Total No. of Questions : 5]

SEAT No. : ____

P-6819

[Total No. of Pages : 2

[6160]-31

S.Y. B.Sc. (Cyber & Digital Science)

CDS-231 : BASICS OF ETHICAL HACKING

(2020 Pattern) (Semester - III)

Time : 3 Hours] ***[Max. Marks : 70***

Instructions to the candidates :

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Draw diagram wherever necessary.***

Q1) Attempt any ten of the following : **[10 × 1 = 10]**

a) List down any four types of 802.11 attacks.

b) What is Brute Force Attack?

c) What is enumeration?

d) What is Reconnaissance?

e) Define SUDO.

f) Justify True/False "Security increases system function and ease of use decreases for user".

g) List down any two OWASP web application vulnerabilities.

h) What is WEP?

i) What is Proof-of-Concept?

j) State use of metasploit.

k) What is Cross site scripting?

1) Define Man-in-the-Middle Attack.

P.T.O.

Q2) Attempt any five of the following : **[5 × 2 = 10]**

a) What is CIA Triad? Explain with example.

b) Write a short note on ARP spoofing.

c) What is pivoting? Write down its types.

d) List down primary components of 802.11 Protocol.

e) What is subdomain enumeration?

f) What is Evil Twin Attack?

Q3) Attempt any four of the following : **[4 × 5 = 20]**

a) Differentiate between Bind Shell and Reverse Shell.

b) What is Trojan? What is the purpose of the Trojan?

c) Describe Life Cycle of Social Engineering.

d) Who is hacker? Explain different types of hackers.

e) What is OSINT? Explain Intelligent Cycle with diagram.

Q4) Answer any FOUR of the following : **[4 × 5 = 20]**

a) Differentiate between Phishing and Vishing.

b) What is ethical hacking? Explain different phases of ethical hacking.

c) What is OSINT? Differentiate between Passive and Active OSINT.

d) What is injection in ethical hacking? Explain SQL Injection and Cookie Injection.

e) What is Privilege Escalation? Explain its types.

Q5) Attempt any One of the following : **[1 × 10 = 10]**

a) List down the advantages and disadvantages of Ethical Hacking. **[5]**

b) What is foot printing? Explain its types. **[3]**

c) Explain SUID. **[2]**

OR

a) What are the different tools used for ethical hacking? **[5]**

b) Explain Nmap. **[3]**

c) What is the difference between HTTP? and HTTPS? **[2]**

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Total No. of Questions : 5]

SEAT No. :

P-6820

[Total No. of Pages : 3

[6160]-32

S.Y. B.Sc. (Cyber & Digital Science)

CDS-232 : DATABASE MANAGEMENT SYSTEMS

(2020 Pattern) (Semester - III)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Assume suitable data if necessary.***

Q1) **Attempt any TEN of the following :** **[10 × 1 = 10]**

a) Define Tuple.
b) Explain Outer Join Operation.
c) What is Normalisation?
d) Define Deadlock.
e) Define term Datamining.
f) Define Super Key.
g) What is transaction?
h) List any two applications of DBMS.
i) Define BCNF.
j) Define Domain.
k) Define Database System.
l) Justify true or false - “Primary Key cannot be Null”.

Q2) **Attempt any FIVE of the following :** **[5 × 2 = 10]**

a) Explain Inner Join Operation with example.
b) What is Multimedia Database.
c) List commands in DDL.
d) Explain Recovery techniques.
e) What is Relational database? Give example.
f) Define Database schema with example.

P.T.O.

Q3) **Attempt any FOUR of the following :** **[4 × 5 = 20]**

a) Explain types of Normalisation in detail.

b) State and explain different types of relationships that can exist in an entity set in an ER-Model.

c) Consider following entities & relationships.

Game (g-no. g-name, No-of-players, name-caption).

Player (p-no, p-name)

Games & Players are related with many-to-many relationships. Create Relational database for above & solve the queries in SQL.

i) List the name of all player playing "basketball" & "cricket"

ii) List gamewise list of all players.

iii) Delete names of players playing "cricket".

d) What is attribute? Explain different types of attributes.

e) Consider the following relation :

R (A, B, C, D, E) and the set of FDs defined on R as :

$F = \{A \rightarrow B, CD \rightarrow E, A \rightarrow C, B \rightarrow D, E \rightarrow A\}$.

Compute the closure of F that is F^+.

Q4) **Attempt any FOUR of the following :** **[4 × 5 = 20]**

a) What is use of check constraint? Give the syntax of check constraint in a column defination.

b) Consider the following relations

Wholesaler (w-no, w-name, address, city)

Product (p-no, p-name). Create a relationship database & solve following queries in SQL. Wholesaler and Product are related with many-to-many relationship.

i) List the wholesaler of product "Keyboard".

ii) List no. of wholesalers from "Pune" city.

iii) Delete records of whole salers where the product name is "Mouse".

c) Explain Distributed database in detail.

d) Consider the following entities & relationships and solve the queries.

Property (P.no, DESC, area, rate)

Owner (owner-name, addr. phno).

Relation between owner & property is one to many.

i) Display property owned by Mrs. Patil.

ii) Display all properties with area = "chinchwad"

iii) Display all property whose Rate > 1CR.

e) Explain ACID properties of transaction.

Q5) **Attempt any one of the following (A or B) :** **[1 × 10 = 10]**

a) i) Explain difference between Generalization and specialization. **[5]**

ii) Explain Dense Index and Sparse Index. **[3]**

iii) Explain need of concurrency control. **[2]**

OR

b) i) Explain following aggregate functions in detail **[5]**

A) SUM()

B) MIN()

ii) Explain Database querying. **[3]**

iii) Explain any two datatypes in SQL. **[2]**



Total No. of Questions : 5]

SEAT No. : ____

P-7859

[Total No. of Pages : 2

[6160]-33
S.Y.B.Sc. (Cyber & Digital Science)
CDS-233 : DATA STRUCTURE USING PYTHON
(2020 Pattern) (Semester - III)

Time : 3 Hours] ***[Max. Marks : 70***

Instructions to the candidates :

1) ***All questions are compulsory.***
2) ***Figures to the right indicate full marks.***
3) ***Assume suitable data if necessary.***

Q1) **Attempt any EIGHT of the following :** **[8 × 2 = 16]**

a) What is ADT?

b) How to measure performance of an algorithm?

c) List out any two asymptotic notations with syntax.

d) What is Graph? Give its types.

e) What is data structure?

f) List the types of Queue.

g) What is balance factor? How to calculate it?

h) What is complete binary tree?

i) What are ancestors of a Node in a tree?

j) What are the applications of stack?

Q2) **Attempt any FOUR of the following :** **[4 × 4 = 16]**

a) Differentiate between stack and queue.

b) Explain Binary search method with an example.

c) Explain any two Graph representation techniques in brief.

d) Explain postfix expression evaluation algorithm with an example.

e) Sort the following data by using insertion sort technique:
95, 1, 45, 89,155, 201, 33, 81.

P.T.O.

Q3) **Attempt any FOUR of the following :** **[4 × 4 = 16]**

a) Write a function to add a node at the beginning of singly linked list.

b) Write a python program for the dynamic implementation of Queue.

c) Write a python program to reverse a string by using stack.

d) Write a python program for the implementation of selection sort technique.

e) Write a python program to create and display circular singly linked list.

Q4) **Attempt any FOUR of the following :** **[4 × 4 = 16]**

a) Explain BFS with an example.

b) Construct binary search tree for the following data:
MON, FRI, THUR, SUN, WED, TUE, SAT.

c) Explain the Node structure of doubly linked list.

d) Explain Quick sort technique with an example.

e) Write a function to delete last Node from singly linked list.

Q5) **Attempt any TWO of the following :** **[2 × 3 = 6]**

a) Explain tree traversing technique with an example.

b) Write a function to add node at given position in doubly linked list.

c) Write an algorithm to convert given infix expression to postfix expression.



Total No. of Questions : 3]

SEAT No. :

[Total No. of Pages : 2

P-8779

[6160]-34
S.Y. B.Sc. (Cyber & Digital Science)
MARATHI (मराठी)
CDS-237 : उपयोजित मराठी (AECC-2A)
(2020 Pattern) (CBCS) (Semester - III) (23331)

वेळ : 2 तास] *[एकूण गुण : 35*

सूचना : *1)* *सर्व प्रश्न सोडविणे आवश्यक आहेत.*
2) *उजवीकडील अंक पूर्ण गुण दर्शवितात.*

प्रश्न 1) अ) खालीलपैकी कोणत्याही पाच प्रश्नांची उत्तरे 20 शब्दांत लिहा. **[5]**

i) नवसमाजमाध्यमांचे कोणतेही दोन फायदे सांगा.

ii) स्वत:चे मत व्यक्त करण्यासाठी इंटरनेटवरील प्रभावी समाजमाध्यम कोणते?

iii) दूरदर्शन या प्रसारमाध्यमाचे कोणतेही दोन विशेष लिहा.

iv) साहित्याच्या भाषेची दोन वैशिष्ट्ये सांगा.

v) कार्यालयीन भाषा म्हणजे काय?

vi) भाषा म्हणजे काय?

vii) सर्वसामान्यांसाठी सर्वदूर पोहचलेले प्रभावी श्राव्य माध्यम कोणते?

ब) खालीलपैकी कोणत्याही दोन प्रश्नांची उत्तरे लिहा. **[10]**

i) वैद्यकीय रजा मिळणेबाबत आपल्या शाळेतील मुख्याध्यापकांकडे अर्जलेखन करा.

ii) कृषीसहायक या पदासाठी नोकरी मिळण्यासाठी स्व–परिचय लिहा.

iii) संगणकीय अर्जलेखनात युनिकोडची आवश्यकता स्पष्ट करा.

P.T.O.

प्रश्न 2) खालीलपैकी कोणत्याही दोन प्रश्नांची उत्तरे लिहा. **[15]**

अ) 'ध्वनीप्रदूषण' या विषयावर वर्तमानपत्रासाठी लेख लिहा.

ब) 'यंत्रमानव' या विषयावर आकाशवाणी साठी भाषण तयार करा.

क) 'विषाणुजन्य रोग' या विषयावर दूरदर्शनसाठी माहितीवर तयार करा.

प्रश्न 3) खालीलपैकी कोणत्याही एका प्रश्नाचे उत्तर लिहा. **[5]**

अ) 'फास्टफुड' या विषयावर ब्लॉगलेखन करा.

ब) 'सेंद्रिय शेती' या विषयावर फेसबुकसाठी लेखन करा.

Total No. of Questions : 3]

SEAT No. :

P-8780

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[6160]-35

S.Y. B.Sc. (Cyber & Digital Science)

ENGLISH

CDS-237 : Ability Enhancement Compulsory (AECC)

(2020 Pattern) (Semester - III)

Time : 2 Hours] *[Max. Marks : 35*

Instructions to the candidates :

1) ***All the questions are compulsory.***
2) ***Figures to the right indicates full marks.***

Q1) Attempt any one of the following in about 150-200 words : **[15]**

a) Explain the poem "La Belle Dame Sans Merci" as a ballad.

b) Describe sambu's reaction at the end of the story "A Shadow".

Q2) Attempt any two of the following in about 50-80 words : **[10]**

a) Introduce your new friend to your parents write a dialogues for this situation.

b) As a student of science discipline, describe your daily routine in a college.

c) As a Project Manager, refuse permission of leave to your team member. Develope a conversation.

Q3) Attempt any two of the following in about 50-80 words : **[10]**

a) Write a job application letter for the post of a "Content Writer".

b) Prepare five Power Point Presentation slides on the topic "E-Waste management".

c) Write your resume for the post of "project Assistant".

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