19COA502 Reg No : .....

CHOICE BASED CREDIT SYSTEM

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Web Programming with ASP.Net

Duration:3 Hours **Max Marks:80**

I. Answer any FIVE of the following : **(5×2= 10 Marks)**

1. Mention the compilation models in ASP.NET.
2. What is IIS and FTP?
3. What is the usage of RequiredFieldValidator?
4. What is the usage of Table server control?
5. What is AppearenceEditorPart?
6. Write any two public properties of ObjectDataSource control.

II. Answer any FIVE of the following : **(5×6= 30 Marks)**

7. Explain cross page posting with the help of an example.
8. Explain any six methods corresponding to the events that occur in global.asax file.
9. What are Web server controls? Explain any two.
10. What is a Menu control? Explain any four public properties of a Menu Class.
11. How can themes be applied on controls at Runtime? Explain.
12. Explain i) CatalogZone ii) DeclarativeCatalogPart iii) PageCatalogPart

III. Answer any FOUR of the following : **(4×10= 40 Marks)**

13. a) Explain the methods used to store state information at client end.
    b) Write a note on i) Application state ii) Session state
14. a) What is developer productivity? Discuss the aspects that contribute towards attaining developer productivity.
    b) Explain the tools used to perform administrative tasks in ASP.NET.
15. Explain a) PasswordRecovery b) LoginName c) ChangePassword control
16. a) Explain any five elements of AdRotator server control.
    b) How do you retrieve a selected date from Calendar server control? Explain with a help of an example.
17. Explain any five public properties of i) DataList control ii) Repeater control

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Morning

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CREDIT BASED SEMESTER SCHEME

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Microprocessor Programming

Duration:3 Hrs Max Marks:100

PART - A

I. Answer any SEVEN from the following: **(7×2= 14 Marks)**

1. Define Microprocessor.
2. What do you mean by Register Addressing mode? Give an example.
3. List the different data definition directives used to define a program.
4. What is the use of a Procedure Call? Write the syntax of a Procedure call.
5. Write the function of OUTS instruction.
6. List any 4 Hardware or Exception interrupts.
7. Differentiate between Sign Flag and Zero Flag.
8. What is the difference between the instructions LDS and LES?

PART - B

II. Answer any SIX from the following: **(6×6= 36 Marks)**

9. Draw the internal architecture of 8086 and explain the Bus Interface Unit.
10. With the syntax and example, explain the instruction i) DIV ii) MUL
11. Explain in detail the rotate instructions with an example each.
12. Explain the following processor control instructions: i) STD ii) CMC
13. Write an assembly language program to find the largest and smallest number in an array.
14. Write a note on ASCII Data and BCD Data.
15. Explain how interrupt works in 8086.

PART - C

III. Answer any FIVE from the following: **(5×10= 50 Marks)**

16. (a) Explain the instruction types with examples.
    (b) Differentiate between Zero operand instruction and Two operand instruction.

17. Explain the following directives: (i) LENGTH (ii) ASSUME (iii) ENDS (iv) OFFSET v) SIZE

18. (a) Explain LOOP instruction with an example.
    (b) Explain the following branch instructions: i) JA ii) JE

19. List and explain the Index Registers and Segment Registers.

20. (a) Explain the Branch Displacement Directives with suitable examples.
    (b) Explain the directives: (i) INCLUDE (ii) EXTRN (iii) PUBLIC

21. With the function and an example explain Decimal adjust for Addition and Decimal adjust for Subtraction.

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CREDIT BASED SEMESTER SCHEME

B.C.A FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Python Programming

Duration:3 Hrs **Max Marks:100**

PART - A

I. Answer any SEVEN from the following: **(7×2= 14 Marks)**

1. Write a note on Python.
2. Define ELSE in FOR loop.
3. Explain the count() method in strings.
4. What is lambda function?
5. How do you create a class and object in Python?
6. How do you connect to mysql database?
7. Define array in Python.
8. Why is range() function used in python?

PART - B

II. Answer any SIX from the following: **(6×6= 36 Marks)**

9. Explain C vs Python.
10. a) Explain loop through a tuple.
    b) How can you check if a specified item exists in a tuple?
11. Explain the strftime() method.
12. Explain method overloading with an example.
13. Write a note on memory management in python.
14. Explain GLOBAL and LOCAL variables in Python.
15. Explain how to insert rows into a table through Python.

PART - C

III. Answer any FIVE from the following: **(5×10= 50 Marks)**

16. Explain the data types in Python.

17. Explain with example difference between a normal def defined function and lambda function.

18. Explain With example creating database tables through Python.

19. Explain sets in Python.

20. Explain with examples the various ways to join two or more lists in Python.

21. Explain with example polymorphism with a function and objects.

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CHOICE BASED CREDIT SYSTEM

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Python Programming

Duration:3 Hours **Max Marks:80**

I. Answer any FIVE of the following : **(5×2= 10 Marks)**

1. Mention the various Built in data types in Python.
2. What are the features of Python?
3. What is slicing in strings?
4. What are GLOBAL variables in Python?
5. How do you display the current date?
6. Write how to prepare a cursor object using cursor() method.

II. Answer any FIVE of the following : **(5×6= 30 Marks)**

7. Write a note on Frozen binaries.
8. Explain CONTINUE statement with example.
9. a) Explain Python tuple count() method. b) Explain Python tuple index() method.
10. Explain the sort() method in list in python.
11. Explain user defined polymorphic functions with example.
12. How do you delete rows from a table in Python? Explain.

III. Answer any FOUR of the following : **(4×10= 40 Marks)**

13. Explain sets in Python.
14. Explain the relational and logical operators in Python.
15. a) How do you define and call a function? Explain with an example.
    b) Explain with example returning multiple values from a function.
16. Explain with example difference between a normal def defined function and lambda function.
17. Explain with example updating rows from a table through python.

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CHOICE BASED CREDIT SYSTEM

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Microprocessor Programming

Duration:3 Hours **Max Marks:80**

I. Answer any FIVE of the following : **(5×2= 10 Marks)**

1. What are the two ways that BCD information is stored?
2. Name the two Index registers of 8086 microprocessor.
3. Give an example each for : (i) Binary Constant (ii) Hexadecimal Constant
4. What is the use of EQU maro definition directive?
5. Write the function of AAA.
6. What is the significance of CX register in LOOP instruction?

II. Answer any FIVE of the following : **(5×6= 30 Marks)**

7. What was special about Intel 8080 and 8086 Microprocessors? Explain.
8. Explain Carry flag and Interrupt flag.
9. With the syntax and example, explain the instruction i) DIV ii) MUL
10. What is the significance of ENDS and SEGMENT directives in 8086? Explain.
11. With the syntax and an example, explain the instruction i) SHL ii) ROL
12. Explain the following string instructions: i) STOS ii) CMPS

III. Answer any FOUR of the following : **(4×10= 40 Marks)**

13. Differentiate between (i) Memory mapped I/O and I/O mapped I/O.
    (ii) Zero operand instruction and Two operand instruction
14. With a neat diagram explain the internal block diagram of 8086 Microprocessor.
15. Explain the following directives: (i) PUBLIC (ii) LABEL (iii) INCLUDE
16. (a) Write an Assembly Language Program to count the logical 1's & 0's in a byte.
    (b) Write an Assembly Language Program to check if the entered string is a palindrome or not.
17. (a) Write a note on exception interrupts.
    (b) Explain the interrupts: (i) INT 02H (ii) INT 04H

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CHOICE BASED CREDIT SYSTEM

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Cloud Computing

Duration:3 Hours **Max Marks:80**

I. Answer any FIVE of the following : **(5×2= 10 Marks)**

1. What is silos?
2. What is a service level agreement?
3. What is network capacity?
4. What are porting applications?
5. How do you create a cloud storage system?
6. What are file storage devices? Give examples.

II. Answer any FIVE of the following : **(5×6= 30 Marks)**

7. Explain the unique characteristics of ideal cloud computing model.
8. Define and explain communication protocol.
9. Explain the Google cloud.
10. Write a note on i) Storage location and tenancy ii) Auditing and compliance
11. What is ACID principle? Explain.
12. List and explain the features of ESB.

III. Answer any FOUR of the following : **(4×10= 40 Marks)**

13. Explain NIST model with a neat diagram.
14. Explain Software as a service with its characteristics.
15. Explain security service boundary with a neat diagram.
16. a. Explain lifecycle management of the cloud.
    b. Write a note on FCAPS.
17. Explain business process modeling.

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CHOICE BASED CREDIT SYSTEM

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Data Mining

Duration:3 Hours **Max Marks:80**

I. Answer any FIVE of the following : **(5×2= 10 Marks)**

1. List any two steps involved in data cleaning.
2. State the disadvantage of using eager query processing.
3. What is support and confidence?
4. List the different types of data sets.
5. How are the starting values in the k-means method selected?
6. What is the role of distance between clusters in hierarchical methods?

II. Answer any FIVE of the following : **(5×6= 30 Marks)**

7. Explain the guidelines for Data Warehouse implementation.
8. Compare ROLAP and MOLAP.
9. Write a note on i) Association Analysis ii) Anomaly Detection
10. Explain the following preprocessing techniques i) Aggregation ii) Sampling
11. Write a note on text mining.
12. Write a note on web structure mining.

III. Answer any FOUR of the following : **(4×10= 40 Marks)**

13. a) Explain the characteristics of OLAP systems.
    b) Compare OLAP and OLTP systems.
14. Explain the different types of cluster analysis methods and discuss their features.
15. Explain divisive hierarchical method with the help of a figure.
16. Explain K-means method and the concept of fractionation while dealing with large databases.

17. Explain the construction of an FP tree for the following transaction data set.

TID	Items
1	{a,b}
2	{b,c,d}
3	{a,c,d,e}
4	{a,d,e}
5	{a,b,c}
6	{a,b,c,d}
7	{a}
8	{a,b,c}
9	{a,b,d}
10	{b,c,e}

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CHOICE BASED CREDIT SYSTEM

B.C.A. FIFTH SEMESTER DEGREE EXAMINATION JANUARY 2023

COMPUTER APPLICATIONS

Artificial Intelligence

Duration:3 Hours **Max Marks:80**

I. Answer any FIVE of the following : **(5×2= 10 Marks)**

1. Write the disadvantages of Depth-first search.
2. What is the difference between fully observable agent and partially observable environment with an example?
3. Define Heuristic knowledge.
4. Define Bidirectional Search.
5. Define Knowledge -Based Agents.
6. With an example define Forward Chaining.

II. Answer any FIVE of the following : **(5×6= 30 Marks)**

7. Explain the Search Algorithm in AI.
8. List out the disadvantages of propositional logic.
9. Write a note on Forward Chaining.
10. Explain the difference between following environments with example
    a) Fully observable vs partially observable b) Deterministic vs Stochastic.
11. What are the Advantages of Local Search Algorithms?
12. Explain Briefly about Adverserial Search.

III. Answer any FOUR of the following : **(4×10= 40 Marks)**

13. Compare the following:
    a) Goal based agents and model based agents
    b) Utility Based Agents and Learning Agents.
14. Explain forward chaining in first order logic with an example.
15. Explain briefly about Adverserial Search.
16. Explain knowledge Based Agents.
17. Briefly explain about the history of AI.

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