

- (u) Message segmentation and re-assembly is the task of _____ layer in OSI model.
 1) Transport 2) Session 3) Network 4) Physical
- (v) The rules for exchanging data between computers are called _____.
 1) Topology 2) Protocol 3) Communication 4) Syntax
- (w) The full form of URL is _____.
 1) Uniform Resource Library 2) United Resource Locator
 3) Universal Resource Locator 4) Uniform Resource Locator

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

- (a) Write a note on LAN and MAN.
 (b) Explain Star and Bus topology.

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

- (c) Explain the different uses of internet.
 (d) Explain Search Engine and Meta Search Engine.

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

- (a) Write MySQL statement to create a table called DEPOSIT having the columns Deposit Number(DN, integer, primary key), Deposit Code(DCODE, character with variable width 10 columns), Amount (AMT, width of 8 including 2 decimals, positive) and Date of Registration (DRT, date, should not be empty).
- (b) Write MySQL statement to create a table called MARGIN having the columns Account Number(ANO, integer, distinct), Account holders Name(ANAME, character with variable width 15 columns), Gender(GEN, Boolean), Margin Amount (MARG, very large integer, should not be empty) and Date of account(DACC, Date).

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

- (c) Explain the following built-in functions in MySQL.
 1) MOD() 2) RTRIM() 3) LOWER() 4) TIME()
 5) REVERSE() 6) SQRT() 7) DAYNAME()

- (d) There exists a table called COLLEGE having the following columns Roll Number(RN, integer), Students Name (STNAME, character variable width 10 columns), Fees Paid (FEE, width of 6 with 2 decimals) and Date of Admission(DA, date). Write MySQL statements for the following.
 i) Add a new column Confirmation (CO, Boolean) to this table.
 ii) Change the students name to 'Deepa Gupta' for Roll Number 57.
 iii) Delete all the rows from the table where fees paid are negative.
 iv) Change the date of admission of the student whose name is 'Monaz Mehta' to June 10, 2015.

- v) Insert one row of data in the table with Roll Number 715, Students Name 'Hiral Jain' and Date of Admission July 23, 2015.
- vi) Change the name of the column Roll Number to RNO.
- vii) Rename the table COLLEGE as MARK.

Q4. (A)

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

(a) There exists a table ELECTRIC having the columns Consumer number (CNO, integer), Consumer name (CONA, character), meter number (MNO, character), type of connection (TYPE, character) and bill amount (BILL, integer).

Write MySQL queries for the following.

- i) Display Consumer name, meter number and bill amount where the bill amount is equal to or above the average bill amount.
- ii) Display the Consumer number, type of connection and bill amount where the bill amount is equal to the highest bill amount.
- iii) Display Type of connection, maximum bill amount and total bill amount of such connections grouped according to Type.
- iv) Display consumer number, meter number and bill amount where the consumer number is odd.
- v) Display all the rows in the ascending order of bill amount.

(b) There exists a table TRAVEL containing columns customer number (CNUM, integer), customer name (CNAME, character), holiday destination (DEST, character). There exists another table DETAILS containing the columns customer number (CNUM, integer), amount quoted (QUOTE, integer) and date of travel (DPT, Date).

Write MySQL queries for the following.

- i) Display Customer number, customer name and amount quoted for those having holiday destination 'DUBAI' using both the tables.
- ii) Display Customer number, holiday destination and date of travel for those customers whose date of travel is after October 15, 2015 using both the tables.
- iii) Display Customer number and amount quoted from the table DETAILS for those customers where the amount quoted is equal to the highest amount quoted.
- iv) Display Customer number, amount quoted and date of travel from the table DETAILS for those who want to travel in the month of May.
- v) Display all the rows from the table TRAVEL where the holiday destination contains 'M'.

Q4. (B)

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

(c) There exists a table OFFICE containing columns employee number (EN, Integer), name of the employee (NAME, character), department name (DEPT, Character), provident fund amount (PF, numeric) and date of deduction (DEDDT, date). Write MySQL queries for the following.

- i) Display the department name, average of provident fund amount and minimum of the provident fund amount grouped as per department.

- ii) Display the department name, maximum provident fund amount and total of the provident fund amount grouped as per department.
 - iii) Display the employee number, name of the employee and provident fund amount where the provident fund amount is above the average provident fund amount.
 - iv) Display all the rows from this table where the employee number is divisible by 5.
- (d) There exists a table EMPLOYEES with columns for employee id (EMP_ID, integer), employee name (EMP_NAME, character), job id (JOB_ID, character), manager id (MGRID, integer), salary (SAL, numeric), and hire date (H_DATE, date). Write MySQL queries for the following.
- i) Display all the rows from this table.
 - ii) Display the name and hire date of all employees who do not have a manager.
 - iii) Display the employee name labeled as 'Name of the Employee' and salary labeled as 'Monthly Salary' from the table.
 - iv) Display the employee id, job id and salary of employees whose manager id is 505 or 509.
 - v) Display the employee id, employee name and salary of employees whose the salary is 25,000 or more.
 - vi) Display all the rows in the descending order of hire date.
 - vii) Display all the rows where the second letter in the employee name is 'H'.

Q5. (A)

(a) Answer *any one* sub-question from (a), (b) in MS-EXCEL. The following data has been entered in a worksheet.

(8)

	A	B	C	D	E	F
	NAME	BASIC	HRA	DA	TOTAL	TAX
1	Gopal	30000				
2	Somdev	20000				
3	Rehman	22100				
5	Oscar	25000				

Write the steps to obtain

- i) HRA as 25% of the Basic or 10,000 whichever is less in column C
- ii) DA as 110% of the Basic rounded to the nearest integer in column D.
- iii) TOTAL as BASIC+DA+HRA in column E.
- iv) TAX as 33.3% of TOTAL in column F.

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(b) Answer the following using MS-EXCEL
Given the worksheet.

	A	B	C
1	Item Name	January	February
2	Mouse	6000	7300
3	Monitor	50000	45000
4	Keyboard	6100	6300
5	Printer	65000	80000
6	Pen Drive	3250	3100
7	Total		
8	Average		
9	Highest		
10	Lowest		

Write the steps to obtain the Total, Average, Highest and Lowest for the month of January and for the month of February in columns B and C respectively.

Q5. (B)

(c) Answer *any one* sub-question from (c), (d) in MS-EXCEL
In the following worksheet the cost of machinery is entered in cell A4 and its estimated life in years is entered in cell A7 and it has no salvage value.

(7)

	A	B	C	D	E
1		Year	Depreciation	WDV	
2		1			
3		2			
4	500000	3			
5		4			
6		5			
7	5				
8					

Write the steps to obtain the year wise depreciation and WDV in columns C and D where depreciation is computed using reducing balance method.

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

1. PMT()
2. ROUND()
3. FV()
4. COUNT()
5. CEILING()
6. NPER()
7. INT()