00416

Seat No.	

QP Code: 3201QP
Total No. of Pages: 3

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81138_Introduction to Programming_20.03.2023_10.30 AM To 01.30 PM

Subject Code: 81138

Day and Date: Monday, 20-03-2023
Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:
1) Figures to the right indicate full marks

Special Instruction.:
• Question No.1 and Question No.7 are compulsory • Attempt any three questions from Question No. 2 to Question No.6

Q.1. Choose correct alternatives for following questions from options given below. **[8]**

1. What is the type of programming language supported by Python?
1. Object-oriented
2. Functional programming
3. Structured programming
4. All of the above

2. All the keywords in Python are in_
1. Lower case
2. Upper case
3. Capitalized
4. None of the above

3. What is the maximum possible length of an identifier?
1. 16
2. 32
3. 64
4. None of these above

4. Study the following function:
round(4.576)
What will be the output of this function?
1. 4
2. 5
3. 576
4. 5.5

! (Hold and wait) =
! Hold or ! wait

5. Which of the following option is not a core data type in the python language?
1. Dictionary
2. Lists
3. Class
4. All of the above

6. Which block lets you test a block of code for errors?
1. try
2. except
3. finally
4. None of the above

7. What will be the output of below Python code?
```
str1="poWer"
str1.upper()
print(str1)
```
1. POWER
2. Power
3. power
4. power

8. Which of the following is correct with respect to above Python code?
```
d={"a":3,"b":7}
```
1. a dictionary d is created.
2. a and b are the keys of dictionary d.
3. 3 and 7 are the values of dictionary d
4. All of the above.

Q.2. Write a program to print Prime Numbers between 1 and 100. [14]

Q.3. What is string? Explain string special operators with appropriate example. [14]

Q.4. Explain built-in Functions and Methods of List. [14]

Q.5. Explain creating and importing user defined modules with example. [14]

Q.6. What is file? Explain readlines( ) and writelines() methods with appropriate example. [14]

Q.7. **Write short note on any four.** **[20]**

1. **Class Inheritance**
2. **Multi-Line Statements**
3. **The Anonymous Functions**
4. **globals( ) and locals()**
5. **Indentation in Python**

Seat No.	

QP Code: 3297QP

Total No. of Pages: 2

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81139_Computer Architecture & Operating System_21.03.2023_10.30 AM To 01.30 PM

Subject Code: 81139

Day and Date: Tuesday, 21-03-2023

Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:

1) Figures to the right indicate full marks

Special Instruction.:

Q.1 and Q.7 are compulsory Attempt any Three Questions from Q.2 to Q.6.

Q.1. Multiple Choice Questions [8]

I) __ is used to store data in memory
a) D flip flop b) JK flip flop c) SR flip flop d) T flip flop

II) What is paging in the operating system
a) Memory management scheme b) Process management scheme
c) I/O device management d) None of these

III) Which of the following page replacement algorithm can be used in page fault recovery?
a) First In First Out(FIFO) b) Least Recently Used (LRU)
c) Least Frequently Used (LFU) d) All of these

IV) The binary equivalent of the decimal number 10 is _____
a) 0010 b) 10 c) 1010 d) 010

V) What is an operating system?
a) interface between the hardware and application programs
b) collection of programs that manages hardware resources
c) system service provider to the application programs
d) all of the above

VI) Virtual Memory can be implemented via _____
a) Demand Paging b) Logical paging c) Structural way d) Simple division

VII) Who founded Linux Kernel?
a) Ken Thompson and Dennis Ritchie b) Linus Torvalds
c) Linus Torvalds and Ken Thompson d) Richard Stallman

VIII) Which Linux command is used to remove files?
a) remove b) rm c) delete d) del

Q.2. a) Explain different logic gates in detail. 7 [14]
b) Explain Half Adder in detail. 7

Q.3. What is process scheduling? Explain different process scheduling algorithms with suitable example. [14]

Q.4. a) What is synchronization? Describe producer-consumer problem using synchronization. 7
b) What is deadlock? How to prevent occurrence of deadlock? 7

Q.5. Illustrate different Input-Output transfer modes with their advantages and disadvantages. [14]

Q.6. a) Explain the architecture of Linux in detail. 7
b) Describe different conditional statements used in shell scripting. 7 [14]

Q.7. Write short notes (Any Four) [20]
a) Instruction Set.
b) Fragmentation
c) Semaphore
d) Features of Linux
e) File handling commands in Linux

[14]

Seat No. | | QP Code: 3303QP

Total No. of Pages: 3

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81141_Statistical and Mathematical Foundations_24.03.2023_10.30 AM To 01.30 PM

Subject Code: 81141

Day and Date: Friday, 24-03-2023

Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:

1) Figures to the right indicate full marks

Special Instruction.:

i) Question no. 1 and Question no. 7 are compulsory ii) Attempt any three questions from question 2 to question 6 iii) Use of nonprogrammable calculator is allowed.

Q.1. Choose the correct alternatives : [8]

1) The measurements of spread or scatter of the individual values around the central point is called.....

a) measures of dispersion b) measures of central tendency

c) measures of skewness d) measures of kurtosis

2) Which one of these statistics is unaffected by outliers.....

a) mean b) standard deviation c) interquartile range d) range

3) The negation of the conjunction of two simple statements is the ..... of their negations.

a) conjunction b) disjunction c) implication d) double Implication

4) In a Poisson Distribution, if 'n' is the number of trials and 'p' is the probability of success, then the mean value is given by.....

a) m = np b) m = 2 (np) c) m = np(1-p) d) m = p

5) When the values of two variables move in the same direction, correlation is said to be.....

a) linear b) non-linear c) positive d) negative

6) The degree of any vertex of graph is.....

a) number of edges incident with vertex

b) number of vertex in a graph

c) number of vertices adjacent to that vertex

d) number of edges in a graph

7) Logistic regression is used when.....

a) predict a dichotomous variable from continuous variables

b) predict a continuous variable from dichotomous variables

c) predicts any categorical variable from several other categorical variables

d) none of these

8) The contrapositive of the statement: "If a child concentrates then he learns" is.....

a) If a child does not concentrate then he can not learn

b) If a child does not learn then he does not concentrate.

c) If a child practices then he learns.

d) If a child concentrates then he can't forget.

Q.2. a) Define IQR. Construct a box plot to represent the data given below

5; 40, 42, 46, 48, 49, 50, 50, 52, 53, 55, 56; 58, 75, 102

.

b) Define logical equivalence. Using the truth table, Prove the following equivalence

i) $\sim (p \wedge q) \equiv \sim p \vee \sim q$

ii) $p \wedge (q \vee r) \equiv (p \wedge q) \vee (p \wedge r)$

Q.3. a) Following data represents the service time of a sample of 10 jobs arrived to a computing centre. [14]

Service Time (minutes) : 10.2, 12.9, 13.6, 11.4, 14.7, 13.9, 12.6, 10.5, 11.7, 12.5

Find coefficient of variance and comment.

b) Define Correlation. Calculate the Karl Pearson's correlation coefficient between Price (Rs) and Supply (Kg) from the following data.

Price (Rs)	11	12	13	14	15
Supply(Kg)	30	29	29	25	22

Q.4. a) The service time of the jobs arriving to a computing centre is normally distributed with mean service time 20 minutes with standard deviation 5 minutes. Find the probability that arriving job requires [14]

i) less than 17.5 minutes

ii) between 15 to 25 minutes

iii) more than 30 minutes

[Given, $P(0 \le z \le 0.5) = 0.1915$, $P(0 \le z \le 1) = 0.3413$, $P(0 \le z \le 2) = 0.4772$]

b) Calculate rank correlation coefficient from the data given below.

Cost	50	60	65	50	55	60	60	30	40
Profit	10	20	25	15	20	30	35	5	7

Q.5. a) Explain Logistic Regression and LDA. [14]

b) State the equations of regression lines. For two variables X and Y the lines of regression are $8X-10Y+66=0$, $40X-18Y-214=0$.

Find i) Mean of X and Y

ii) Correlation coefficient between X and Y

Q.6. a) Define Complete graph and Regular Graph. Give an example of each. [14]

b) Define Regression. For the following data obtain

i) Regression equation of Y on X and hence estimate Y when X = 10

ii) Regression equation of X on Y and hence predict X when Y = 15

X	6	2	10	4	8
Y	9	11	5	8	7

Q.7. **Write short notes on any four from the following :** **[20]**

a) **Binomial distribution**
b) **Scatter Diagram**
c) **Regression Coefficient**
d) **Matrix representation of graph**
e) **Inference theory of statement calculus**

QP Code: 3319QP

Seat No.	

Total No. of Pages: 3

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81170_Knowledge Management_27.03.2023_10.30 AM To 01.30 PM

Subject Code: 81170

Day and Date: Monday, 27-03-2023
Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:
1) Figures to the right indicate full marks
Special Instruction.:
i) Attempt any three (3) questions from question no 2 to question no 6. ii) Question No.1 and question No.7 are compulsory

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Q.1. **1. Which of the following best describes, the set of processes developed in an organization to create, gather, store, transfer, and apply knowledge?** **[8]**

A. Organizational learnings
B. Knowledge management
C. Organizational memory
D. Knowledge assets

2. The images, languages and concepts held by the staff and customers indicate _____ of the following assets of knowledge?

A. Experiential knowledge
B. Systematic knowledge
C. Conceptual Knowledge
D. Routine knowledge

3. Which of the following is the knowledge that people carry in their minds and is therefore, difficult to access?

A. Explicit knowledge
B. Tacit Knowledge
C. Procedural knowledge
D. Declarative knowledge

4. Which one of the following is a property of knowledge capturing?

A. Determining feasibility
B. Choosing appropriate expert
C. Taping the expert's knowledge
D. All of the above options

5. A collection of internal and external knowledge in a single location for more efficient management and utilization by the organization best describes as_____
A. Knowledge repository
B. Organizational memory
C. Data warehouse
D. Knowledge management

6. A knowledge-intensive computer program that captures the expertise of a human in limited domains of knowledge describes as _____
A. Virtual reality
B. Neural network
C. Decision support system
D. An expert system

7. The main focus of Knowledge management in a firm is _____
A. Leverage knowledge resources to achieve business objectives
B. Information Management
C. Document Management
D. Process Improvement

8. Which of the following knowledge can be articulated, codified, and stored in certain media?
A. Explicit knowledge
B. Tacit knowledge
C. Procedural knowledge
D. Declarative knowledge

Q.2. a. What is Knowledge management? Describe how knowledge management helping to organizational process and decision support systems. 7 [14]
b. What are key challenges facing the evolution of knowledge management? 7

Q.3. a. What are different types of knowledge systems? Explain in detail tacit knowledge 7 [14]
b. Write procedure for knowledge sharing organization and knowledge management. 7

Q.4. a. Explain how information technology support in knowledge management. 7 [14]
b. Describe the term information mapping in information retrieval 7

Q.5. a. Explain different components of a knowledge strategy. [14]
7

b. How to develop a knowledge management map/plan with an organization's strategic and business plan ? 7

Q.6. a. Discuss application of Knowledge Management in Health Science 7 [14]

b. How knowledge management supporting in organization process life cycle? Explain. 7

Q.7. Write short note on (Attempt any FOUR) [20]

a. Evolution of Knowledge management
b. Ethics for Knowledge Management
c. Knowledge Management in Developing Countries
d. Internet Search Engines and Knowledge Management
e. Repackaging Information.

Seat No.	

QP Code: 3303QP

Total No. of Pages: 3

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81141_Statistical and Mathematical Foundations_24.03.2023_10.30 AM To 01.30 PM

Subject Code: 81141

Day and Date: Friday, 24-03-2023

Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:

1) Figures to the right indicate full marks

Special Instruction.:

i) Question no. 1 and Question no. 7 are compulsory ii) Attempt any three questions from question 2 to question 6 iii) Use of nonprogrammable calculator is allowed.

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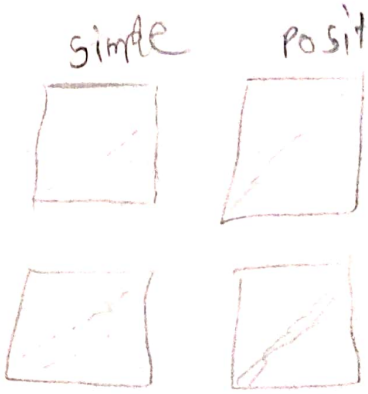
e) **Inference theory of statement calculus**



00416

QP Code: 3313QP

Total No. of Pages: 3

Seat No. 00416

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81140_RDBMS_23.03.2023_10.30 AM To 01.30 PM

Subject Code: 81140

Day and Date: Thursday, 23-03-2023

Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:

1) Figures to the right indicate full marks

Special Instruction.:

1. Question No.1 and Question No.7 are compulsory. 2. Attempt any three questions from Question No. 2 to Question No. 6.

Q.1. Select the correct alternative and write the correct option with answer. [8]
(1 * 8)

1. The argument keys that are used to identify a record uniquely are called _____
A. secondary key.
B. candidate key.
C. super key.
D. alternate key.

2. What does the term 'Consistency' means in the database?
A. transaction of the data.
B. redundancy of the data.
C. correctness of the data.
D. duplication of the data.

3. If column C functionally depends on column B, and column B functionally depends on column A, then _____
A. column C transitively depends on column A.
B. column A transitively depends on column C.
C. column C functionally depends on column A.
D. column A functionally depends on column C.

4. The _____ keyword is used to eliminate the duplicates.
A. distinct.
B. unique.
C. union.
D. intersect.

5. The _____ is a query that has another query embedded within it.
A. Sub query.
B. Structured query.
C. Nested query.
D. Sequence query.

6. The _____ can be used to retrieve data from multiple tables.
A. embedded SQL.
B. dynamic SQL.
C. joins.
D. views.

7. Rollback and commit affect _____.
A. only DML statements.
B. only DDL statements.
C. all statements.
D. only DCL statements.

8. Which SQL*Plus feature can be used to replace values in the WHERE clause?
A. Substitution variables.
B. Replacement variables.
C. Prompt variables.
D. Instead-of variables.

Q.6.

Q.2. a) Discuss RDBMS architecture in detail. (7) [14]
b) State different types of Data Models. Explain any one type of data models in details. (7)

Q.3. a) Explain various Data Definition Commands in details with syntax. [14]
(7)
b) What are JOINS? Explain its types with suitable examples of each.
(7)

Q.4. a) What is PL/SQL?Explain Operators in PL/SQL. Discuss the advantage [14]
of PL/SQL in compare to SQL. (7)
b) Explain the Iterative control structures in PL/SQL with suitable examples.
(7)

Q.5. a) What is cursor? Explain different types of cursors with suitable [14]
example. (7)
b) Discuss exception handling mechanism in PL/SQL. Describe types of exception. (7)

Q.6. a) Define Stored procedure? Where does store procedure reside? State the advantages of store procedure. (7) [14]
b) State and Explain different types of CODD's rules. (7)

Q.7. Write short notes on (any four) (4*5) [20]
a) ACID properties of transaction.
b) aggregate functions of SQL
c) PL/SQL data types
d) Packages
e) Concurrency control

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Seat No. 00416

QP Code: 3308QP

Total No. of Pages: 3

January - February (Winter) Examination - 2023

Subject Name: MCA Commerce (CBCS)_81142_Principles of Management and Organizational Behavior_25.03.2023_10.30 AM To 01.30 PM

Subject Code: 81142

Day and Date: Saturday, 25-03-2023

Time: 10:30 am to 01:30 pm

Total Marks: 70

Instructions.:

1) Figures to the right indicate full marks

Special Instruction.:

Que. no. 1 and Que. no. 7 are compulsory. Attempt any three questions from Que. no. 2 to Que. no. 6

Q.1. [8]

1. ____ is a motivational theory in psychology comprising a five-tier model of human needs,
often depicted as hierarchical levels within a pyramid..
1. Maslow's hierarchy of needs
2. Herzberg's two Factor Theory
3. Vrooms Expectancy
4. None of the Above

2. _____ is the study of human behavior in organizational settings, the interface between human
behavior and the organization organization itself.
1. Organisational Behaviour
2. Organisational Planning
3. Organisational Structure
4. Organisational Culture

3. ____ can be defined as the permanent change in behavior due to direct and indirect experience.
It means change in behavior, attitude due to education and training, practice and experience.
1. Organisational Decisions
2. Organisational Image.
3. Learning
4. Personality

4. _____ is the process of bringing together physical, financial and human resources and developing
productive relationship amongst them for achievement of organizational goals
1. Co-ordinating
2. Organising
3. Staffing
4. None of the above

5. _____ can be defined as one of the most important functions of management. It involves the process of filling the vacant position of the right personnel at the right job, at right time..
1. Change Management
2. Staffing
3. OD
4. All of the above

6. The _____ can be defined as the process of selection and shortlisting of the right candidates with the necessary qualifications and skill set to fill the vacancies in an organisation..
1. Organisational Behaviour
2. Management Activities
3. Group Behaviour
4. Selection Process

7. _____ is the transformation or adjustment to the way an organization functions
1. Training
2. Recruitment
3. Organisational Change
4. None of the Above

8. _____ plays a key role in organizational behaviour because the way that people think, feel, and behave affects many aspects of the workplace.
1. Personality
2. Management
3. Policies
4. None of the Above

Q.2. a. Discuss in detail Centralization & Decentralization [14]
b. Explain in detail Human Resource Planning

Q.3. a. Define and discuss the concept of Directing [14]
b. Briefly explain sources of recruitment

Q.4. a. Explain the concept of Staffing [14]
b. Briefly explain Maslow's Hierarchy of Needs theory

Q.5. a. Explain in brief stages of group formation [14]
b. Discuss the determinants of Personality

Q.6. a. Briefly discuss concept of Controlling [14]
b. Explain in detail types of Groups

Q.7. **Write short notes on (any four)** **[20]**

a) Importance of Organisational Behaviour
b) Motivation
c) Likert's four system of leadership
d) Characteristics of Organisational Development
e) Staffing