

--	--	--	--	--	--

केंद्रीय विद्यालय संगठन ,जयपुर संभाग
KENDRIYA VIDYALAYA SANGATHAN, JAIPUR REGION
PRACTICE PAPER-I

कक्षा/ CLASS :XII

विषय /SUB : कंप्यूटर विज्ञान (83) /COMPUTER SCIENCE (83)

अधिकतम अवधि / Time Allowed :03 Hours

अधिकतम अंक Maximum Marks : 70

सामान्य निर्देश / General Instructions

- This question paper contains 37 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 3 questions (29 to 31). Each question carries 3 Marks.
- Section D consists of 4 questions (32 to 35). Each question carries 4 Marks.
- Section E consists of 2 questions (36 to 37). Each question carries 5 Marks.
- All programming questions are to be answered using Python Language only.
- In the case of MCQ, the text of the correct answer should also be written.

Q No	Question	Marks
SECTION A		
1	State True or False: "In a Python loops can also have else clause"	1
2	What is the output of the following code? Text = 'Happy hour12-3' L= " " for i in range(len(Text)): if Text[i].isupper(): L=L+Text[i].lower() elif Text[i].islower(): L=L+Text[i].upper() elif Text[i].isdigit(): L=L+(Text[i]*2) else: L=L+'#' print(L) (A)hAPPY#HOUR1122#33 (B)Happy#hOUR12#3 (C)hAPPY#HOUR112233 (D)Happy Hour11 22 33 #	
3	Consider the given expression: 17%5==2 and 4%2>0 or 15//2==7.5 Which of the following will be correct output if the given expression is evaluated? (a)True (b) False (c)None (d)Null	1
4	Select the correct output of the code: s = "Question paper 2022-23"	1

	Which of the following statements should be given in the blank for # Missing statement, if the output produced is 70? a. global a c. global b b. global b=70 d. global a=70	
13	Which of the following commands is not a DDL command? 1 (a) DROP (b) DELETE (c) CREATE (d) ALTER	1
14	Which of the following keywords will you use in the following query to display the unique values of the column dept_name? SELECT ----- dept_name FROM Company; (a) All (b) key (c) Distinct (d) Name	1
15	What is the maximum width of numeric value in data type int of MySQL. a. 10 digits b. 11 digits c. 9 digits d. 12 digits	1
16	SUM(), AVG() and COUNT() are examples of _____ functions. 1 a) single row functions b) aggregate functions c) math function d) date function	1
17	_____ is a standard mail protocol used to receive emails from a remote server to a local email client. (a) SMTP (b) POP (c) HTTP (d) FTP	1
18	Pawan wants to transfer files and photos from laptop to his mobile. He uses Bluetooth Technology to connect two devices. Which type of network will be formed in this case. a. PAN b. LAN c. MAN d. WAN	1
19	Fill in the blank: In case of ___ switching, message is send in stored and forward manner from sender to receiver.	1
	Q20 and 21 are ASSERTION AND REASONING based questions. Mark the correct choice as (a) Both A and R are true and R is the correct explanation for A (b) Both A and R are true and R is not the correct explanation for A (c) A is True but R is False (d) A is false but R is True	
20	Assertion (A): The default argument values in Python functions can be mutable types like lists and dictionaries. Reason (R): Mutable default arguments retain their state across function calls, which can lead to unexpected behaviour.	1
21	Assertion (A): The HAVING clause in MySQL is used to filter records after the GROUP BY operation. Reason (R): The WHERE clause filters records before grouping, while HAVING allows for conditions on aggregated data.	1
	<u>SECTION</u> <u>B</u>	
22	Write difference between mutable and immutable property, Explain it with its example.	2

SECTION C																																
29	<p>Write a user – defined function countH() in Python that displays the number of lines starting with 'H' in the file 'Para.txt'. Example , if the file contains: Whose woods these are I think I know. His house is in the village though; He will not see me stopping here To watch his woods fill up with snow. Output: The line count should be 2.</p> <p style="text-align: center;">OR</p> <p>Write a function country() in Python to read the text file "DATA.TXT" and count the number of times "my" occurs in the file. For example , if the file "DATA.TXT" contains – "This is my website. I have displayed my preference in the CHOICE section." The country() function should display the output as: "my occurs 2 times"</p>	3																														
30	<p>Aalam has created a list, L containing marks of 10 students. Write a program, with separate user defined function to perform the following operation: 3</p> <p>PUSH()- Traverse the content of the List, L and push all the odd marks into the stack,S.</p> <p>POP()- Pop and display the content of the stack.</p> <p>Example: If the content of the list is as follows: L=[87, 98, 65, 21, 54, 78, 59, 64, 32, 49] Then the output of the code should be: 49 59 21 65 87</p>	3																														
31	<p>Consider the table ACTIVITY given below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ACODE</th> <th>ACTIVITYNAME</th> <th>PARTICIPANTS NUM</th> <th>PRIZEMONEY</th> <th>SCHEDULED TE</th> </tr> </thead> <tbody> <tr> <td>1001</td> <td>Relay Name</td> <td>16</td> <td>10000</td> <td>2004-01-23</td> </tr> <tr> <td>1002</td> <td>High Jump</td> <td>10</td> <td>12000</td> <td>2003-12-12</td> </tr> <tr> <td>1003</td> <td>Shot Put</td> <td>12</td> <td>8000</td> <td>2004-02-14</td> </tr> <tr> <td>1005</td> <td>Long Jump</td> <td>12</td> <td>9000</td> <td>2004-01-01</td> </tr> <tr> <td>1008</td> <td>Discuss Throw</td> <td>10</td> <td>15000</td> <td>2004-03-19</td> </tr> </tbody> </table> <p>Based on the given table, write SQL queries for the following:</p> <ul style="list-style-type: none"> (i) Display the details of all activities in which prize money is more than 9000 (including 9000) (ii) Increase the prize money by 5% of those activities whose schedule date is after 1st of March 2023. (iii) Delete the record of activity where participants are less than 12. 	ACODE	ACTIVITYNAME	PARTICIPANTS NUM	PRIZEMONEY	SCHEDULED TE	1001	Relay Name	16	10000	2004-01-23	1002	High Jump	10	12000	2003-12-12	1003	Shot Put	12	8000	2004-02-14	1005	Long Jump	12	9000	2004-01-01	1008	Discuss Throw	10	15000	2004-03-19	3
ACODE	ACTIVITYNAME	PARTICIPANTS NUM	PRIZEMONEY	SCHEDULED TE																												
1001	Relay Name	16	10000	2004-01-23																												
1002	High Jump	10	12000	2003-12-12																												
1003	Shot Put	12	8000	2004-02-14																												
1005	Long Jump	12	9000	2004-01-01																												
1008	Discuss Throw	10	15000	2004-03-19																												
SECTION D																																
32	You have learnt how to use math module in Class XI. Write a code where you use the wrong number of arguments for a method (say sqrt() or pow()). Use the exception handling process to catch the ValueError exception.	4																														
33	Write a python program to create a csv file dvd.csv and write 10 records in it Dvidid, dvd name, qty, price. Display those dvd details whose dvd price is more than 25.	4																														

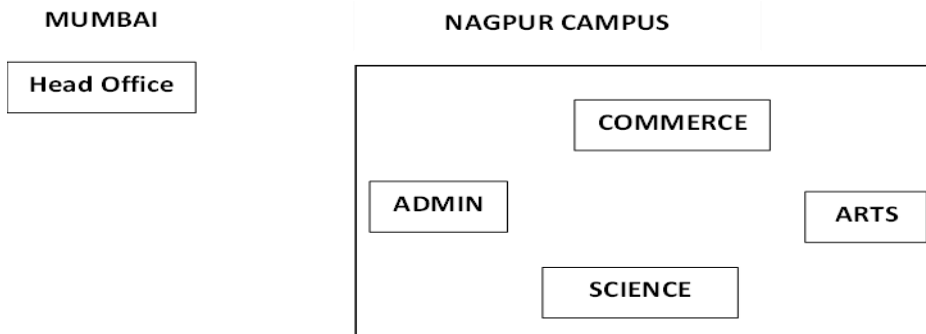
34	<p>Consider the following tables and answer the questions a and b:</p> <p>Table: Garment</p> <table border="1" data-bbox="247 145 1316 436"> <thead> <tr> <th>GCode</th> <th>GName</th> <th>Rate</th> <th>Qty</th> <th>CCode</th> </tr> </thead> <tbody> <tr> <td>G101</td> <td>Saree</td> <td>1250</td> <td>100</td> <td>C03</td> </tr> <tr> <td>G102</td> <td>Lehanga</td> <td>2000</td> <td>100</td> <td>C02</td> </tr> <tr> <td>G103</td> <td>Plazzo</td> <td>750</td> <td>105</td> <td>C02</td> </tr> <tr> <td>G104</td> <td>Suit</td> <td>2000</td> <td>250</td> <td>C01</td> </tr> <tr> <td>G105</td> <td>Patiala</td> <td>1850</td> <td>105</td> <td>C01</td> </tr> </tbody> </table> <p>Table: Cloth</p> <table border="1" data-bbox="247 481 965 683"> <thead> <tr> <th>CCode</th> <th>CName</th> </tr> </thead> <tbody> <tr> <td>C01</td> <td>Polyester</td> </tr> <tr> <td>C02</td> <td>Cotton</td> </tr> <tr> <td>C03</td> <td>Silk</td> </tr> <tr> <td>C04</td> <td>Cotton- Polyester</td> </tr> </tbody> </table> <p>Write SQL queries for the following:</p> <ol style="list-style-type: none"> Display unique quantities of garments. Display sum of quantities for each CCODE whose numbers of records are more than 1. Display GNAME, CNAME, RATE whose quantity is more than 100. Display average rate of garment whose rate ranges from 1000 to 2000 (both values included) 	GCode	GName	Rate	Qty	CCode	G101	Saree	1250	100	C03	G102	Lehanga	2000	100	C02	G103	Plazzo	750	105	C02	G104	Suit	2000	250	C01	G105	Patiala	1850	105	C01	CCode	CName	C01	Polyester	C02	Cotton	C03	Silk	C04	Cotton- Polyester	1*4=4
GCode	GName	Rate	Qty	CCode																																						
G101	Saree	1250	100	C03																																						
G102	Lehanga	2000	100	C02																																						
G103	Plazzo	750	105	C02																																						
G104	Suit	2000	250	C01																																						
G105	Patiala	1850	105	C01																																						
CCode	CName																																									
C01	Polyester																																									
C02	Cotton																																									
C03	Silk																																									
C04	Cotton- Polyester																																									
35	<p>Kishan wants to write a program in Python to insert the following record in the table named Flight in MYSQL database KV:</p> <ul style="list-style-type: none"> Fno (Flight number)-varchar Source (source)- varchar Destination (Destination)-varchar Fare (fare)-integer <p>Note the following to establish connectivity between Python and MySQL:</p> <ul style="list-style-type: none"> User name-root Password – KVS@123 Host-localhost <p>The values of fields Fno,Source,Destination and Fare has to be accepted from the user. Help Kishan to write the program in Python.</p> <p style="text-align: center;">OR</p> <p>Suman has created a table named Game in MYSQL database Sports:</p> <ul style="list-style-type: none"> GID (Game ID)-integer Gname(Game name)-varchar No_of_Participants (number of participants)- integer <p>Note the following to establish connectivity between Python and MySQL:</p> <ul style="list-style-type: none"> Username: root Password: KVS@123 Host: localhost <p>Suman, now wants to display the records of students whose number of participants are more than 10, Help Suman to write the program in Python.</p>	4																																								
SECTION-E																																										
36	<p>Write a program in Python that defines and calls the following functions: Insert() – To accept details of clock from the user and stores it in a csv file 'watch.csv'. Each record of clock contains following fields – ClockID,</p>	5																																								

ClockName, YearofManf, Price. Function takes details of all clocks and stores them in file in one go.
Delete() – To accept a ClockID and removes the record with given ClockID from the file 'watch.csv'. If ClockID not found then it should show a relevant message. Before removing the record it should print the record getting removed.

37

Superior Education Society is an educational Organization. It is planning to setup its Campus at Nagpur with its head office at Mumbai. The Nagpur Campus has 4 main buildings – ADMIN, COMMERCE, ARTS and SCIENCE. You as a network expert have to suggest the best network related solutions for their problems raised in a to e, keeping in mind the distances between the buildings and other given parameters:

1*5=5



Shortest distances between various buildings:

- ADMIN to COMMERCE - 55 m
- ADMIN to ARTS - 90 m
- ADMIN to SCIENCE - 50 m
- COMERCE to ARTS - 55 m
- COMMERCE to SCIENCE - 50
- ARTS to SCIENCE - 45 m

MUMBAI Head Office to NAGPUR Campus – 850 KM

Number of Computers installed at various buildings are as follows:

- ADMIN – 110
- COMMERCE – 75
- ARTS – 40
- SCIENCE – 12

MUMBAI Head Office – 20

- a. Suggest the most appropriate location of the server inside the Nagpur Campus to get the best connectivity for maximum number of computers. Justify your answer.
- b. Suggest and draw the cable layout to efficiently connect various buildings within the Nagpur campus for connecting the computers.
- c. Which of the following will you suggest to establish the online face-to-face communication between the people in the ADMIN office of Nagpur Campus and Mumbai Head office?
 - i. Cable TV
 - ii. E-mail
 - iii. Video Conferencing
 - iv. Text Chat
- d. Suggest the placement of following devices with appropriate reasons:
 - i. Switch/Hub
 - ii. Repeater
- e. Suggest the device/software to be installed in Nagpur Campus to take care of data security and unauthorized access.

OR

Which network type is formed between Nagpur office to Mumbai head office.

