

UNIVERSITY OF CALCUTTA

FAKIRCHAND COLLEGE

B.Sc. (HONOURS) SEMESTER-V, 2021

INTERNAL ASSESSMENT

PAPER – CMSA-CC-5-11

F.M. – 30

(Answer Question **no.1** and any **four** from the rest)

- | | |
|-----------------------------------------------------------------------------|-------------|
| 1. Answer any four question: | 1.5 × 4 = 6 |
| a) What is DBMS? | |
| b) Define SQL . | |
| c) What is schema? | |
| d) Define data dictionary. | |
| e) Define Entity. | |
| f) What is an attribute? | |
| g) What is functional dependency ? | |
| 2. Define keys in DBMS. What are the different types of keys? | 2+ 4 |
| 3. Differentiate between generalization and specialization in DBMS. | 6 |
| 4. Explain 3-level architecture in DBMS with proper diagram. | 6 |
| 5. What are the basic differences between traditional file system and DBMS. | 6 |
| 6. Explain the data models in DBMS. | 6 |
| 7. Draw an E-R diagram of library management. | 6 |
| 8. Explain normalization of DBMS. | 6 |
| 9. Explain 'aggregation' and 'view' in SQL. | 3 + 3 |

UNIVERSITY OF CALCUTTA

FAKIR CHAND COLLEGE

COMPUTER SCIENCE

B.Sc. SEM-V (Honours) Examination-2021

Paper: CC-12

Internal Assessment

Full Marks: 30

Answer Q.No.1 and any four from the rest.

1. Answer any four questions: 1.5X4=6
 - a) What are the differences between OOP and POP?
 - b) What are the features of OOP?
 - c) What is early binding?
 - d) What are the differences java constructor and java method?
 - e) Differentiate between final, finally and finalize.
 - f) What is Meta class?
 - g) What is mutable string?

2. What is exception handling? What are the differences between Throw and Throws? 3+3

3. Explain about the lifecycle of java thread. 6
4. Explain about the role of constructor in java. 6
5. Explain about different type of inheritance procedure. 6
6. What is java package? What is the advantage of it? 3+3
7. What is interface? What are the differences between function overloading and function overriding? 3+3
8. Explain about access control in java. 6
9. What is JVM? What are the differences between JDK, JRE and JVM? 6

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INTERNAL EXAMINATION SEMESTER – V

Subject: Computer Science

F.M. – 30

Paper: CMSA-DSE-A-1

(Answer Question no. 1 and any four from the rest.)

1. Answer any four questions: 1.5*4 = 6
 - a) Define digital image?
 - b) What is pixel?
 - c) Write two application of Image Enhancement?
 - d) What is edge detection?
 - e) What is line detection?
 - f) What is Prewitt Operator?
 - g) Define Resolutions?
2. Discuss the concept of So Sampling and Quantization of an image. 3+3
3. Explain Log Transformations in image processing? 6
4. What is smoothing spatial filter? Explain different types of smoothing Spatial filter? 4+2
5. Discuss about Canny Edge Detection in Image Processing? 6
6. Explain Intensity-level slicing. Write two difference between Blurring and sharpening in Image Processing? 4+2
7. Perform the Histogram Equalization on the following 8x8 image. The gray level distribution of the image is given below –

Gray Level (r_k)	0	1	2	3	4	5	6	7
No of Pixels (P_k)	8	10	10	2	12	16	4	2

6
8. Explain Fourier Transformation. 6
9. what is Image Addition? Application of Image Addition? Give an an example. 2+2+2

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INTERNAL EXAMINATION SEMESTER – V

Subject: Computer Science

F.M. – 30

Paper: CMSA-DSE-B-2

(Answer Question no. 1 and any four from the rest.)

1. Answer any four questions: 1.5*4 = 6
 - a. Write the difference between a list and a tuple?
 - b. What is a Dictionaries in Python?
 - c. What is docstring in python?
 - d. What is the difference between '/' and '//' in Python?
 - e. Accessing the tuple elements
tup= (70, 85, 90, 100, 120)
Print (tup [-4] and print (tup [2])
 - f. How to concatenate two strings in python?
 - g. What is the namespace in python?
2. Define a function. Write the difference between a function and a method? 2+4
3. Discuss about data types in python? 6
4. Why string is immutable? How we compare two strings? 4+2
5. write a Python function to check if a given number is prime or not? 6
6. Discuss packing & unpacking of Tuples with the help of an example. Define Nested Tuples. 4+2
7. What are Literals in python? Discuss different types of Literals in python? 2+4
8. What is the difference between an abstract class and an interface? Give an example? 6
9. Discuss Logical and membership operator in python with the help of example. 6