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 spreadsheet   (2)
              (True/False)
      (a)   We can link two workbooks.
      (b)   Formulas must begin with an equality sign.
      (c)   PPMT function returns the interest payment for a given period for an
              investment based on periodic constant payments and a constant interest rate.

      (B)   Attempt any **two** sub-questions from (d), (e),(f) in MySQL   (2)
              (Multiple Choice)
      (d)   To open a database CLASS the statement is ------------------.
               1) SELECT CLASS 2) CHOOSE CLASS 3) OPEN CLASS   4) USE CLASS
      (e)   In MySQL, SELECT * FROM salary LIMIT 4,2; displays---------------.
              1) all rows 2) 5th,6th rows   3) 4th row twice   4) 4th and 5th rows
      (f)   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)

      (C)   Attempt any **six** sub-questions from (g),(h),(i),(j),(k),(l),(m),(n),(o)   (6)
              in Data Communications, Networking and Internet. (True/False).
      (g)   Message is not a component of data communication.
      (h)   In LAN there may be more than one server.
      (i)   It is easy to add/remove a node in star topology.
      (j)   OSI is a network protocol.
      (k)   Each URL consists of three parts.
      (l)   A Fiber Optic Cable carries data using Electric Current.
      (m)   AND is a Boolean operator.
      (n)   Google is a Meta Search Engine.
      (o)   White hat are hackers who break computer security for non-harmful reasons
              like to test the security of the system.

      (D)   Attempt any **five** sub-questions from (p),(q),(r),(s),(t),(u),(v),(w)   (5)
               in Data Communications, Networking and Internet. (Multiple Choice)
      (p)   ----------------- is also called Data Transmission.
              1)Data distribution   2) Data representation   3) Data Communication
              4) None of these
      (q)   The fastest transmission media is-------------------.
              1) Twisted pair   2) Fiber-optic   3)Co-axial   4) Wireless

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(r) Full form of HTTP is-----------------
1) Hyper Text Transfer Protocol   2)Hyper Test Transfer Protocol
3) Home Text Transfer Page   4) Hyper Text Transfer Page.

(s) ------------- is a device using which we can segment a large network into smaller more efficient network.
1)Hub   2) bridge   3) switch   4) router

(t) In ----------- topology all nodes are connected directly to a central system.
1)Star   2) Bus   3) Ring   4) None of these

(u) The part before the @ symbol in an email address is ----------------.
 1) The Domain name 2) user name 3) sub domain name   4) None of these

(v) Google Chrome is a _____.
1) Hardware   2) Browser   3) Utility software   4) Internet tool

(w) ----------- allows user to search simultaneously on several search engines.
1) Server   2) Boolean search   3) Meta search engine 4) none of these.

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

(a)   What is networking? Explain different types of Networks.

(b)   Write short notes on (i) Bridges (ii) routers.

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

(c)   Explain TCP/IP protocol.

(d)   Explain hacking and 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 ADMISSION having the columns Name of Student (SNAME, character with variable width 15 columns, should not be empty), Gender (MALE, Boolean), Date of Birth (DOB, date, should not be empty), Fees Paid (FEES, having 6 integers and 2 decimal places, positive).

(b)   Write MySQL statement to create a table called ECHARGE containing information of customers using electricity provided by XYZ company having columns Customer Number(CNO, integer, primary key), Customer Name(CNAME, character with variable width 20, not empty), Customer Address(CADR, character of fixed width 12, containing default entry 'RESIDENTIAL'), Units consumed(UNITS, integer) .

(B)   Answer *any one* sub-question from (c) , (d) in MySQL   (7)
(c)   Explain the following built-in functions in MySQL.

1)TRIM ( )   2)UPPER( )   3) RIGHT( )   4) DATE( )

5) YEAR( )   6) DAYNAME( )   7) POW( )

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(d)   There exists a table called TYCLASS having the following columns Roll number (RN, integer), Name of the student (SNAME, character variable width 20), Subject offered (OPT, character width 10) and Marks obtained in SY(MKSY, integer).

Write MySQL statements for the following.

i) Display the structure of the table TYCLASS.

ii)To delete the row from the table TYCLASS where roll number is 126.

iii)Change the name of the column RN to RNO.

iv)Increase the marks obtained in SY by 5 for all the students.

v) Change the subject offered by the roll number 120 to 'COMPUTER'.

vi) Add a new column division (DIVI character width 1) to this table after the name column.

vii) Rename the table TYCLASS to TYBCOMCLASS.

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

(a)   There exists a table RAIL having the columns Station Number (SNO, integer), Station Name (SNAME, character), Amount Collected (AMT, numeric).

Write MySQL statements for the following.

i) Display Station Number, Station name and Amount Collected from this table.

ii) Display Station Number, Station Name whose Amount Collected is below the average Amount Collected.

iii) Display Station Name, maximum Amount and total Amount Collected from stations grouped by Station Names.

iv) Display Station Number, Station Name whose Amount Collected is equal to the Highest Amount Collected.

v) Display all the rows from this table in the ascending order of amount Collected.

(b)   There exists a table TRAVEL containing columns   Passenger Number (PNO, integer, primary key), Passenger Name (PNAME, char(20)) and Age of Passenger (AGE, integer). There exists another table JOURNEY containing columns   Passenger Number (PNO, integer, primary key), Destination City (CITY, char(15)), Fare(FARE, decimal(6,2)) and Date of Travel (DTR, date).

Write MySQL statements for the following.

i) Display Passenger Number, Passenger's Name and Fare for those having Destination City 'PUNE' using both the tables.

ii) Display Passenger Number, Destination City and Date of Travel for those whose Date of Travel is after May 15, 2017 using both the tables.

iii) Display Passenger Number, Fare from the table JOURNEY for those passengers whose Fare is equal to the highest Fare.

iv) Display Passenger Number, Fare and Date of Travel from the table JOURNEY for those who want to travel in the month of MAY..

v) Display all the rows from the table TRAVEL where the passenger's name contains 'S'.

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Q4. (B) Answer **any one** sub-question from (c) , (d) in MySQL (7)

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

i) Display the department name, maximum Salary and minimum of Salary grouped as per department.
ii) Display the department name, average provident fund amount and total of the provident fund amount grouped as per department.
iii) Display the employee number, name of the employee and Salary where the Salary is above the average Salary.
iv) Display all the rows from this table where the employee number is divisible by 7.

(d) There exists a table BOOKS containing columns Account Number (ACNO, integer, primary key), Book Name (BNAME, character), Number of copies (NCOPY, integer), Value of the book (Value, integer) and Date of Publication (DOP, Date).
Write MySQL queries for the following.
i) Display all the rows from this table.
ii) Display all the rows from this table in alphabetical order of book name.
iii) Display the columns Account number, Book name and Date of Publication from this table.
iv) Display the structure of the table BOOKS.
v) Display the rows from this table where the date of Publication is after March 1, 2011.
vi) Display all the rows from this table in the descending order of Value of the book.
vii) Display all the rows from this table where the first letter in the Book Name is 'J'.

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	E
1	F NAME	L NAME	AGE	SALARY
2	SALIM	KHAN	45	45000
3	ANANT	KULKARNI	30	30000
4	RAHUL	SHAH	35	55000
5	AANA	MEHTA	30	40000
6	RAJNI	MEHTA	46	20000
7	ASHA	SHAH	35	25000
8	AAMIR	KHAN	45	55000

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Write steps to do the following:-
i) Arrange data in the descending order of age and further in the ascending order of Salary.
ii) Arrange the data in the alphabetic order of L Name and further in the descending order of F Name.

(b)   For the following spreadsheet obtain the Pivot table showing total Salary and average Salary Gender wise in column F1.

	A	B	C	D
1	NAME	CITY	GENDER	SALARY
2	SHAAN	NASIK	MALE	350000
3	ADITYA	MUMBAI	MALE	550000
4	SARITA	PUNE	FEMALE	540000
5	NIKKI	NASIK	FEMALE	550000
6	RIDHI	PUNE	FEMALE	670000
7	SUMIT	MUMBAI	MALE	700000

Q5.   (B)   Answer *any one* sub-question from (c) , (d) in MS-EXCEL   (7)

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

	A	B	C	D	E	F	G
1	NAME	IT	TAX	MHRM	ECO	TOTAL	AVERAGE
2	KIRTI	86	80	65	61		
3	RIDHI	82	78	71	58		
4	ADITYA	94	89	76	72		
5	GAURAV	76	70	64	55		
6	MITALI	79	67	59	60		
7	HIGHEST						

Write the steps to obtain
i) TOTAL marks in column F.
ii) AVERAGE marks as average of best three in column G.
iii) HIGHEST marks subject wise in cells B7, C7, D7 and E7 respectively.

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

1. FV( )   2. PMT( )   3. ROUNDUP( )   4. NPER( )

5. CEILING( )   6.MOD( )   7. SQRT( )

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