

P. G. P. CA 22 2018

Roll No. ....

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**2746/M**

**J-4/2058**

**FUNDAMENTALS OF COMPUTER  
NETWORKS, INTERNET & SCRIPTING  
LANGUAGES-204**

**Semester-II**

Time Allowed : 3 Hours] [Maximum Marks : 70

**Note :** The candidates are required to attempt **two** questions each from Sections A and B carrying 10½ marks each and the entire Section C consisting of 14 short answer type questions carrying 2 marks each.

**SECTION—A**

1. Explain TCP/IP reference model. Write its advantages and disadvantages also. 10½

2. Discuss following concepts :

(a) Firewalls

(b) Internet architecture

(c) Internetwork routing. 10½

3. Explain various internetworking devices. 10½

4. Explain the concepts of layers, interfaces and services. 10½

### SECTION—B

5. (a) What is HTML? Explain the structure of an HTML page.

(b) Discuss two categories of body elements of HTML. 5½, 5

6. What do you mean by cryptography? Discuss about two fundamental principles. 10½

7. Explain following with HTML tags and examples :

(a) Colors and fonts

(b) Creating links. 10½

8. (a) What do you mean by FTP? Discuss its working.

(b) Explain the term WWW. 5½, 5

### SECTION—C

9. Write brief answers :

1. What is cryptography?

2. Discuss functioning of bridge and router.

3. Discuss two fundamental cryptographic principles.

4. How colours and fonts are set in HTML?

5. What is tunnelling?

6. What are relays? Discuss.

7. Discuss design issues for layers.

8. Compare LAN, MAN and WAN.

9. Differentiate between substitution and transposition ciphers.

10. What is DNS? Why is it required?

11. Differentiate between connection oriented and connection less service.
12. Discuss two categories of body elements of HTML.
13. How formatting of body section is done using HTML?
14. What are firewalls? What is their use?

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**2744/M**

**J-4/2058**

**OBJECT ORIENTED PROGRAMMING**

**WITH C++-202**

**Semester-II**

Time Allowed : 3 Hours]

[Maximum Marks : 70

**Note :** The candidates are required to attempt **two** questions each from Sections A and B carrying 10.5 marks each and the entire Section C consisting of 14 short answer type questions carrying 2 marks each.

**SECTION—A**

1. How object oriented programming is different from its predecessor programming paradigms? Explain.
2. Define and distinguish between the following :
  - (a) Arrays and pointers

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(b) Structures and union

(c) Parameter passing by address and parameter passing by reference.

3. Define bit fields. How these are used? What are their advantages? Explain giving examples.
4. Define type casting. Discuss in detail the various type casting operators available in C++.

### SECTION—B

5. Define static data members and static member functions. How these are used? Explain giving examples of each.
6. Define constructor and destructor. What are the rules for constructors and destructors? What are the different types of constructors? Explain giving examples.
7. What are the different types of scopes in C++? Explain giving example for each of them.

8. How function overloading can be done using friend functions? Explain giving examples.

### SECTION—C

9. Write brief answers :

1. Define reference variable.
2. Define const arguments.
3. What is the difference between `int *A[10]` and `int (*A)[10]`?
4. What are default arguments?
5. Define union.
6. Define enumeration.
7. Which operators are permitted for pointer arithmetic?
8. How an external function is made friend of a class?
9. What do you mean by container class?

10. How ambiguity of multiple inheritance is removed?
11. Define code reusability.
12. What is a pure virtual function?
13. Define virtual destructor.
14. Distinguish between function redefinition and function overriding.

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**2745/M**

**J-4/2058**

**DATABASE MANAGEMENT SYSTEM WITH  
MS ACCESS-203**

**Semester-II**

Time Allowed : 3 Hours]

[Maximum Marks : 70

**Note :** The candidates are required to attempt **two** questions each from Sections A and B carrying 10.5 marks each and the entire Section C consisting of 14 short answer type questions carrying 2 marks each.

**SECTION—A**

1. (a) What are the advantages of the DBMS over the traditional file system? Explain.
- (b) What are the responsibilities of a DBA? Explain.

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2. Explain the 3 level architecture of a DBMS. Also, discuss the mapping between the levels.
3. Explain the concepts of :
  - (a) candidate key
  - (b) primary key
  - (c) secondary key
  - (d) alternate key
  - (f) foreign key.
4. What are the operations that can be performed in Boolean algebra? Explain with examples.

### SECTION—B

5. Explain the following (with respect to the database concurrency) :
  - (a) Serial schedule
  - (b) Serializability
  - (c) Multiple updates
  - (d) Incorrect analysis problem
  - (e) Uncommitted dependency

- (f) Shared lock
- (g) Exclusive lock.
6. What is the purpose of normalization? Explain 1NF, 2NF and 3NF with examples.
7. Explain the following :
  - (a) Sorting
  - (b) Filtering
  - (c) Applying integrity constraints
  - (d) Inserting a new column (attribute) in a table.
8. (a) Discuss the key control measures that are used to provide security to data in databases.
  - (b) What do you mean by authorization? How is it different from authentication? Explain access control method in detail.

### SECTION—C

9. Write brief answers :
  - (a) When the schedule is serializable?
  - (b) What are relational operations?

- (c) What is a DBMS conceptual model?
- (d) What do you mean by the functional dependency?
- (e) What is a schema?
- (f) What is the meaning of integrity and accuracy in a database?
- (g) What are the integrity constraints?
- (h) What are the filtering controls in MS-Access?
- (i) What is the difference between authentication and authorization?
- (j) What is decomposition?
- (k) What is the difference between DDL and DML?
- (l) What are entities and attributes?
- (m) What is a relation?
- (n) What are the various types of Join operators?

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**DATA STRUCTURE-201**

**Semester-II**

Time Allowed : 3 Hours]

[Maximum Marks : 70

**Note :** The candidates are required to attempt **two** questions each from Sections A and B carrying 10.5 marks each and the entire Section C consisting of 7 short answer type questions carrying 4 marks each.

**SECTION—A**

1. Discuss in brief the uses of data structures. Differentiate between linear and non-linear data structures.
2. Define Sparse arrays. What are the various methods of storing sparse arrays? Explain. Give the merits and demerits of sparse arrays.

3. What do you mean by stack? How a stack is represented in memory using linked list? Write an algorithm for push and pop operations in a stack when a stack is created using linked list.
4. Discuss the use of stacks in converting the infix notation to postfix notation.

### SECTION—B

5. What do you mean by a linked list? What are its advantages? Write an algorithm to insert and delete a node from a linked list when the information of the node is given.
6. What do you mean by doubly linked list? What are its advantages and disadvantages? How doubly linked lists are different from circular list? Explain with an example.
7. Write an algorithm to implement linear search. What are merits and demerits of linear search over binary search?
8. What do you mean by sorting? List various sorting algorithms. Discuss insertion sort algorithm in detail.

### SECTION—C

9. Write brief answers :
  - (a) What do you mean by algorithmic complexity?
  - (b) Differentiate between row major order and column major order.
  - (c) What are the advantages and disadvantages of using arrays?
  - (d) What are various applications of linked list?
  - (e) How linear and non-linear data structures are different from each other?
  - (f) What do you mean by radix sort?
  - (g) Compare selection sort with bubble sort.

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**PC 2758-M**

**J-9/2058**  
**DRESS DESIGNING-II**  
**Paper-II**  
**Semester-II**

Time Allowed : Two Hours]

[Maximum Marks : 36

**Note :-** The candidates are required to attempt *two* questions each from Sections A and B carrying 5½ marks each and the entire Section C consisting of 7 short answer type questions carrying 2 marks each.

**SECTION—A**

1. What are the reasons behind wearing clothes ?
2. Explain the role of principle of design in dress designing.
3. How the use of proper lines in dress can improve the personality of person ? Discuss.
4. Explain fashion theories.

**SECTION—B**

5. What are the various factors that should be considered in selection of clothing for children ?
6. How do income, physical characteristics and occasions affects the clothing selection ?

7. Write about the various factors that effects the fashion.
8. Write the effects of fashion trend in dress designing.

### SECTION—C

9. Write short notes on :

- (a) Silhouette
- (b) Warm and Cool colours
- (c) Bias
- (d) Fashion
- (e) Draw a fashion cycle
- (f) Style
- (g) Fad.

### (ਪੰਜਾਬੀ ਅਨੁਵਾਦ)

**ਨੋਟ:** ਪ੍ਰੀਖਿਆਰਥੀ ਭਾਗ ਓ ਅਤੇ ਅ ਵਿੱਚੋਂ ਦੋ-ਦੋ ਪ੍ਰਸ਼ਨ ਕਰਨ, ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 5½ ਅੰਕ ਹਨ। ਭਾਗ ਏ ਦੇ ਸਾਰੇ 7 ਸੰਖੇਪ ਉੱਤਰ ਵਾਲੇ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹਨ, ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 2 ਅੰਕ ਹਨ।

### ਭਾਗ—ਓ

1. ਕਪੜੇ ਪਹਿਨਣ ਪਿੱਛੇ ਕੀ ਕਾਰਨ ਹਨ ?
2. ਡਰੈਸ ਡਿਜ਼ਾਈਨਿੰਗ ਵਿੱਚ ਡਿਜ਼ਾਈਨ ਦੇ ਸਿਧਾਂਤ ਦੀ ਭੂਮਿਕਾ ਦੀ ਵਿਆਖਿਆ ਕਰੋ।
3. ਪਹਿਰਾਵੇ ਵਿੱਚ ਢੁੱਕਵੀਆਂ ਲਾਈਨਾਂ ਦੀ ਵਰਤੋਂ ਨਾਲ ਵਿਅਕਤੀ ਦੀ ਸਖਸ਼ੀਅਤ ਵਿੱਚ ਸੁਧਾਰ ਕਿਸ ਤਰ੍ਹਾਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ ? ਚਰਚਾ ਕਰੋ।
4. ਫੈਸ਼ਨ ਸਿਧਾਂਤਾਂ ਦੀ ਵਿਆਖਿਆ ਕਰੋ।