4. Write a C++ program to create a class for representing a ' brain' with suitable atributes and methods . Also write the main function.

5. (a) What is over loading? Explain.

   (b) Explain the use of a friend function with example.

6. Discuss different types of inheritances with examples.

7. (a) What is an abstract class? What is its implications? Explain. (12)

   (b) Explain the 'new' and 'delete' operators with examples. (8)

8. Explain the file processing features of C++ with examples.

Reg. No. : .....

D 2017 **Q.P. Code : [07 DSCA 04]**

(For the candidates admitted from 2007 onwards)

B.C.A. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III — Computer Applications

PROGRAMMING WITH C AND C ++

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Discuss the looping structures in C with syndax , examples and flow charts.

2. Write a C program to real an amay of numbers mid to print the second largest number in that away.

3. (a) Bring out the differences between structure and union.

   (b) What is a printer? Write a program segment to exchange two numbers by using pointers.

3. (a) Explain the algorithms of adding an item and deleting an item in a stock. (12)

(b) What is storage poor? (8)

4. Write the algorithm for polynomial addition using linked list and explain it with an example. (20)

5. (a) Distinguish between sequential and binary search procedures. (10)

(b) Explain the 'insertion sort' with an example. (10)

6. (a) Write a note on 'symbols tables'.

(b) Explain the various hashing functions. (10 + 10)

7. (a) Discuss the various file organisations. (12)

(b) What is trie indexing? (8)

8. What is heap? Explain heap sort with algorithm and an example.

———

Reg. No. : .....

D 2018 **Q.P. Code : [07 DSCA 05]**

(For the candidates admitted from 2007 onwards)

B.C.A. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Computer Applications

DATA STRUCTURES AND ALGORITHMS

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) Explain the phages of developing programs. (10)

(b) Describe the criterions to analyse programs. (10)

2. (a) What are ordered list? Describe the operations performed on ordered lists. (10)

(b) Describe ways of representing arrays with examples. (10)

4. Explain the various aspects in software requirements specification.

5. Elaborate of the fundamental design concepts.

6. Describe the various design techniques.

7. Elaborate on walk throughs and Inspections.

8. (a) Explain enhancing maintainability during development.

   (b) Explain the managerial aspects of software maintenance.

Reg. No. : .....

D 2019 **Q.P. Code : [07 DSCA 06/ 07 DSC 06]**

(For the candidates admitted from 2007 onwards)

B.Sc./B.C.A. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III — Computer Science/Computer Applications

SOFTWARE ENGINEERING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Explain the quality and productivity factors in the development and maintenance of software products.

2. Explain the various stages in planning the development process.

3. Describe the various software cost estimation techniques.

5. Describe the various process states and its transition scheme.

6. Explain the fixed partitioned memory management technique with allocation algorithm.

7. Give a neat description on segmentation technique. Also write the procedure of address translation and relocation.

8. Discuss the recent development of computer system design "clusters" in detail. Also narrate the features of Beowulf and Linux clusters.

Reg. No. : .....

D 2020 **Q.P. Code : [07 DSCA 07]**

(For the candidates admitted from 2007 onwards)

B.C.A DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III — Computer Applications

OPERATING SYSTEMS

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Give a detailed description on evolution of operating systems.

2. Explain the overview of Microsoft Windows operating system.

3. (a) Identify the different services of an operating system. (12)

   (b) Write about the concept of "Booting". (8)

4. Narrate the procedure of implementing a directory system.