## SAMPLE QUESTION PAPER COMPUTER SCIENCE (083) – CLASS XII

Maximum Marks: 35 Time: 2 Hours

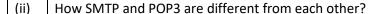
## **General Instructions**

- The question paper is divided into 3 sections A, B and C
- Section A, consists of 7 questions (1-7). Each question carries 2 marks.
- Section B, consists of 3 questions (8-10). Each question carries 3 marks.
- Section C, consists of 3 questions (11-13). Each question carries 4 marks.
- Internal choices have been given for question numbers 7, 8, 12.

		Section – A											
0.50	Part	Each question carries 2 marks											
Q.no	No.	Question											
1.		Identify the correction options out of the following which are implemented by Stack											
		a. Undo operations											
		b. Printer Spooling											
		c. Function calling d. Expression solving											
		e. Keyboard buffering f. Reverse of String											
2.	(i) Expand the following:												
	(1)	SMTP, UI	_					1					
	(ii)			hing all packet	s must be of	same size?		1					
3.		Difference	ce between P	rimary Key and	d unique with	h respect to datak	oase.	2					
4.					-		ursor object (that	2					
		has been	already crea	ted) by giving	the following	g statement.							
		Records = cursor.fetchmany(3)											
		<ul><li>(a) How many records will be returned by fetchmany() method?</li><li>(b) What will be the datatype of Records object after the given command is executed?</li></ul>											
5		Write the output of queries(a) to (d) based on the table, PERIPHERALS given below											
3		Table: EMPLOYEE											
		F_ID FNAME LNAME DEPT HIRE_DATE SALARY					SALARY	2					
		102 AMIT MISHRA IT 1998-10-12				12000							
							8000						
		104 RAKSHIT SONI SALES 2001-05-18 16000					16000						
		105 RASHMI MALHOTRA ADMIN 2004-09-11 13000					13000						
		106 SULEKHA SINHA ADMIN 2006-06-05 11000											
		107 RAVINA SIROHI IT 2007-10-22 13000											
					EE group by DEPT								
	<ul><li>(b) Select Min(HIRE_DATE) from EMPLOYEE where SALARY&gt;=10000;</li><li>(c) SELECT FNAME, SALARY*12 ANN SAL from EMPLOYEE WHERE PID LIKE</li></ul>												
		ERE PID LIKE											
			SN%';	DEDT 6 51	4DLOVEE!	omo CALADY: 420	100 and an let :						
		(d) SELECT FNAME, DEPT from EMPLOYEE where SALARY>=12000 order by HIRE DATE desc;											
6	(i)	Which command is used to open database to work?											
U	(i) (ii)			· · · · · · · · · · · · · · · · · · ·	Give one point between WHERE and HAVING clause 1								

	Table: COMPANY										
CID NAM	E CITY	PRODUCT NAME		PRICE							
111 SON	Y DELHI	TV		89000							
222 NOKI	A MUMBAI	MOBILE		3000							
333 ONID	DA DELHI	TV		15000							
444 SON	Y MUMBAI	MOBILE		23000							
555 SAM	SUNG CHENNA	I MOBILE	ILE 62								
666 DELL	. DELHI	LAPTOP		55000							
(b) Which f	the Degree and Care field should be made the candidate key(ser the given table	the Primary K	ey? Justify		er						
CUSTID	NAME	QTY	CID								
101	Rohan Sharma	20	222								
102	Deepak Kumar	10	10 666								
103	Mohan Kumar	5	111								
104	Sahil Bansal	3	333								
105	Neha Soni	7	444								
Which field will be considered as the foreign key if the tables COMPANY and CUSTOMER are related in database?											
	Each que	Section – B stion carries 3	marks								
Each question carries 3 marks  Sanjana has created a dictionary containing ProdName and Price as the Key – Value pair of 8 Products. Write a program with separate user defined function to perform the following operations:  • Push the Keys (ProdName) of the dictionary into a Stack, where corresponding Price range is 5000-25000 (inclusive of both values).  • Pop and display the content of Stack. For example if the content of Dictionary is as follows: Product={"TV":20000,"Mobile":19999,"Camera":4999,"Printer":5999, "Mouse":499,"Keyboard":600,"AC":45000}  The output of the program should be: AC Printer Mobile TV  OR  Mohit has a list of 10 integers. You need to help him create a program with separate user defined functions to perform the following operations based on this list.  • Traverse the content of the list and push only odd numbers in Stack  • Pop and display the content of the stack For example:											

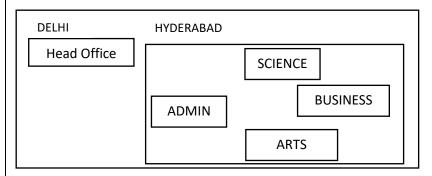
		If the sample Content of the list is as follows:  Num = [17, 25, 32, 65, 96, 56, 95, 105,33,27]  Sample Output of the code should be:  27 33 105 95 65 25 17													
9.	(i)	A table EMP has been created in a database by Arun with the following fields: EMPNO, EMPNAME, DEPT, SALARY, COMM Write SQL command to drop the column COMM from the table EMP									1				
	(ii)	Write SQL command to drop the column COMM from the table EMP.  Differentiate between DDL and DML. Identify DDL and DML commands from the following:  (UPDATE, ALTER, DROP, INSERT)									2				
10		Priyanka has to create a database named COACHING in MYSQL. She now needs to create a name named TRAINERS in the database to store the records of trainers. The table TRAINERS has the following structure Table: COVID													3
		FIELD NAME				DATA TYPE				REMARKS					
		TID				•				Prin	nary	Key			
		TNAME			_	RCHAF	<u> </u>			Not	null				
		CITY				RCHAF	R(30)								
		HIREDATE			DA										
		SALARY			INT										
		SUBJECT				RCHAF	· ·								
		MOBILE				AR(10)				601			1 -		
		Help her to	comp	olete the ta	ask by suggesting appropriate SQL commands.										
		Section C										_			
					Fach			arries 4	l mark	c					
11		Write gueri	es (a)			•					RSFS	giver	n he	low:	4
		Write queries (a) to (d) based on the table TRAINER and COURSES given below: <b>Table: TRAINER</b>												-	
		Т		CITY HIREDATE SALA				ARY MOBILE							
		1	01	Sunaina	Mum	nbai 2	2001-	001-01-20 9000		51259		59125	62		
		1	02	Anamika	Delh	i 2	2015-08-11 85000 2016-07-22 75000		)	5988541236 5545210250					
		1	03	Minakshi	Kota	1 2			)						
		1	04	Rahul	Mum	nbai 2	2020-	020-03-08 95000		)	5121122012		12	_	
		1	05	Jeetu	Kota	1 2	2015-	15-08-25 12500				28965	12		
		1	06	Dipali	Delh	i 2	2015-	5-07-19 69000		0 578		96411	00		
				<b>.</b>	•			COURSES			_				
		CI		CNAME		FEES		START			TID				
			201	AGDCA		22000		2021-01		101					
			202	ADCA		15000		2021-02		103					
			203	DCA		10000		2020-09-12		102					
		l ———	204	DDTP		9000		2020-10-05 2021-04-01 2020-04-01		104	1				
			205	DHN	1	20000				101					
		<u> </u>	206 displa	O OEVE		18000				105					
		1	•	y average					cnam	of a	ach :	traina	ابيرس	hoso	
		(b) To display name of trainer and respective cname of each trainer who course started in the year 2020.									11036				
					ne year 2020. City, hiredate and salary of all trainers hired in month on ng order of their salary							nonth of			
		1	•	•											
		_		ew trainer	_			-		en va	lues:				
		1		atha','Delh											
12	(i)	Give two dit	fferer	nces betwe	en H										(2)
		Define the f		_											
		IP Address,	web	nosting											



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Xcelencia Edu Services Ltd. is an educational organization. It is planning to setup its India campus at Hyderabad with its head office at Delhi. The Hyderabad campus has 4 main buildings – ADMIN, SCIENCE, BUSINESS and ARTS. You as a network expert have to suggest the best network related solutions for their problems raised in (i) to (iv), keeping in mind the distances between buildings and other given parameters.

(2)



Distance between various buildings is given as:

ADMIN to SCIENCE	80m			
ADMIN to BUSINESS	180m			
SCIENCE to BUSINESS	100m			
SCIENCE to ARTS	150m			
BUSINESS to ARTS	100m			
DELHI Head Office to	1600KM			
Hyderabad Campus				

## Number of Computers in the buildings:

ADMIN	100
SCIENCE	85
BUSINESS	40
ARTS	12
DELHI Head Office	20

- (a) Suggest the most appropriate location of the server inside the Hyderabad Campus (out of 4 buildings) 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 Hyderabad Campus for connecting the computers.
- (c) Which hardware device will you suggest to be procured by the company to be installed to protect and control the internet uses within the campus.
- (d) Which of the following will you suggest to establish the online fact-to-face communication between the people in the ADMIN office of Hyderabad campus and Delhi Head Office
  - i) E-Mail
  - ii) Text Chat
  - iii) Cable TV
  - iv) Video Conferencing