

**K21U 0188**

**Reg. No. :** .....

**Name :** .....

**VI Semester B.C.A. Degree (CBCSS – Reg./Supple./Improv.)**

**Examination, April 2021**

**(2014 – 2018 Admissions)**

**Core Course**

**6B17BCA : WEB TECHNOLOGY**

**Time : 3 Hours**

**Max. Marks : 40**

**SECTION – A**

1. **One** word answer.

**(8×0.5=4)**

- a) Expand WWW.
- b) Give an example for a physical tag.
- c) What is CGI ?
- d) Tag used to insert an image in a web page is
- e) Give an example for a paired tag.
- f) Which tag is used to create a definition list ?
- g) Give an example for a data type in PHP.
- h) Give an example for a Super Global Variable in PHP.

**SECTION – B**

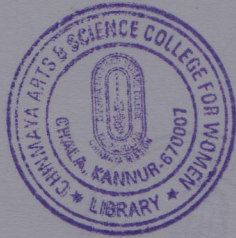
Write short notes on **any seven** of the following questions.

**(7×2=14)**

2. Give the structure of an HTML program.
3. What is an unordered list ? Explain the tags associated with it.
4. Differentiate <td> and <th>.
5. What is the use of <a> tag ?

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6. Give two advantages of PHP.
  7. What is meant by DOM ?
  8. Explain arrays in Javascript.
  9. Write the code to display an ordered list of students in your class.
  10. What are events and event handlers ?
  11. What is the use of global keyword in PHP ?
  12. Differentiate internal and external linking.
  13. Write the code to split the browser to two columns of equal width.
  14. What is the use of a form tag ?
  15. What is echo statement in PHP ? Write its syntax.

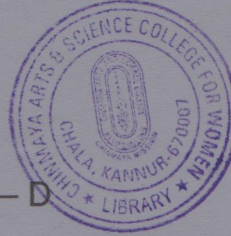
#### SECTION – C

Answer **any four** of the following questions. (4×3=12)

16. Explain environment variables.
17. Differentiate GET and POST.
18. Explain any three logical tags with examples.
19. Explain control structures of PHP.
20. Explain the different dialog boxes of Javascript.
21. Explain resource data type in PHP.
22. Explain settype() and gettype().
23. == and === are two operators in PHP. Are they the same ? If not, what is the difference ?



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SECTION - D

Write an essay on **any two** of the following questions.

(2×5=10)

24. Give a brief introduction to Internet and WWW.
  25. Write HTML code to print a table with 3 rows and 4 columns (rollno, name, mark, subject).
  26. Explain the navigation and location objects of javascript.
  27. Explain the client server model.
  28. Explain the HTTP request response cycle.
  29. Design a login page with username and password. Write code for password checking and display appropriate message on invalid attempts.
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Examination, April 2021  
(2014-2018 Admissions)  
Core Course  
6B18BCA : DATA MINING AND DATA WAREHOUSING

Time : 3 Hours

Max. Marks : 40

SECTION – A

1. One word answer.

(8×0.5=4)

- Which operation deals with selecting all but one dimension of the data cube ?
- A data warehouse is built on historical data and is not guaranteed to be up-to-data information. **True** or **False**
- How many categories of functions involved in Data Mining ?
- What is the use of data cleaning ?
- Fraud detection is an application of data mining. **True** or **False**
- The first steps involved in the knowledge discovery is
- A data mart is designed to optimize the performance for well-defined and predicible uses. **True** or **False**
- Expand DBSCAN.

SECTION – B

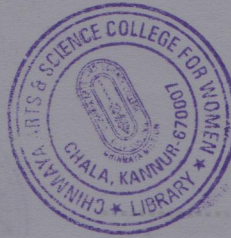
Write short notes on **any seven** of the following questions. (7×2=14)

- What is Data Warehouse ?
- Define data cube.
- What is Data Mart ?

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5. What is metadata ?
6. Brief note on OLAP engine function.
7. Briefly explain data cleaning.
8. What is an association rule ?
9. Define FP-Tree.
10. What is DBSCAN ?
11. Brief note on STIRR.
12. What is a decision tree ?
13. Briefly explain best split in decision tree.
14. What is Gini index ?
15. Define CART.

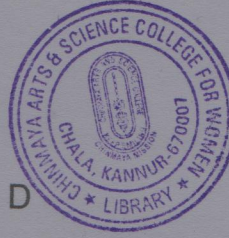
SECTION - C

Answer **any four** of the following questions. (4×3=12)

16. What is Data Mining ?
17. Explain star schema.
18. Compare ROLAP and MOLAP.
19. Explain the functions of data warehouse.
20. Differentiate database and data mining.
21. Briefly explain the data mining applications.
22. Explain Apriori algorithm.
23. Compare CLARA and CLARANS.



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SECTION – D

Write an essay on **any two** of the following questions.

(2×5=10)

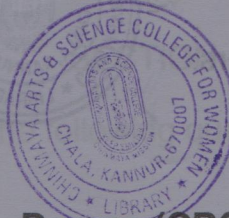
24. Compare OLTP and OLAP. Explain OLAP operations.
  25. What is KDD and KDD Process ? Explain.
  26. Explain data warehouse architecture.
  27. Explain data mining techniques.
  28. Write down partition algorithm in detail.
  29. Differentiate hierarchical and partitioning clustering.
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VI Semester B.C.A. Degree (CBCSS – Reg./Supple./Improv.)

Examination, April 2021

(2014-2018 Admissions)

Core Course (Elective)

6B19BCA:E01 : INFORMATION SECURITY

Time : 3 Hours

Max. Marks : 40

SECTION – A

1. **One word answer :** (8×0.5=4)

- The service that makes sure that only authorized users can access the data is called \_\_\_\_\_
- \_\_\_\_\_ helps in non-repudiation.
- Breaking of code without knowledge of the key and plaintext is also known as \_\_\_\_\_
- DES stands for \_\_\_\_\_
- In double DES data encryption is done \_\_\_\_\_ times.
- RSA uses \_\_\_\_\_ key length.
- A condensed version of data is called \_\_\_\_\_
- The key length for a secure RSA transmission is typically \_\_\_\_\_ bits.

SECTION – B

Write short notes on **any seven** of the following questions :

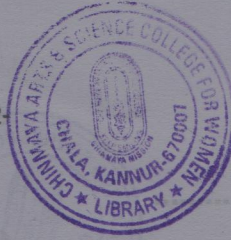
(7×2=14)

- Define plaintext.
- What is cryptography ?
- What is symmetric encryption ?
- What is a Trojan Horse ?

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6. List four examples for block ciphers.

7. Give any four weakness of DES.

8. State the weaknesses of public keys.

9. What is non-repudiation ?

10. What is a stream cipher ?

11. What is brute force attack ?

12. What is a parasitic virus ?

13. What are advantages of using Digital Signatures ?

14. What is linear cryptanalysis ?

15. How is key length related to encryption strength ?

SECTION - C

Answer **any four** of the following questions :

(4×3=12)

16. Compare symmetric and asymmetric encryption.

17. Differentiate between passive and active attacks.

18. Explain public key encryption.

19. Explain the RSA algorithm.

20. Explain three reasons why digital signatures are used in communication.

21. Discuss about substitution ciphers.

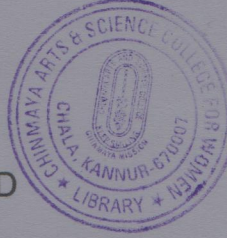
22. Distinguish between Virus and Worms.

23. Explain the working of symmetric encryption.





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SECTION – D

Write an essay on **any two** of the following questions :

(2×5=10)

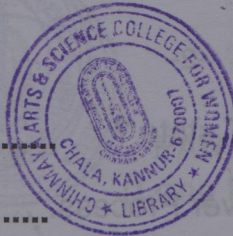
24. Explain working of DES.
  25. Discuss working of digital signature.
  26. Explain about transposition ciphers.
  27. Describe the elements in information security.
  28. Discuss about Malwares.
  29. Explain about
    - i) Steganography.
    - ii) Differential cryptanalysis.
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VI Semester B.C.A.. Degree (CBCSS – Reg./Supple./Improv.)

Examination, April 2021

(2014-2018 Admissions)

Core Course (Elective)

6B20BCA : E05 : NETWORK PROGRAMMING

Time : 3 Hours

Max. Marks : 40

PART – A  
(Short Answer)

1. One Word Answer : (8×0.5=4)
- a) SCTP stands for \_\_\_\_\_.
  - b) Well known ports (0 through 1023) are controlled and assigned by \_\_\_\_\_.
  - c) fork system call is used for \_\_\_\_\_.
  - d) DNS means \_\_\_\_\_.
  - e) The default port number for http communication is \_\_\_\_\_.
  - f) A \_\_\_\_\_ is a notification to a process that an event has occurred.
  - g) The purpose of the \_\_\_\_\_ state is to maintain information about the child for the parent to fetch at some later time.
  - h) A \_\_\_\_\_ I/O operation causes the requesting process to be blocked until that I/O operation completes.

PART – B  
(Short Essay)

Answer any 7 questions : (7×2=14)

- 2. Write a short note on UDP.
- 3. State the purpose of SO\_REUSEADDR and SO\_REUSEPORT Socket options.

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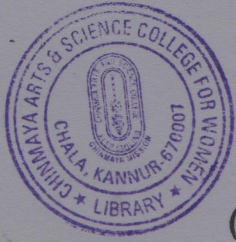
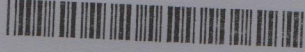
4. What are the reasons for TIME-WAIT state ?
5. Write a note on Termination of a Server Process.
6. Define Socket Pair for a TCP connection.
7. List out the information maintained by Zombie State.
8. Explain IPV6 Socket address structure.
9. Write a note on str\_echo() function.
10. How TCP NODELAY option is used while sending small packets ?
11. Write a program to determine host byte order.
12. Explain the syntax and purpose of str\_cli() function.
13. Explain the relationship among six exec functions.
14. How a client running on IPV4 configured host communicate with a server in IPV6 host ?
15. Explain the syntax and use of gethostbyaddr function.

**PART – C**  
**(Essay)**

Answer **any 4** questions :

**(4×3=12)**

16. Explain about the three way handshake TCP connection establishment.
17. Explain in detail about concurrent servers.
18. Write a note on the queues maintained by TCP for listening socket.
19. Distinguish getsockname and getpeername functions.
20. Explain about Raw Socket creation.
21. Explain the syntax and use of getaddrinfo function.
22. Write a note on tcp\_listen function.
23. State and explain socket function for TCP.



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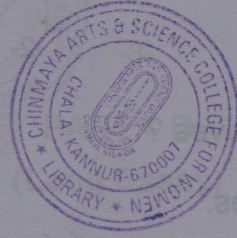
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**PART - D  
(Long Essay)**

Answer any 2 questions :

(2×5=10)

24. Explain about a simple Daytime Server.
  25. Explain the various TCP/IP protocols.
  26. Explain about socket options in detail.
  27. Explain in detail about DNS.
  28. Explain the syntax and use of functions : socket, connect and bind.
  29. Explain the various UDP server side system calls and getsocket, setsocket functions in detail.
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**VI Semester B.C.A. Degree (CBCSS – Reg./Supple./Improv.)  
Examination, April 2021  
(2014-2018 Admissions)  
Core Course  
6B21BCA : SYSTEM SOFTWARE**

Time : 3 Hours

Max. Marks : 40

**PART – A  
(Short Answer)**

1. One word answer : (8×0.5=4)
- a) \_\_\_\_\_ is a system program that bridges a specification or execution gap.
  - b) \_\_\_\_\_ directive defines a symbolic name to represent either a value or another symbolic name.
  - c) An \_\_\_\_\_ provides components of a memory address.
  - d) A \_\_\_\_\_ in the program is an invocation of the new operation.
  - e) A \_\_\_\_\_ is the facility for extending a programming language.
  - f) A \_\_\_\_\_ is the system program that loads a binary program in memory for execution.
  - g) The translator generates a program form called \_\_\_\_\_ of the program.
  - h) \_\_\_\_\_ performs the interpretation of source program.

**PART – B  
(Short Essay)**

Answer **any 7** questions : (7×2=14)

- 2. Write note on language processing.
- 3. What is system software ?

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4. What is assembler directives ?
5. Define forward references.
6. What is the use of stack in designing a macro preprocessor ?
7. Write note on macro definition.
8. Write note on self relocating programs.
9. What is object module ?
10. What are the steps in execution of a program ?
11. What are the components of programming language specification ?
12. Explain about ambiguity in grammars with example.
13. What are the benefits of interpretation ?
14. Write note on the data structures used in compilers.
15. Define expression tree with example.

**PART – C****(Essay)**

Answer **any 4** questions : **(4x3=12)**

16. Explain about the data structures for language processing.
17. Write note on elements of assembly language programming.
18. Explain in detail about advanced assembler directives.
19. Write note on OPTAB, SYMTAB and LITAB.
20. Write note on nested macro calls.
21. Define loader. Explain its types.
22. Explain about code optimization.
23. Compare static and dynamic memory allocation.



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**PART - D**

Name : .....

**(Long Essay)**

Answer **any 2** questions :

**(2x5=10)**

24. Explain in detail about language processing activities.

25. Write and explain the algorithm for pass 2 of a two-pass assembler.

26. Explain the different types of macro expansion.

27. Design and explain the linker for MS DOS.

28. Explain in detail about the compilation of expression.

29. Explain in detail about program relocation and linking.

- a) \_\_\_\_\_ is a system program that bridges a specification or execution gap.
- b) \_\_\_\_\_ directive defines a symbolic name to represent either a value or another symbolic name.
- c) \_\_\_\_\_ provides components of a memory address.
- d) \_\_\_\_\_ in the program is an invocation of the new operation.
- e) A \_\_\_\_\_ is the facility for extending a programming language.
- f) A \_\_\_\_\_ is the system program that loads a binary program in memory for execution.
- g) The translator generates a program form called \_\_\_\_\_ of the program.
- h) \_\_\_\_\_ performs the interpretation of source program.

**PART - B**  
**(Short Essay)**

Answer any 7 questions :

**(7x2=14)**

2. Write note on language processing.

3. What is system software ?