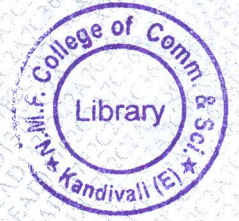


Paper / Subject Code: 23120 / Computer systems & Applications Paper -I

Time: 2½ Hours

Total Marks: 75



Note: 1) All questions carry equal marks and are compulsory.

2) Figures to the right indicate maximum marks for a question.

- Q1 (A) Attempt any **two** sub-questions from (a), (b), (c) in MS-EXCEL (2)
(True/False)
- The argument of a function can be a reference to another cell in the spreadsheet.
 - To insert subtotal you must sort the list.
 - A worksheet may have either a header or footer, but not both.
- (B) Attempt any **two** sub-questions from (d), (e), (f) in MySQL (Multiple Choice) (2)
- To indicate that there should be 6 integers and 2 decimal positions we use _____.
1) DECIMAL(8,2) 2) DECIMAL(6,2) 3) DECIMAL(2,6) 4) DECIMAL(2,8)
 - To save the transaction we use _____.
1) Rollback 2) Save 3) Commit 4) Return
 - A Database contains one or more _____.
1) Rows 2) Databases 3) Columns 4) Tables
- (C) Attempt any **six** sub-questions from (g), (h), (i), (j), (k), (l), (m), (n), (o) in Data Communications, Networking and Internet. (True/False). (6)
- Telecommunication system is an example of distributed processing.
 - A network is used to share hardware and software.
 - There is no way to handle collisions that occur in a bus topology.
 - There are four types of twisted pair cables.
 - The Presentation layer is one of the upper layers in the OSI model.
 - OR is a Boolean operator.
 - In the domain name system .com is used for business and commercial organisation.
 - Email can be sent with attachments.
 - Spoofing refers to tricking or deceiving computer systems or other computer users.
- (D) Attempt any **five** sub-questions from (p), (q), (r), (s), (t), (u), (v), (w) in Data Communications, Networking and Internet. (Multiple Choice) (5)
- The transmission medium that carries the message is referred to as the _____.
1) Protocol 2) gateway 3) Communication channel 4) Transport
 - A _____ network spans a number of cities and countries.
1) LAN 2) MAN 3) WAN 4) None of these



- (r) In _____ topology all the nodes are connected with a single cable.
1) Bus 2) Ring 3) Star 4) None of these
- (s) _____ is the fastest Internet account.
1) ISDN account 2) Shell account 3) Dial-up account 4) Broadband account
- (t) Internet Explorer is referred to as _____.
1) System Software 2) Utility Software 3) Browsers 4) Internet tools.
- (u) Full form of HTTP is Hyper Text _____ Protocol.
1) Transfer 2) Transport 3) Terminal 4) Transaction
- (v) The protocol to download email and store it in your computer is -----
1) POP 2) NMTP 3) FTP 4) HTTP
- (w) _____ type of hackers break into the security system for non-harmful reasons.
1) Grey hat 2) Blue hat 3) White hat 4) Black hat

Q2. (A) Answer **any one** sub-question from (a), (b) in Data Communications, Networking and Internet. (8)

- (a) Write the four main characteristics of LAN and WAN.
(b) Write short notes on i) Twisted Pair Cable ii) Fiber Optic Cable

(B) Answer **any one** sub-question from (c), (d) in Data Communications, Networking and Internet. (7)

- (c) What is a protocol? Describe any three layers of TCP/IP protocol.
(d) What is hacking and explain any three types of hackers.

Q3. (A) Answer **any one** sub-question from (a), (b) in MySQL (8)

- (a) Write MySQL statement to create a table called BEST having the columns Consumer Number (CNO, integer, Primary key), Consumer Name (CNAME, character with variable width 30 columns), Type of Connection (TYPE, character with variable width 25 columns default value "INDUSTRIAL") and Bill Amount (BILL, width of 9 including 2 decimals, positive).
(b) Write MySQL statement to create a table called COMPANY having columns Employee Number (EN, Integer, should be increased by 1 automatically), Name of Employee (NAME, character with width 30 columns), Department Name (DEPT, character with variable width 20 columns, should not be empty), Gender (GENDER, Boolean) and Provident Fund Amount (PF, 8 integer and 2 decimals).

(B) Answer **any one** sub-question from (c), (d) in MySQL (7)

(c) Explain the following built-in functions in MySQL.

- 1) LOWER() 2) LTRIM() 3) REVERSE() 4) DAY()
 5) ABS() 6) TIME() 7) MONTHNAME()

(d) There exists a table called PICNIC containing the columns Roll Number (RNO, integer, Primary Key), Name (SNAME, character variable width 20), Date of birth (DOB, Date), Gender (GENDER, character width 1) and Division (DIVISION, character variable width 4).

Write MySQL statements for the following.

- i) Display the structure of the table PICNIC.
 ii) Enter the following one row of data in this table.

RNO	SNAME	DOB	GENDER	DIVISION
101	REKHA	2001-03-01	F	A

- iii) Add a new column Mobile Number (MOB, integer) at the end of the table PICNIC.
 iv) Delete the row where roll number of the student is 56.
 v) Change the Date of Birth of student with roll number 11 to September 7, 1999.
 vi) Change the size of the column SNAME to 30 columns.
 vii) Rename the table PICNIC as FUNPICNIC.

Q4. (A) Answer **any one** sub-question from (a), (b) in MySQL (8)

(a) There exists a table AMAZON having the columns Purchaser's Number (PNO, integer), Purchaser's Name (PNAME, character), Receipt Number (RNO, integer, primary key), Total Cost (TCOST, integer) and Date of Purchase (PURDT, date).

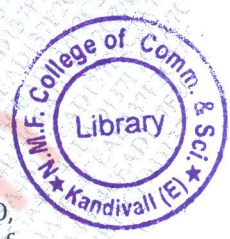
Write MySQL statements for the following.

- i) Display Purchaser's name, Receipt Number and Total Cost from this table where Date of Purchase is January 1, 2018.
 ii) Display Purchaser's Name and Total Cost where Total Cost is equal to the maximum Total Cost.
 iii) Display Date of Purchase, maximum and minimum Total Cost grouped by Date of Purchase.
 iv) Display Purchaser's Name, Date of Purchase and Total Cost where Total Cost is more than the average Total Cost.
 v) Display Purchaser's Name, Total Cost and "Discount" as 10% of Total Cost.

(b) There exists a table INSTITUTE containing columns Roll Number (RNO, integer, primary key), Name (SNAME, character), Age (AGE, integer), Fees (FEES, decimal (8, 2)). There exists another table PERFORMANCE containing columns Roll Number (RNO, integer, primary key), Total marks (TOTAL, integer).

Write MySQL statements for the following.

- i) Display Name, Age and Total marks of a student with Roll Number 100 using both the tables.
 ii) Display Name, Age and Total marks of students getting Total Marks more than or equal to 400 using both the tables.





Q4. (B)

- (c) Answer **any one** sub-question from (c), (d) in MySQL (7)
- (c) There exist a table called RMALL containing columns Department Name (DEPT, character), Department Manager Name (MNAME, character), Date of Sale (DSALE, date), Sale Amount (SAMT, numeric) and Discount Amount (DISCOUNT, numeric).

Write MySQL statements for the following:-

- i) Display Department Name, Manager Name, total and average Sale Amount grouped as per Department Manager
- ii) Display Department Name, Manager Name, minimum and maximum of the Discount Amount of each Department
- iii) Display all the rows where the Sale Amount is equal to maximum Sale Amount.
- iv) Display Department Name, Manager Name, Sale Amount where Sale Amount is between 45000 and 70000.

- (d) There exists a table STUDENT containing columns Roll Number (RNO, integer), Students Name (SNAME, character), Age (AGE, integer), Mobile Number (MOBILE, integer) and Fees Paid (FPAID, numeric).

Write MySQL queries for the following.

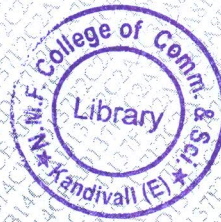
- i) Display all the rows from this table where Student Name contains 'R'.
- ii) Display all the rows from this table where Age is more than 18.
- iii) Display Roll Number, Student Name labeled as 'Name of the Student' and Fees Paid from this table.
- iv) Display Roll Number, Student Name and Age from this table where Fees Paid is more than 7500.
- v) Display all the rows from this table in the ascending order of Roll Numbers.
- vi) Display all the rows from this table where Age is divisible by 5.
- vii) Display Students Name, Mobile Number and Fees Paid from this table.

Q5. (A)

Answer **any one** sub-question from (a), (b) in MS-EXCEL (8)

- (a) The following data has been entered in a worksheet.

	A	B	C	D	E	F	G	H
1	ROLL NO.	NAME	ACC	ECO	MHRM	COMP	TOTAL	AVERAGE
2	152	AVINASH	88	80	92	99		
3	176	DIANA	60	64	80	97		
4	243	SAPNA	45	38	65	80		
5	362	KARAN	69	76	72	90		
6	89	ANU	98	90	98	100		
7	127	SAMPATH	87	85	90	98		
8								
9						MAX. AVG MARKS		



Write the steps to obtain

- i) Total Marks in column G
- ii) Average of best three subjects in column H.
- iii) Maximum average marks in cell H9.

(b) For the following spreadsheet write the steps to obtain the subtotals of sales city wise.

	A	B	C
1	NAME	CITY	SALES
2	NIRAJ	MUMBAI	78000
3	KARTHIK	PUNE	60000
4	JAY	MUMBAI	100000
5	RAVPREET	NAGPUR	68000
6	RAM	NAGPUR	62000
7	DHEERAJ	PUNE	77000
8	ANUP	MUMBAI	75000

Q5. (B)

Answer **any one** sub-question from (c), (d) in MS-EXCEL

(7)

(c) For the following spreadsheet write the steps to obtain the Pivot table showing total salary and lowest salary department wise in column G.

	A	B	C	D
1	NAME	AGE	DEPT	SALARY
2	VINAYAK	42	A/C	48000
3	NAVIN	28	PUR	32000
4	PADMA	25	ADMIN	25000
5	MOHAN	44	PUR	55000
6	PETER	46	ADMIN	46000
7	MUSCAN	29	A/C	30000
8	BHAVYA	32	PUR	36000

(d) Explain the following built in functions in MS-EXCEL

- 1. FV()
- 2. PPMT()
- 3. ROUNDDOWN()
- 4. MOD()
- 5. INT()
- 6. SQRT()
- 7. COUNT()