

SAMPLE PAPER

SESSION ENDING EXAMINATION – [2018-19]

INFORMATICS PRACTICES (065)

CLASS – XI

TIME: 3 HRS.

MAXIMUM MARKS: 70

Instructions: All questions are compulsory. Programming Language : Python

1.	PROGRAMMING AND COMPUTATIONAL THINKING: BASIC COMPUTER ORGANISATION	10
a)	What are the functional components of a mobile system? Explain with a block diagram.	[2+1]
b)	Expand the following abbreviations : EEPROM, DRAM, ALU, SoC	[2]
c)	What do you mean by Tracks and Sectors in the context of Hard Disks?	[2]
d)	Fill in the blanks: (i) 1 Giga Byte = _____ Kilo Byte (ii) _____ bits = 1 Nibble	[1]
e)	Differentiate between : (i) CU and ALU (ii) APU and GPU	[2]
2.	PROGRAMMING AND COMPUTATIONAL THINKING: BASICS OF PYTHON PROGRAMMING	10
a)	Name two Python Software Libraries and their uses.	[2]
b)	Write any two features of Python.	[2]
c)	Differentiate between tuple and list.	[1]
d)	Cite examples for each type of comments.	[1]
e)	Re-write the following program code after removing error if any: Num = input("Enter a number : ") Sqr = Num * Num Print (Sqr)	[1]
f)	Find output of the following program code: Name = "Kendriya" Count = '8' print("Result=",Name+Count)	[1]
g)	Identify the data types of the following values: i) "215" ii) 3j iii) (48.2, 4.1, 2.0) iv) [8, 200, 47, 6]	[2]
3.	PROGRAMMING AND COMPUTATIONAL THINKING: BASICS OF PYTHON PROGRAMMING	10
a)	Write a python program to take input of three of 3 angles and display whether they form a triangle or not.	[2]
b)	Re-write the following code using while loop: for a in (2,7,2): for b in (1,a): print(b, end= '\$') print()	[1]
c)	Write a program to print the following pattern * * * *** ****	[2]
d)	Find the output of the following program code: aDict = { 'Bhavna':1, "Richard":2, "Firoza":10, "Arshnoor":20 }	[1]

	<pre>temp = "" for key in aDict: if temp < key: temp = key print (temp)</pre>																									
e)	Draw a flowchart for solving the following problem: Find the product of all the even natural numbers upto N where N is a positive integer.	[2]																								
f)	Prepare a decision tree for the following table of rules:	[2]																								
	<table border="1"> <thead> <tr> <th>MARKS</th> <th>DIVISION</th> </tr> </thead> <tbody> <tr> <td>>=60</td> <td>FIRST</td> </tr> <tr> <td>50-60</td> <td>SECOND</td> </tr> <tr> <td>40-50</td> <td>THIRD</td> </tr> <tr> <td><40</td> <td>FAIL</td> </tr> </tbody> </table>	MARKS	DIVISION	>=60	FIRST	50-60	SECOND	40-50	THIRD	<40	FAIL															
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4.	DATA HANDLING – PART1	10																								
a)	Name the standard missing data marker used in pandas with suitable example.	[2]																								
b)	Differentiate dataframe and series with the help of suitable example.	[2]																								
c)	Write a python panda program to create series of 10 even numbers.	[2]																								
d)	Find the output for following code: (i) >>>df=pd.DataFrame({'animal':['alligator', 'bee', 'falcon', 'lion', 'monkey', 'parrot', 'shark', 'whale', 'zebra']}) >>>df.head(3) >>>df.tail(3) ii) import pandas as pd data =[['Alex' , 10],[‘bob’,12],[‘Clarke’,13]] df=pd.DataFrame(data,columns=['Name','age']) print (df)	[2+2]																								
5.	DATA HANDLING – PART2	[10]																								
	Find the largest and smallest numbers in a list.	2																								
	What is the purpose pass statement in python?	2																								
	How will you create a dictionary in python?	2																								
	What is the purpose of following operators **,//, is, not in	2																								
	Write python program to find factorial of a number	2																								
6.	DATA MANAGEMENT	10																								
a)	State the use of foreign key in relational database.	[1]																								
b)	Write down SQL statement for creating table LIBRARY having following attributes: i. BOOK_ID – an integer, primary key of the table ii. BOOK_TITLE –a string iii. AUTHOR—a string iv. QTY – an integer v. PRICE – a real number	[2]																								
c)	Find the output of the queries based on the following relation STUDENT:	[1]																								
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	<p>i) SELECT NAME, GRADE FROM STUDENT WHERE MARKS BETWEEN 40 AND 75; ii) SELECT * FROM STUDENT WHERE GRADE = 'A+';</p>																																																																			
d)	<p>Write SQL commands for the following table MOVIE:</p> <table border="1"> <thead> <tr> <th>NO</th> <th>TITLE</th> <th>TYPE</th> <th>RATING</th> <th>SEATS_LEFT</th> <th>PRICE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SANJU</td> <td>BIOPIC</td> <td>A</td> <td>4</td> <td>250</td> </tr> <tr> <td>2</td> <td>RAID</td> <td>ACTION</td> <td>B</td> <td>2</td> <td>175</td> </tr> <tr> <td>3</td> <td>RACE3</td> <td>ACTION</td> <td>C</td> <td>7</td> <td>245</td> </tr> <tr> <td>4</td> <td>HAAMI</td> <td>COMEDY</td> <td>A</td> <td>3</td> <td>130</td> </tr> <tr> <td>5</td> <td>BAHUBALI</td> <td>DRAMA</td> <td>A</td> <td>3</td> <td>300</td> </tr> <tr> <td>6</td> <td>AVENGER</td> <td>ACTION</td> <td>A</td> <td>2</td> <td>320</td> </tr> <tr> <td>7</td> <td>PARMANU</td> <td>THRILLER</td> <td>B</td> <td>2</td> <td>120</td> </tr> <tr> <td>8</td> <td>INCREDIBLES</td> <td>ANIMATION</td> <td>B</td> <td>2</td> <td>350</td> </tr> <tr> <td>9</td> <td>HITCHKI</td> <td>SOCIAL</td> <td>C</td> <td>1</td> <td>90</td> </tr> <tr> <td>10</td> <td>TITANIC</td> <td>ROMANTIC</td> <td>A</td> <td>5</td> <td>280</td> </tr> </tbody> </table> <p>i) Display the list of all movies with price over 200 rupees and sorted by rating. ii) Display a report listing the movie number, current price, updated price for each movie in the above table if their price is increased by 15%. iii) Display the number of seats left for action movies. iv) Delete all the movies from the table with rating 'C'.</p>	NO	TITLE	TYPE	RATING	SEATS_LEFT	PRICE	1	SANJU	BIOPIC	A	4	250	2	RAID	ACTION	B	2	175	3	RACE3	ACTION	C	7	245	4	HAAMI	COMEDY	A	3	130	5	BAHUBALI	DRAMA	A	3	300	6	AVENGER	ACTION	A	2	320	7	PARMANU	THRILLER	B	2	120	8	INCREDIBLES	ANIMATION	B	2	350	9	HITCHKI	SOCIAL	C	1	90	10	TITANIC	ROMANTIC	A	5	280	[4]
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e)	A table FLIGHT has 4 rows and 3 columns and another table AIRHOSTESS has 3 rows and 4 columns. What will be the degree and cardinality of the resultant table if we obtain Cartesian product of these two tables?	[1]																																																																		
f)	State the advantages of using index in database.	[1]																																																																		
7.	SOCIETY, LAW AND ETHICS	10																																																																		
a)	<p>Write name of terms for the following descriptions:</p> <p>(i) The act of online harassment of someone by using online tools such as Internet , email , instant messages , chat rooms or social networking sites. (ii) An act of stealing someone's personal information such as name, login details etc. and then posting as if that person is online.</p>	[1+1]																																																																		
b)	Differentiate between adware and malware .	[1]																																																																		
c)	Ravi is trying to obtain sensitive information such as usernames, passwords, and credit card details (and money), electronically of his friend Ramesh ,with malicious purpose. The action which Ravi is doing is referred as?	[1]																																																																		
d)	What do you mean by eavesdropping?	[1]																																																																		
e)	<p>Nivedita has recently shifted to a new city and a new school. She does not know many people in her new city and school. But every time she goes online she finds someone chasing her online.</p> <p>a. What is this happening to Nivedita? b. What action should she take to stop them?</p>	[1]																																																																		
f)	What are cookies?	[1]																																																																		
g)	Write name two common social networking sites.	[1]																																																																		
h)	Write any two measures that one should take to avoid and maintain confidentiality of personal information.	[1]																																																																		