Marking Scheme

COMPUTER SCIENCE (Code : 083)

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 and 12

		Section -A **Each question carries 2 marks**		
Q. No	**Part No.**	**Question**	**Marking Instructions**	**Marks**
1.		Characteristics of Stacks: • It is a LIFO data structure • The insertion and deletion happens at one end i.e. from the top of the stack	1 mark for each point	(2)
2.	(i)	SMTP : Simple Mail Transfer Protocol XML: Extensible Mark Up Language	½ mark for each correct expansion	(1)
	(ii)	Wired- optical fibre Wireless – microwave	½ mark for each correct answer	(1)
3.		char(n): • stores a fixed length string between 1 and 255 characters • if the value is of smaller length, adds blank spaces • some space is wasted varchar(n) : • stores a variable length string • no blanks are added even if value is of smaller length • no wastage of space	1 mark for each correct difference (minimum 2 differences to be given)	(2)

<table>
<tr><td>4.</td><td></td><td>(a) One record
(b) tuple</td><td>1 mark for each correct answer</td><td>(2)</td></tr>
<tr><td>5.</td><td></td><td>(a) 29

(b) 19-Jul-2021

(c)
<table><tr><td>T006</td><td>Console Table</td><td>17-Nov-2019</td><td>15000</td><td>12</td></tr></table>
(d)
10-Mar- 2020
17-Nov-2019</td><td>½ mark for each correct output</td><td>(2)</td></tr>
<tr><td>6.</td><td>(i)</td><td>SHOW TABLES;</td><td>1 mark for correct answer</td><td>(1)</td></tr>
<tr><td></td><td>(ii)</td><td>Equi- join:
• The join in which columns from two tables are compared for equality
• Duplicate columns are shown
Natural Join
• The join in which only one of the identical columns existing in both tables is present
• No duplication of columns</td><td>1 mark for correct difference (Any one point may be given)</td><td>(1)</td></tr>
<tr><td>7.</td><td></td><td>(a) Degree: 5
Cardinality: 6

(b) MOVIEID should be made the primary key as it uniquely identifies each record of the table.</td><td>½ mark each for correct degree and cardinality

½ mark for correct field and ½ mark for justification</td><td>(2)</td></tr>
</table>

		OR (a) MOVIEID and TITLE (b) MOVIEID	½ mark for each correct field name 1 mark for correct answer	
		SECTION – B **Each question carries 3 marks**		
8.		**# Question No 8 (first option)** **R={"OM":76, "JAI":45, "BOB":89, "ALI":65, "ANU":90, "TOM":82}** **def PUSH(S,N):** ** S.append(N)** **def POP(S):** ** if S!=[]:** ** return S.pop()** ** else:** ** return None** **ST=[]** **for k in R:** ** if R[k]>=75:** ** PUSH(ST,k)** **while True:** ** if ST!=[]:** ** print(POP(ST),end=" ")** ** else:** ** break** **OR** **# Question No 8 (second option)** **N=[12, 13, 34, 56, 21, 79, 98, 22, 35, 38]** **def PUSH(S,N):**	1 mark for correct PUSH operation 1 mark for correct POP operation 1 mark for correct function calls and displaying the output 1 mark for correct PUSH operation	(3)

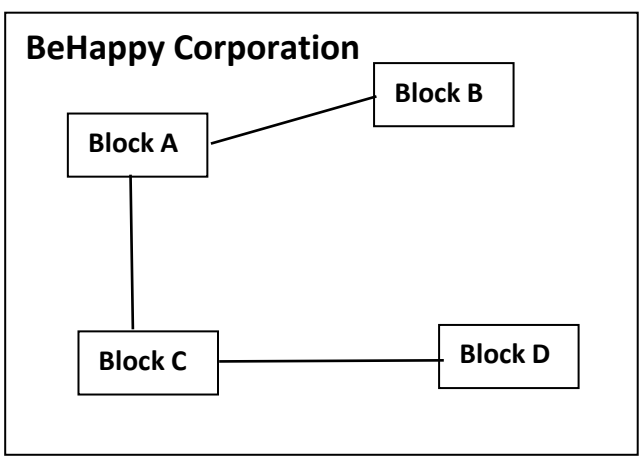
		`  S.append(N)`
		`def POP(S):`
		`  if S!=[]:`
		`  return S.pop()`
		`  else:`
		`  return None`
		`ST=[]`
		`for k in N:`
		`  if k%2==0:`
		`  PUSH(ST,k)`
		`while True:`
		`  if ST!=[]:`
		`  print(POP(ST),end=" ")`
		`  else:`
		`  break`
			1 mark for correct POP operation
			
			1 mark for correct function calls and displaying the output
			
			Note: Marks to be awarded for any other correct logic given by the student	

9.	(i)	`ALTER TABLE Item` `ADD (Discount INT);`	1 mark for correct command	(1)
	(ii)	DDL: **`DROP TABLE, ALTER TABLE`** DML: **`INSERT INTO, UPDATE...SET`**	½ mark for each correct command identified	(2)

10.		`CREATE DATABASE MYEARTH;`
		
		`CREATE TABLE CITY`
		`(`
		`  CITYCODE CHAR(5)PRIMARY KEY,`
		`  CITYNAME CHAR(30),`
		`  SIZE INT,`
		`  AVGTEMP INT,`
		`  POPULATIONRATE INT,`
		`  POPULATION INT,`
		`);`
			1 mark for correctly creating database.
			
			2 marks for correctly creating the table.
				(3)

		Section C **Each question carries 4 marks**		
11.		`(a) SELECT AVG(SALARY)`		

		FROM EMPLOYEE GROUP BY DEPTID; (b) SELECT NAME, DEPTNAME FROM EMPLOYEE, DEPARTMENT WHERE EMPLOYEE.DEPTID= DEPARTMENT.DEPTID AND SALARY>50000; (c) SELECT NAME FROM EMPLOYEE WHERE SALARY IS NULL ORDER BY NAME; (d) SELECT DISTINCT DEPTID FROM EMPLOYEE;	1 mark for each correct query	(4)
12.	(i)	Advantages • Ease of service • Centralized control • Easy to diagnose faults • One device per connection Disadvantages • long cable length • difficult to expand • central node dependency OR **www**: a set of protocols that allow you to access any document on the internet through the naming systems based on URLs **Web hosting**: Web hosting is a service that allows organizations and individuals to post a website or web page onto the server, which can be viewed by everyone on the Internet.	½ mark for each correct advantage / disadvantage 1 mark for each correct definition	(2)
	(ii)	Packet switching: • uses store and forward concept to send messages • no physical path is actually establishes • message is divided into smaller parts, known as packets and then sent forward • tight upper limit on block size • Each data unit knows only the final receiver's address	1 mark for each correct difference (minimum two points should be given)	(2)

		Circuit switching • physical connection is established between sender and receiver • Each data unit knows the entire path from sender to receiver • It does not follow store and forward concept		
13.		(a)  (b) Repeater : between C and D as the distance between them is 100 mts. Hub/ Switch : in each block as they help to share data packets within the devices of the network in each block (c) WAN. (d) Satellite	1 mark for each correct answer	(4)

[6]