ರಧಾನತೆಯನ್ನು ವಿವರಿಸಿರಿ.
26. Discuss the status of women in India.
ಭಾರತದಲ್ಲಿ ಮಹಿಳೆಯರ ಸ್ಥಾನಮಾನವನ್ನು ಚರ್ಚಿಸಿರಿ.
27. Discuss the factors affecting maternal mortality.
ಮಾತೃ ಮೃತ್ಯುದರವು ವಿವಿಧ ಕಾರಣವಾಗುವ ಅಂಶಗಳನ್ನು ಚರ್ಚಿಸಿರಿ.
28. Explain the discrimination against girl child in India.
ಹೆಣ್ಣು ಭಾರತದಲ್ಲಿ ಮಕ್ಕಳ ವಿರುದ್ಧ ಪಕ್ಷಪಾತವನ್ನು ವಿವರಿಸಿರಿ.
29. Discuss the progress of Women's Education in India.
ಭಾರತದಲ್ಲಿ ಮಹಿಳೆಯರ ಶೈಕ್ಷಣಿಕ ಬೆಳವಣಿಗೆಯನ್ನು ಚರ್ಚಿಸಿರಿ.
30. Explain the functions of Karnataka state commission for women.
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಹಿಳಾ ಆಯೋಜನದ ಕಾರ್ಯಗಳನ್ನು ವಿವರಿಸಿರಿ.

Contd..3

PART - B
(VALUE EDUCATION)

IV. Answer any FOUR questions in about 8-10 sentences. Each question carries FIVE marks:

(4x5=20)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳನ್ನು 8-10 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ 5 ಅಂಕಗಳು.

31. Define Human Sexuality. Explain the evolution of human sexuality with the help of a diagram.

ಮಾನವಿಕ ಲೈಂಗಿಕತೆಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ. ಇದರ ವಿಕಸನವನ್ನು ರೇಖಾಚಿತ್ರದ ಮೂಲಕ ವಿವರಿಸಿ.

32. Examine the attitudes of various religions towards sex.

ಲೈಂಗಿಕತೆಯ ಬಗೆಗಿನ ವಿವಿಧ ಧರ್ಮದ ಮನೋಭಾವವನ್ನು ಪರಿಶೀಲಿಸಿ ಬರೆಯಿರಿ.

33. Discuss the ways in which HIV-AIDS is spread.

ಎಚ್.ಐ.ವಿ.ಎಡ್ಸ್ ಹರಡುವ ರೀತಿಗಳನ್ನು ಚರ್ಚಿಸಿ ಬರೆಯಿರಿ.

34. Friends of the heart are friends forever, Do you agree with this statement. State your reasons.

"ಹೃದಯದ ಸ್ನೇಹಿತರು ಶಾಶ್ವತ ಸ್ನೇಹಿತರು"-ನೀವು ಈ ಹೇಳಿಕೆಯನ್ನು ಒಪ್ಪುವಿರಾ? ಕಾರಣಗಳನ್ನು ಬರೆಯಿರಿ.

35. Explain the four stages of Marriage preparation.

ಮದುವೆಯ ತಯಾರಿಯ ನಾಲ್ಕು ಹಂತಗಳನ್ನು ವಿವರಿಸಿ.

36. What are the reasons for high birth rate?

ಅಧಿಕ ಜನನ ಪ್ರಮಾಣದ ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿ.

V. Answer any ONE question in about 20 sentences. The Question

carries 10 marks:

(1x10=10)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಒಂದು ಪ್ರಶ್ನೆಯನ್ನು 20 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. ಪ್ರಶ್ನೆಗೆ 10 ಅಂಕಗಳು.

37. Discuss the ten important elements in a healthy marriage relationship.

ಆರೋಗ್ಯಕರ ಮದುವೆ ಸಂಬಂಧದ ಹತ್ತು ಮುಖ್ಯವಾದ ಅಂಶಗಳನ್ನು ಚರ್ಚಿಸಿ ಬರೆಯಿರಿ.

38. Explain the benefits of breast feeding.

ಸ್ತನ್ಯಪಾನದ ಲಾಭಗಳನ್ನು ವಿವರಿಸಿ.

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B.C.A. Semester III – Degree Examination
October - 2019
WEB DESIGNING

Time: 3 hrs.

Max Marks: 100

PART – A

1. Answer any **TEN** of the following: (10x2=20)
- Differentiate webserver and client.
 - How to create link to section within the pages in HTML?
 - List any four HTML form elements.
 - What are the differences between Alert and confirm Box In JavaScript?
 - What is a strict mode in Java Script?
 - List four properties of Screen Object.
 - What is the difference between '=' and '===' operators in Java Script?
 - What are the different types of errors in Java Script?
 - What is the use of inner HTML in Java Script?
 - What is the use of Query Selector() method?
 - Differentiate class and idselector in CSS.
 - Compare RGB values with hexadecimal color codes.

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PART – B

- Answer any **FOUR** of the following: (4x5=20)
- Write a note on HTML elements and character entities.
 - Write Java Script program to print numbers from 1 to 100.
 - Write a note on JavaScript Navigation object.
 - How to handle exception in Java Script? Explain.
 - Explain various advantages of using cascading style sheets.
 - Explain CSS multi column model with any five properties.

PART – C

- Answer any **FOUR** full questions of the following: (4x15=60)
- Explain Different types of lists in HTML with examples. (9)
 - Write a note on (6)
 - www
 - Web browsers
- OR**
- Explain different input elements in HTML. (9)
 - Explain the following HTML tags with commonly used attributes. (6)
 - <a>
 - <body>
 -

Contd...2

- 10.a) Explain three kinds of popup boxes in Java Script with usage syntax and examples. (8)
- b) Explain window and history objects in Java Script. (7)
- OR**
- 11.a) How do you catch exceptions in Java? Explain with a programming example. (8)
- b) List and explain any two categories of operators in Java Script (7)
- 12.a) What is an event? Write Java Script event handlers for various mouse events. (8)
- b) Write a Java Script program to validate a login form. (7)
- OR**
- 13.a) What are Cookies? Explain how Cookies are created and deleted in Java Script with a programming example. (9)
- b) Explain exception handling mechanism in Java Script with a program. (6)
- 14 a) Explain boxes and columns in CSS using classes and ID's. (8)
- b) Write a note on FONT and Text styles in CSS. (7)
- OR**
- 15 a) Explain any four list styles in CSS with examples. (8)
- b) How to set background and color gradients in CSS? Explain with example. (7)

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B.C.A. Semester III – Degree Examination

October - 2019

OBJECT ORIENTED PROGRAMMING USING C++

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following:

(10x2=20)

1. a) Define polymorphism.
- b) List the drawbacks of POP.
- c) Write the general form of conditional operator. Give example.
- d) What is the use of scope resolution operator? Give an example.
- e) What is a destructor? How it is defined?
- f) What is an inline function?
- g) Write any two rules of operator overloading.
- h) What is const object?
- i) Write syntax for different types of derivation in C++.
- j) List out any two advantages of using virtual function.
- k) Write the general form of open () function. Give an example.
- l) What is exception handling?

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PART – B

Answer any **FOUR** of the following:

(4x5=20)

2. Explain switch.....case along with its syntax and example.
3. Explain insertion and extraction operators with examples to each.
4. Write a note on static data members and static member functions.
5. What is function overloading? Explain.
6. What is multiple inheritance? Explain with a programming example.
7. Briefly explain exception handling in C++.

PART – C

Answer any **ONE FULL** question from each unit

(15x4=60)

UNIT – I

8. a) Differentiate between entry controlled and exit controlled loops. (5)
- b) Explain how we can pass arrays to functions. (5)
- c) List out various relational operators and explain any two with example. (5)

OR

9. a) List out the benefits of OOP. (5)
- b) Explain if...else with suitable example. (5)
- c) What is an array? Explain how we can create, initialize and access one dimensional array. (5)

Contd...2

UNIT - II

10. a) Explain array of objects with suitable code example. (5)
b) Explain how we can specify default arguments to a function. (5)
c) Explain friend functions with example. (5)

OR

11. a) What is parameterized constructor? Explain. (5)
b) Explain overloading of binary operator with suitable example. (5)
c) What is copy constructor? Explain with example. (5)

UNIT - III

12. a) What are virtual functions? Explain with suitable example. (8)
b) Explain single inheritance with an example program. (7)

OR

13. a) Explain the concept of virtual base class with suitable example. (5)
b) What is hybrid inheritance? Explain with a programming example. (5)
c) List the rules for virtual functions. (5)

UNIT - IV

14. a) Write a program to create a text file and do necessary operations. (8)
b) Explain how various types of exceptions are handled by multiple catch statements. Explain with suitable example. (7)

OR

15. a) Explain read and write operations on files. (5)
b) Explain how appending operation can be performed on files. (5)
c) Explain how a try block invokes a function that generates an exception. (5)

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B.C.A. Semester III – Degree Examination
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DATA STRUCTURES

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following:

(10x2=20)

1. a) What do you mean by primitive data types?
- b) Differentiate between an array and a linked list.
- c) Mention any two applications of stack.
- d) What are the advantages of a circular queue over a linear queue?
- e) Define the terms indegree and outdegree of a node.
- f) Write the steps in inorder traversal of a binary tree.
- g) What is the difference between linear and non-linear data structure?
- h) Give the prefix form of the expression $A - B / (C * D - E)$
- i) What is a priority queue?
- j) Give the expression for the time complexity of merge sort.
- k) What is sparse matrix?
- l) What is a binary search tree?

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PART – B

Answer any **FOUR** of the following:

(4x5=20)

2. What are the format conventions used for repetition of statements and conditional statements?
3. Write the algorithm for push and pop operations using linked list.
4. Explain depth first search traversal with an example.
5. Write the procedure for bubble sort.
6. Explain circular queue with a diagram.
7. Write the steps involved in converting the expression $(a - b * c + d) / (e + f)$ into postfix form using stack.

PART – C

Answer any **ONE FULL** question from each unit

(15x4=60)

UNIT – I

8. a) Write the algorithm for evaluation of postfix expression. (8)
- b) What is an algorithm? Write an algorithm to sort 'n' elements using selection sort. (7)

OR

9. a) Write the algorithm to insert and delete elements from a queue. (8)
- b) List the four parts of an iterative process. Draw the flowchart for an iterative process. (7)

Contd...2

UNIT - II

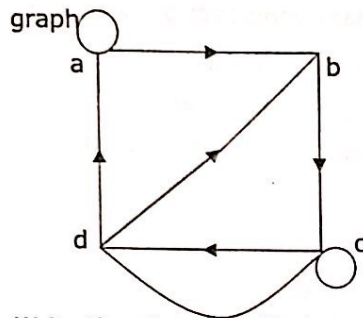
10. a) Write a function to insert a term of three variables polynomial at the beginning of a linked linear list. (8)
- b) Explain doubly linked list. Write an algorithm to delete an element at the beginning of the linked list with an example. (7)

OR

11. a) Explain any four insert operations that can be performed on singly linked storage structures with example. (8)
- b) Write an algorithm to delete a node following the given node of a singly linked list. (7)

UNIT - III

12. a) What is an adjacency matrix? Write the adjacency matrix for the graph (8)



- b) Write the steps for depth first search of a graph with an example. (7)

OR

13. a) Explain tree traversal algorithms with example. (9)
- b) Given A B C D E F G H I . Write inorder and post order traversal of a binary tree. (6)

UNIT - IV

14. a) Consider the key set.
42 23 74 11 65 58 94 36 99 87 write the steps to sort above numbers using quick sort. (8)
- b) Write an algorithm to sort numbers using merge sort. (7)

OR

15. a) Write the algorithm for heap sort. (8)
- b) Explain the procedure for searching and inserting an element into a binary search tree. (7)

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B.C.A. Semester III – Degree Examination

October -2019

OPERATING SYSTEMS

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following.

(10x2=20)

1. a) Define process. How does it differ from program?
- b) Define Response Time and through put.
- c) What is a System call?
- d) Define Critical Section Problem.
- e) Write the functions of Dispatcher.
- f) Define context switch.
- g) Write the four conditions responsible for deadlock situation to arise.
- h) What do you mean by swapping of a process?
- i) Differentiate between logical address and physical address.
- j) What is safe sequence? **ST.ALOYSIUS COLLEGE LIBRARY**
- k) Define aging. **MANGALORE-575003**
- l) List any four services of operating system.

PART – B

Answer any **FOUR** of the following.

(4x5=20)

2. Explain process state transition diagram.
3. Explain resource allocation graph.
4. Write a note on multiprocessor system.
5. Explain Deadlock prevention method.
6. Explain wait-for-graph.
7. What is fragmentation? Explain.

PART – C

Answer any **ONE FULL** question from each unit.

(15x4=60)

UNIT – I

8. a) Explain priority scheduling algorithm with an example. (6)
- b) How do you represent process scheduling using queing diagram. (5)
- c) What is Thread? What are its benefits? (4)
9. a) Explain Operating System services. (6)
- b) Which are the different threading models? Explain. (5)
- c) Explain multi programmed systems. (4)

Contd...2

UNIT - II

10. a) Explain SJF scheduling with an example. (5)
 b) Write a note on dining philosopher's problem. (5)
 c) Consider the following set of sequences that arrive at time 0 with the length of the CPU burst time given in milliseconds.

Process	Burst Time
P_1	24
P_2	3
P_3	3

Using Round Robin scheduling, with time quantum of 4ms, draw a gantt chart and find average waiting time. (5)

11. a) Explain multilevel queue scheduling. (5)
 b) Define Critical Section. Explain any one algorithm for finding solution to critical section problem. (5)
 c) Explain the various criteria for CPU scheduling. (5)

UNIT - III

12. a) What is paging? Explain the basic method for implementing paging. (6)
 b) Explain the data structures used in Banker's algorithm. Also write the purpose of using Banker's algorithm. (5)
 c) Explain deadlock prevention method. (4)
13. a) What is readers-writers' problem? Explain. (6)
 b) What are the steps in the binding of instruction and data to memory address? (5)
 c) Write a note on contiguous allocation of memory. (4)

UNIT - IV

14. a) Explain the need for page replacement with a diagram. (5)
 b) Consider the following page reference string:
 1,2,3,4,5,3,4,1,6,7,8,7,8,9,7,8,9,5,4,5,4,2
 How many page faults would occur for LRU page replacement algorithm assuming four page frames? (5)
 c) Write a note on Windows file system. (5)
15. a) Write a note on Demand Paging. (5)
 b) Explain FIFO page replacement algorithm with an example. (5)
 c) What are the features of windows operating system? Explain. (5)

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B.C.A. Semester III – Degree Examination
October - 2019

COMPUTER NETWORKS

Time: 3 hrs.

Max Marks: 100

PART – A

Answer any **TEN** of the following:

(10x2=20)

1. a) What do you mean by circuit switching?
- b) What are the roles of bridges in computer network?
- c) Differentiate between parallel and serial transmission modes.
- d) Define ad-hoc networks.
- e) Explain the terms bit-interval and bit-rate of digital signal.
- f) Differentiate between simplex and half-duplex communication.
- g) Define multiplexing. List the different types of multiplexing techniques.
- h) Define topology. List any four types of topologies.
- i) What is connection oriented service? Give one example.
- j) What is IP address? List any two network layer protocols.
- k) Define block coding and explain its purpose.
- l) What is a computer network? List different types of networks.

PART – B

Answer any **FOUR** of the following:

(4x5=20)

2. Explain the concept of protocol hierarchy.
3. What is the difference between periodic and non-periodic signal? Explain with suitable diagram.
4. Briefly explain FDDI.
5. Explain different classes of IP address with example.
6. Generate a signal for Manchester and AMI schemes for digital data 10110001.
7. Explain the difference between connection oriented and connectionless service.

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PART – C

Answer any **ONE FULL** question from each unit

(15x4=60)

UNIT – I

8. a) Explain the different types of computer networks. (8)
 - b) What are the design issues of network layer? Explain in brief. (7)
- OR**
9. a) What are the different uses of computer networks? Explain. (10)
 - b) Explain twisted pair and fiber optic cables. (5)

Contd...2

UNIT - II

10. a) Explain any four types topologies. (8)
 b) Explain HDB3 scrambling techniques for digital data encoding.
 Write the waveform for data 110000010000. (7)

OR

11. a) Briefly explain different types of transmission impairments. (8)
 b) Explain synchronous and asynchronous transmission modes. (7)

UNIT - III

12. a) Explain packet switching technique with diagram. (8)
 b) Explain frequency division multiplexing technique. (7)

OR

13. a) Write short note on the following:
 i) Token ring ii) Switch (8)
 b) Explain the use of checksum for error detection, illustrate with an example. (7)

UNIT - IV

14. a) Explain TCP/IP reference model. (10)
 b) Explain the principles of internetworking. (5)

OR

15. a) Explain OSI reference model. (10)
 b) Write short note on the following:
 i) Electronic Mail ii) Firewalls (5)

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B.A./B.Sc./B.C.A. Semester III – Degree Examination

October 2019

FOUNDATION COURSE IN GENDER EQUITY AND VALUE EDUCATION

Time: 3 Hours

Max. Marks: 100

PART – A

GENDER EQUITY

I. Answer any TEN of the following in just one sentence:

(1x10=10)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಹತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದೇ ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿ.

1. Define Gender Equity.

ಲಿಂಗ ಸಮಾನತೆಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.

2. What are Gender Roles?

ಸಾಮಾಜಿಕ ಲಿಂಗ ಪಾತ್ರ ಎಂದರೇನು?

3. What is Gender bias?

ಸಾಮಾಜಿಕ ಲಿಂಗ ಪೂರ್ವಾಗ್ರಹ ಎಂದರೇನು?

4. Define Sex ratio.

ಲಿಂಗ ಅನುಪಾತ ವ್ಯಾಖ್ಯಾನಿಸಿ.

5. What is gender sensitization?

ಲಿಂಗ ಸಂವೇದನಾ ಎಂದರೇನು?

6. Give the meaning of female foeticide.

ಹೆಣ್ಣು ಭ್ರೂಣಹತ್ಯದ ಅರ್ಥವನ್ನು ನೀಡಿ.

7. Mention the forms of domestic violence.

ಗೃಹ-ಹಿಂಸೆಯ ವಿಧಗಳನ್ನು ತಿಳಿಸಿ.

8. Define Mental Health.

ಮಾನಸಿಕ ಆರೋಗ್ಯವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.

9. Expand PMLA.

ಪಿ.ಎಂ.ಎಲ್.ಎ ಎಂಬುದನ್ನು ವಿಸ್ತರಿಸಿ ಬರೆಯಿರಿ.

10. What is Dowry?

ವರದಕ್ಷಿಣೆ ಎಂದರೇನು?

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11. Define Globalization.

ಜಾಗತೀಕರಣವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.

12. Who is the present chairperson of National commission for women?

ರಾಷ್ಟ್ರೀಯ ಮಹಿಳಾ ಆಯೋಗದ ಪ್ರಸ್ತುತ ಅಧ್ಯಕ್ಷರು ಯಾರು?

II. Answer any TEN of the following questions in about two sentences each:

(2x10=20)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಹತ್ತು ಪ್ರಶ್ನೆಗಳಿಗೆ ಎರಡು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ.

13. Differences between Masculinity and Femininity.

ಪುರುಷತ್ವ ಮತ್ತು ಸ್ತ್ರೀತ್ವದ ನಡುವಿನ ವ್ಯತ್ಯಾಸಗಳು.

14. What is 'Sarve Santu Niramayah'?

'ಸರ್ವೇ ಸಂತು ನಿರಾಮಾಯ' ಎಂದರೇನು?

Contd...2

15. Trafficking in women
ಮಹಿಳೆಯರ ಕಳ್ಳ ಸಾಗಣೆ.
16. What is gender division of labour?
ಲಿಂಗಧಾರಿತ ಶ್ರಮ ವಿಭಜನೆ ಎಂದರೇನು?
17. Define Primary Health.
ಪ್ರಾಥಮಿಕ ಆರೋಗ್ಯವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.
18. What is MTP Act?
ಎಂ.ಟಿ.ಪಿ. ಕಾಯ್ದೆ ಎಂದರೇನು?
19. Mention the offences relating to marriage.
ವಿವಾಹ ಸಂಬಂಧಿತ ಅಪರಾಧಗಳನ್ನು ಸೂಚಿಸಿ.
20. What is child sexual abuse?
ಮಕ್ಕಳ ಲೈಂಗಿಕ ದುರ್ಬಳಕೆ ಎಂದರೇನು?
21. What is honour killing?
ಗೌರವ ಹತ್ಯೆ ಎಂದರೇನು?
22. List the contributions of Brahma Samaj to female education.
ಮಹಿಳೆಯರ ಶಿಕ್ಷಣಕ್ಕಾಗಿ ಬ್ರಹ್ಮಸಮಾಜದ ಕೊಡುಗೆಗಳನ್ನು ಪಟ್ಟಿ ಮಾಡಿ.
23. Mention the two objectives of National Commission for Women.
ರಾಷ್ಟ್ರೀಯ ಮಹಿಳಾ ಆಯೋಗದ ಎರಡು ಉದ್ದೇಶಗಳನ್ನು ಸೂಚಿಸಿ.
24. Define Divorce.
ವಿವಾಹ ವಿಚ್ಛೇದನೆಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.

III. Answer any FOUR of questions in about 20 lines each:

(10x4=40)

- ಕೆಳಗಿನ ಯಾವುದಾದರೂ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳಿಗೆ 20 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ.
25. Describe the status of women in India.
ಭಾರತದಲ್ಲಿ ಮಹಿಳೆಯರ ಸ್ಥಾನಮಾನವನ್ನು ವಿವರಿಸಿ.
 26. Discuss the factors affecting maternal mortality.
ಮಾತೃ ಮೃತ್ಯುದರವು ವಿವಿಧ ಕಾರಣವಾಗುವ ಅಂಶಗಳನ್ನು ಚರ್ಚಿಸಿ.
 27. Explain Alma Ata declaration.
ಅಲ್ಮಾ ಆಟಾ ಪ್ರಕಟನೆಯನ್ನು ವಿವರಿಸಿ.
 28. Describe the initiatives taken by the government to promote the rights of the girl child.
ಹೆಣ್ಣು ಮಕ್ಕಳ ಹಕ್ಕುಗಳನ್ನು ಪ್ರೋತ್ಸಾಹಿಸಲು ಸರ್ಕಾರ ತೆಗೆದುಕೊಂಡ ಉಪಕ್ರಮಗಳನ್ನು ವಿವರಿಸಿ.
 29. Explain the discrimination against girl child in India.
ಭಾರತದಲ್ಲಿ ಹೆಣ್ಣು ಮಕ್ಕಳ ವಿರುದ್ಧ ಪರ್ಷಪಾತವನ್ನು ವಿವರಿಸಿ.
 30. Explain the functions of Karnataka State Commission for Women.
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಹಿಳಾ ಆಯೋಗದ ಕಾರ್ಯಗಳನ್ನು ವಿವರಿಸಿ.

Contd...3

PART - B
VALUE EDUCATION

IV. Answer any FOUR questions in about 8-10 sentences. Each question carries FIVE marks: (5x4=20)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ನಾಲ್ಕು ಪ್ರಶ್ನೆಗಳನ್ನು 8-10 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ 5 ಅಂಕಗಳು.

31. Define marriage. Explain the significance of Marriage.
ವಿವಾಹವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ. ವಿವಾಹದ ಮಹತ್ವವನ್ನು ವಿವರಿಸಿ.
32. What are the factors influencing the decision of marriage?
ವಿವಾಹದ ನಿರ್ಧಾರಕ್ಕೆ ಪ್ರಭಾವ ಬೀರುವ ಅಂಶಗಳನ್ನು ವಿವರಿಸಿ.
33. Write a note on Reproductive Health.
ಸಂತಾನೋತ್ಪತ್ತಿ ಆರೋಗ್ಯದ ಬಗ್ಗೆ ಒಂದು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.
34. What are the signs and symptoms of Miscarriage? Explain.
ಗರ್ಭಪಾತದ ಚಿಹ್ನೆಗಳು ಮತ್ತು ಲಕ್ಷಣಗಳೇನು? ವಿವರಿಸಿ.
35. Examine the disadvantages of Artificial Birth Control method.
ಕೃತಕ ಜನನ ನಿಯಂತ್ರಣ ವಿಧಾನದ ಅನಾನುಕೂಲತೆಗಳನ್ನು ಪರಿಶೀಲಿಸಿ.
36. Define family. Explain the characteristics of functional family.
ಕುಟುಂಬವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ. ಕ್ರಿಯಾತ್ಮಕ ಕುಟುಂಬದ ಲಕ್ಷಣಗಳನ್ನು ವಿವರಿಸಿ.

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V. Answer any ONE question in about 20 sentences. The Question carries TEN marks: (10x1=10)

ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಒಂದು ಪ್ರಶ್ನೆಯನ್ನು 20 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ. ಪ್ರಶ್ನೆಗೆ 10 ಅಂಕಗಳು.

37. Explain the common causes for Divorce.
ವಿಚ್ಛೇದನಕ್ಕಿರುವ ಸಾಮಾನ್ಯ ಕಾರಣಗಳನ್ನು ವಿವರಿಸಿ.
38. Discuss the methods of Family planning.
ಕುಟುಂಬ ಯೋಜನೆಯ ವಿಧಾನಗಳನ್ನು ಚರ್ಚಿಸಿ ಬರೆಯಿರಿ.
