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GK—11—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS Pattern)

COMPUTER APPLICATION

Paper S6.CC.1

(Advance Networking Concepts)

(Friday, 21-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

1. Solve the following (any *five*) : 15

(*a*) What is a network ? Explain the benefits of networking.

(*b*) What is the use of a Network Interface Card ?

(*c*) Explain IP datagram.

(*d*) Explain UDP protocol.

(*e*) What is Email ? Explain.

P.T.O.

(*f*) What is a virtual LAN ?

(*g*) Explain WAN.

2. Solve the following (any *two*) : 10

(*a*) Explain the network architecture.

(*b*) What is connection oriented and connectionless services ?

(*c*) Explain the TCP/IP reference model in detail.

3. Solve the following (any *two*) : 10

(*a*) Explain the working of the router and switch.

(*b*) Explain 10Base2 and 10Base5 Ethernet technology.

(*c*) Explain wireless LAN.

4. Solve the following (any *two*) : 10

(*a*) What are different types of ICMP messages ?

(*b*) Explain DHCP.

(*c*) Explain routing protocol OSPF.

5. Solve the following (any *two*) : 10

(*a*) Explain the transport services primitives.

(*b*) Explain the TCP Frame format.

(*c*) What are the elements of transport protocols ?

6. Solve the following (any *two*) : 10

(*a*) Explain the cryptography.

(*b*) What is the client-server model ?

(*c*) Explain the concept of firewalls.

7. Solve the following (any *two*) : 10

(*a*) Explain VTP.

(*b*) Explain VLAN configuration.

(*c*) Explain trunking with ISL.

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GK—35—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS Pattern)

COMPUTER APPLICATION

(Data Mining and Data Warehousing)

(Saturday, 29-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain the concept of regression.

(*b*) Describe database/OLTP systems.

(*c*) Introduce data mining metrics.

(*d*) Write a note on classification.

P.T.O.

(*e*) Write a note on decision tree.

(*f*) What is point estimation ? Explain.

(*g*) Explain concept of outliers with example.

2. Attempt any *two* of the following : 10

(*a*) Explain knowledge discovery in databases.

(*b*) Explain time series analysis with example.

(*c*) Introduce social implication of data mining in detail.

3. Attempt any *two* of the following : 10

(*a*) Write a detailed note on information retrieval.

(*b*) Explain about decision support system in detail.

(*c*) Explain data warehousing in detail.

4. Attempt any *two* of the following : 10

(*a*) Explain concept of neural networks in detail.

(*b*) Explain Bayes theorem.

(*c*) Explain hypothesis testing.

5. Attempt any *two* of the following : 10

(*a*) Explain NN Supervised Learning.

(*b*) Explain Bayesian Classification.

(*c*) Explain K Nearest Neighbors algorithm.

6. Attempt any *two* of the following : 10

(*a*) Explain Agglomerative algorithm.

(*b*) Explain K-means clustering algorithms.

(*c*) Explain RBICH.

7. Attempt any *two* of the following : 10

(*a*) Explain Minimum Spanning Tree.

(*b*) Explain Apriori Algorithm.

(*c*) Explain Data Parallelism.

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GK—36—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS Pattern)

COMPUTER APPLICATION

Paper S6.CC.5

(Enterprise Resource Planning) (ERP)

(Saturday, 29-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain DSS in detail.

(*b*) Explain Data Management.

(*c*) What is ERP Market ?

P.T.O.

(*d*) What is Data Mining ?

(*e*) Explain BPR in short.

(*f*) What is JIT and Kanban ?

(*g*) Explain CTO in short.

2. Attempt any *two* of the following : 10

(*a*) Describe the evolution of ERP.

(*b*) Explain the introduction to ERP in detail.

(*c*) Explain advantages of ERP in detail.

3. Attempt any *two* of the following : 10

(*a*) Explain integrated management information.

(*b*) Explain the Business Modelling in detail.

(*c*) Explain Integrated Data Model.

4. Attempt any *two* of the following : 10

(*a*) What is EIS ? Explain.

(*b*) Explain Supply Chain Management.

(*c*) Explain Data Warehousing in detail.

5. Attempt any *two* of the following : 10

(*a*) What is CAD/CAM ? Explain in detail.

(*b*) Explain Manufacturing Resource Planning.

(*c*) Explain the MTO and MTS.

6. Attempt any *two* of the following : 10

(*a*) What is Quality Management ? Explain in detail.

(*b*) What is Materials Management ? Explain in detail.

(*c*) Explain concept of Finance in ERP Module.

7. Attempt any *two* of the following : 10

(*a*) Explain the benefits of ERP.

(*b*) What is QAD ? Explain in detail.

(*c*) Explain Oracle Corporation.

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GK—34—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS Pattern)

COMPUTER APPLICATION

(Mobile Communication)

(Saturday, 29-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Draw neat labelled diagram wherever necessary.

1. Solve the following (any *five*) : 15

(*a*) Give the applications of mobile communication.

(*b*) Explain the performance criteria of Cellular System.

(*c*) Explain the motivational factors for specialized MAC.

(*d*) Explain DECT.

P.T.O.

(*e*) Explain IEEE 802.11.

(*f*) Describe HIPERLAN.

(*g*) Explain Mobile IP.

2. Solve the following (any *two*) : 10

(*a*) Explain the Basic Cellular System of mobile communication.

(*b*) Explain the Operation of Cellular System.

(*c*) Explain working of Analog Cellular System.

3. Solve the following (any *two*) : 10

(*a*) Explain the historical development of wireless communication.

(*b*) Explain planning of a cellular system.

(*c*) Explain SDMA for mobile communication.

4. Solve the following (any *two*) : 10

(*a*) Explain the simplified reference model.

(*b*) Explain FDMA for mobile communication.

(*c*) Explain CDMA for mobile communication.

5. Solve the following (any *two*) : 10

(*a*) Give the differences between SDMA and FDMA.

(*b*) Differentiate between TDMA and CDMA.

(*c*) Write the comparative differences of Infrared and Radio Transmission.

6. Solve the following (any *two*) : 10

(*a*) Explain in detail GSM.

(*b*) Explain in detail TETRA.

(*c*) Explain working of Bluetooth technology in mobile communication.

7. Solve the following (any *two*) : 10

(*a*) Explain Dynamic Configuration protocol in detail.

(*b*) Explain mobile ad-hoc networks in detail.

(*c*) Explain your view of market for mobile communication.

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GK—10—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper BCA-602

(Python)

(Friday, 21-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain Python interpreter.

(*b*) Discuss comments in Python.

(*c*) Discuss sets in Python.

(*d*) How do you define class in Python ? Explain with example.

P.T.O.

(*e*) Discuss creating labels in Python.

(*f*) What is Inheritance ? Explain.

(*g*) Explain importing MySQL for Python.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Discuss features of Python.

(*b*) What is String ? Discuss string slicing in Python with suitable example.

(*c*) Explain the concept of Dictionaries in Python.

(*d*) Discuss creating info dialog box in Python.

(*e*) Write a Python program to find the number is positive, negative or zero.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Discuss I/O statements in Python with example.

(*b*) What is Exception ? Discuss exception handling in Python.

(*c*) Explain date time module in Python.

(*d*) Explain for loop with suitable programming example.

(*e*) Write a program in Python to find sum of first 10 natural numbers.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain if-elif ladder statement in Python with suitable programming example.

(*b*) Discuss the concept of List in Python.

(*c*) Explain packages in Python.

(*d*) Explain data types in Python.

(*e*) Write a Python program to find the numbers which are divisible by 7 and multiple of 5 within the given range.

5. Write short notes of any *three* of the following (**5** marks each) : 15

(*a*) Getting input from user in Python

(*b*) Creating Checkbutton

(*c*) TKinter module

(*d*) Passing query to MySQL

(*e*) Operators in Python.

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GK—02—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper BCA-601

(Software Engineering)

(Tuesday, 18-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) What is software engineering ? Explain.

(*b*) Explain the software Myths.

(*c*) Describe the activities of SDLC.

P.T.O.

(*d*) What is Decision Tree ? Explain with a example.

(*e*) What is Verification ? Explain.

(*f*) What is Software Testing ? Explain.

(*g*) Explain the advantages of Data Dictionary.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain Software Characteristics.

(*b*) Describe in detail the Evolving Role of Software.

(*c*) Explain the different applications of Software.

(*d*) Describe in detail Software Crisis.

(*e*) Explain the Software Evolution.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Describe the different activities of SDLC.

(*b*) Explain the Waterfall Model.

(*c*) Explain the Spiral Model.

(*d*) What is Prototyping ? Explain.

(*e*) Describe in detail a Generic Process Model.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain with an example the Decision Table.

(*b*) What is Data Flow Diagrams (DFD) ? Explain.

(*c*) Explain the elements of Data Dictionary.

(*d*) What is Black Box Testing ? Explain.

(*e*) Explain with example the concept of Unit Testing.

5. Write short notes of any *three* of the following (**5** marks each) : 15

(*a*) Concurrent Models

(*b*) Validation

(*c*) Pseudo Code

(*d*) Input and Output Design

(*e*) White-Box Testing.

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GK—17—2023

FACULTY OF SCIENCE AND TECHNOLOGY

BCA (Third Year) (Sixth Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER APPLICATION

Paper BCA-604-A

(Windows Programming)

(Tuesday, 25-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) What is .Net Technology ? Explain.

(*b*) Explain the concept of Intellisense.

(*c*) Explain TextBox control.

P.T.O.

(*d*) What is Array ? Explain.

(*e*) What is ADO.Net ? Explain.

(*f*) What are Indexers ? Explain.

(*g*) Describe Multicast Delegates in brief.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain .Net Framework in detail.

(*b*) Describe in brief Common Language Runtime (CLR).

(*c*) What are the important classes used in Windows Application ? Explain.

(*d*) Describe in brief Checkbox and Radio Button control.

(*e*) Explain Dialog boxes in detail.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain the concept of call by value with example.

(*b*) Describe Customs events in detail.

(*c*) What are the advantages of ADO.NET ? Explain.

(*d*) Explain the project types used in .Net.

(*e*) Explain combobox control with example.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Describe in brief out parameter with example.

(*b*) Explain in detail array list class.

(*c*) What are Delegates ? Explain with example.

(*d*) Explain concept of disconnected data access through Dataset Objects.

(*e*) Explain menus in windows application.

5. Write short notes of any *three* of the following (**5** marks each) : 15

(*a*) IDE components

(*b*) Label Control

(*c*) Jagged array

(*d*) Retrieving and Updating Data from Tables

(*e*) String Class.