*Note: (1) All questions carry **equal** marks and are **compulsory**. (2) **Figures** to the **right** indicate **maximum** marks for the questions.*

(1) (A) Attempt any one sub-questions from a, b, c in MS-Excel (True/False).

(a) A workbook can contain maximum three worksheets.

(b) A function can have another function as its argument.

(c) Once subtotal is added to the list, it cannot be removed.

(B) **Attempt any one sub-questions from d, e, f in MySQL (Multiple Choice).**

(d) To cancel the transaction and not save it we use _____.
(i) COMMIT (ii) CONCAT (iii) ROLLBACK (iv) RETURN

(e) To indicate that there should be 7 integers and 3 decimal positions we use _____.
(i) DECIMAL (7, 3) (ii) DECIMAL (3, 7) (iii) DECIMAL (10, 3) (iv) DECIMAL (3, 10)

(f) To select a database INCOME the statement is _____.
(i) SELECT INCOME (ii) OPEN INCOME (iii) USE INCOME (iv) CHOOSE INCOME

(B) **Attempt any six sub-questions from g, h, i, j, k, l, m, n, o in Data Communication, Networking and Internet (True/False).** (6)

(g) Fiber optic cables use light to transmit data.
(h) In LAN network computers must be located in one room.
(i) A computer that acts as a server and a client is peer.
(j) Failure of a node, brings down the entire network in a star topology.
(k) The lowest layer in OSI model is the physical layer.
(l) Dial-up connection provides faster internet access.
(m) Blogs are used to block the internet sites.
(n) An IP address contains a set of 4 numbers separated by dots.
(o) Yahoo.com is a search engine.

(D) **Attempt any five sub-questions from p, q, r, s, t, u, v, w in Data Communication, Networking and Internet (Multiple Choice):** (5)

(p) _____ is a component of Data Communication.
(i) Sender (ii) Receiver (iii) Protocol (iv) All of these

(q) A network where individual computers or nodes share the processing and storage of data with the server is _____.
(i) Peer to Peer Network (ii) Client/Server based Network
(iii) MTTP Network (iv) None of these

(r) In _____ topology all the nodes are connected with a single cable.
(i) Bus (ii) Ring (iii) Star (iv) None of these

(s) The medium of transmission can be _____.
(i) Wireless (ii) Twisted pair cable and Co-axial Cable (iii) Optic fibre (iv) All of these

(t) The protocol to fetch e-mail from a remote mail-box into your computer is _____.
(i) POP (ii) NNTP (iii) FTP (iv) HTTP

(u) Each web page has a unique address called _____.
(i) URL (ii) Protocol (iii) Document Name (iv) Host

(v) Website is a collection of _____.
(i) Web pages (ii) WWW (iii) TCP/IP (iv) None of these

(w) Text that links with the other text is called _____.
(i) Hyper Text (ii) Ring Text (iii) Loop Text (iv) Cipher Text

(A) **Attempt any one sub-questions from a, b (Data Communication, Networking and Internet):** (8)

(a) Explain Domain Name System and IP address.
(b) Explain the different types of networks.

(B) **Attempt any one sub-question from c, d (Data Communication, Networking and Internet):** (7)

(d) What are the various types of internet connections?
(e) Explain Hacking and types of hackers.

(A) **Attempt any one sub-questions from a, b in MySQL:**

(a) Write MySQL statement to create a table BILL having the following columns Bill Number (BN, smallint, primary key), Product Name (PRNAME, character with variable width 15 columns), Quantity (QTY, integer, positive) and Amount (AMT, 6 integers and 2 decimals, should not be empty). (8)

(b) Write MySQL statement to create a table called ADMISSION having the following columns Roll Number (RNO, integer, should be increased by 1 automatically), Student name (NAME, character with variable width 25 columns), Gender (GENDER, Boolean), Date of birth (DOB, Date) and Fees paid (FEES), 5 integers and 2 decimals, should not be empty). (8)

(B) **Attempt any one sub-question from c, d in MySQL:**

(c) Explain the following built-in functions in MySQL. (7)
(i) ROUND() (ii) MOD() (iii) CURDATE() (iv) UPPER()
(v) LTRIM() (vi) MID() (vii) DAYNAME()

(d) There exists a table called COLLEGE having the following columns Student Name (SNAME, character), Class (CLASS, character), Division (DIV, character) and Number of lectures attended (LEC, numeric). Write MySQL statements for the following. (7)
(i) Add a new column Roll Number (ROLL, integer) as the first column of the table.
(ii) Increase the number of lectures attended by 2 for all the students.
(iii) Delete all the rows where division is 'C'.
(iv) Display the structure of the table COLLEGE.
(v) Delete the column DIV from the table.
(vi) Rename the table as NCOLLEGE.
(vii) Delete the table NCOLLEGE.

(A) Attempt any one sub-question from a, b in MySQL:

(a) There exists a table CUSTOM containing the columns Customer number (NO, integer), Customer Name (CNAME, character), Balance due (BALA, numeric) and date of transaction (DT, date) **(8)**
Write MySQL statements to:
(i) Display the customer number, minimum balance due and total of balances due grouped by customer number.
(ii) Display the customer number, maximum balance due and number of balances due grouped by customer number.
(iii) Display all the rows where the balance due is less than average balance due.
(iv) Display all the rows where the name ends with 'A'.
(v) Display the customer number, balance due and date of transaction for date of transaction before July 25, 2013.

(b) There exists a table LIBRARY having the columns Book Number (BKNO, integer), name of the book (BKNAME, character), Type of book (TYPE, character), Number of copies (NOC, integer), value of the book (VALU, numeric) and Date of Publication (DP, date). Write MySQL queries for the following. **(8)**
(i) Display all the rows from this table where the value of the book is below the average book value.
(ii) Display the columns books number, Name of the books and Date of Publication from this table where the value of the book is equal to the highest book value.
(iii) Display Type of book and average value of the books from this table grouped as per type.
(iv) Display the Book Number, Value of the book and 'scrap value' which is 5% of the value of the book from this table.
(v) Display all the rows where the value of the book is above 1000. **(7)**

(B) Attempt any one sub-questions from c, d in MySQL:

(c) There exists a table DEPT containing columns Employee number (ENO, integer), Employee name (ENAME, character), Salary (SAL, numeric), There exists another table COMPANY containing the columns Employee number (ENO, integer), Gender (GEN, character) and date of joining (DOJ, date).
Write MySQL statement to:
(i) Display Employee Number, Employee Name and Date of Joining from these tables for employees whose salary is above 35,000.
(ii) Display Employee number, Employee name, Gender and date of joining from these tables for employees whose salary is joining is after June 15, 2013.
(iii) Display all the rows from the table DEPT whose salary is below average salary.
(iv) Display the name and salary from the table DEPT where the salary is either 30,000 or 40,000.

(d) There exists a table SALARY containing the columns Employee number (E_NO, integer), Employee name (E_NAME, character), Taxable income (INC, numeric) and Income tax (iTAX, numeric).
Write MySQL queries for the following:
(i) Display employee number, employee name and the taxable income.
(ii) Display employee name, Income tax and 5% of the Income tax as 'Surcharge' for all the employees.
(iii) Display all the rows where the taxable income is above 5,00,000.
(iv) Display employee number, employee name and income tax in the descending order of income tax.
(v) Display the employee number, employee name and taxable income of the employees whose name is 'PATEL'.
(vi) Display all the rows from this table where the employee name contain 'S'.
(vii) Display all the rows from this table where the income tax is between 50,000 and 1,00,000.

Attempt any one sub-question from a, b in MS-EXCEL:

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

	A	B	C
	Name	Department	Salary
1	Rajan	Stores	12,000
2	Arti	Accounts	15,500
3	Kiran	Production	18,000
4	Jayesh	Accounts	9,600
5	Rajan	Production	2,200
6	Arti	Stores	11,600

Based on these values, write steps to (1) Arrange the data in the descending order of Name and further in the ascending order of Department. (2) Arrange the data in the alphabetic order of Department and further in the descending order of salary. **(8)**

(b) For the following spreadsheet write the steps to obtain the Subtotals of the fees classwise.

	A	B	C
	Roll No.	Class	Fees Paid
1	232	F.Y.B.Com	3000
2	451	S.Y.B.Com	3500
3	484	T.Y.B.Com	4000
4	557	F.Y.B.Com	3000
5	782	T.Y.B.Com	4000
6	891	S.Y.B.Com	3500

(B) Attempt any one sub-question from c, d in MS-EXCEL: (7)

(c) Answer the following using MS-EXCEL.

	A	B	C	D	E	F	G	H	I
	Name	Eng.	Hindi	Eco.	BK	A/c	Tax	Total	Average
1	Gawli	65	69	78	66	89	48		
2	Harsha	64	49	48	52	46	66		
3	Salman	72	69	66	78	75	81		
4	Jude	87	73	84	82	91	95		
5	Menese	54	49	28	31	13	24		

For the above spreadsheet write the steps to obtain the Total marks in 6 subjects in column H and the Average marks, as the Average of the best five subjects for each student in column I.

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

(i) FV() (ii) SQRT() (iii) RATE() (iv) PMT()

(v) ABS() (vi) MOD() (vii) ROUNDUP()