

Duration: 2 Hours 30 min

Max Marks: 75

**Note : All questions are compulsory**

- Q 1 A** Attempt any Two sub questions from a),b) & c) in MS-Excel **2**  
**(True or False )**  
**a** If a cell display ##### it means that it contains invalid data  
**b** The default cell reference is an absolute cell reference  
**c** Every formula must begins with \$ sign
- B** Attempt any Two sub questions from d),e) and f) in My SQL **2**  
**(Multiple Choice )**  
**d** To make changes in the structure of the existing table we use \_\_\_\_\_  
 1) Alter                      2) Update                      3) Set                      4) Create  
**e** To save the transaction we use \_\_\_\_\_  
 1) Commit                      2) Rollback                      3) Select                      4) Cancel  
**f** A data base contains one or more \_\_\_\_\_  
 1) Rows                      2) Tables                      3) Columns                      4) Databases
- C** Attempt any Six sub questions from g),h),i),j),k),l),m),n), and o) in Data Communication ,Networking and Internet **6**  
**( True or False )**  
**g** HTTP is a protocol on the internet  
**h** A bus topology uses a single cable  
**i** A fiber optic cable carries data using Electric current  
**j** MAN is spread over many countries  
**k** Google.com is a search engine  
**l** Failure of a node bring down the entire network in a star topology  
**m** A blog is a digital diary  
**n** A cyber crime means cheating through computer or internet  
**o** An email address can contains 7 layers
- D** Attempt any Five sub questions from p),q),r),s),t),l),u),v), and w) in Data Communication ,Networking and Internet **5**  
**(Multiple Choice)**  
**p** Each web page has a unique address called a \_\_\_\_  
 a) Bridges                      b) URL                      c) Email                      d) None of these  
**q** \_\_\_\_\_ is used to create Web pages  
 a) HTTP                      b) HTML                      c) SMTP                      d) FTP  
**r** A hyperlink can appear as \_\_\_\_\_  
 a) Only Text                      b) Only Images                      c) Code                      d) Both text and Images  
**s** The fastest transmission media is  
 a) Twisted pair                      b) Fiber Optics                      c) Co-axial                      d) Wireless  
**t** The exchange of information between computers is governed by a set of rules called  
 a) Media                      b) Protocol                      c) Channel                      d) Sender  
**u** A \_\_\_\_\_ joins multiple computers together to form a single network  
 a) Bridge                      b) Switch                      c) Hub                      d) Router  
**v** In \_\_\_\_\_ topology all nodes are connected directly to the central system  
 a) Bus                      b) Ring                      c) Star                      d) Mesh  
**w** A place on the web page that signals a connection to another webpage is called  
 a) Protocol                      b) Blog                      c) Link                      d) Google

- Q 2 A** Attempt any one sub questions from a) & b) in Data Communication ,Networking and Internet **8**
- a** Explain briefly the topologies Star and Ring used in networking.
- b** Write short notes on i) LAN ii) WAN
- B** Attempt any one sub questions from c) & d) in Data Communication ,Networking and Internet **7**
- c** What is OSI model? Explain the three layer of OSI model.
- d** What is hacking and explain any three types of hackers
- Q 3 A** Answer any one sub question from a) and b) in My SQL **8**
- Write MySQL statement to create a table called sales\_details having the columns Customer id(Cid, integer, Primary key, Not Null ), Name (CName character with variable width 30 columns),order no (OrderNo Integer),Item name(Item\_name character 20),quantity ordered(Qty\_order Integer),unit price(Unit\_price Integer),date of order(DOA date).
- a** Write MySQL statement to create a table called STUDENTS  
Columns in the table: Admission number (Adm\_no Integer Primary key),first name (Fname character(15), Last name (Lname character(15)),Date of birth(Dob date), marks in HSC(Hsc\_Marks Integer), gender (Gender Enum),Admission no. should be automatically generated every time you enter a record
- B** Answer any one sub question from c) and d) in My SQL **7**
- There exists a table called Student containing the columns Roll Number (RNO, integer, Primary Key), Name (NAME, 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.
- c**
- i) Display the structure of the table student.
- ii) Display all the information from the table student.
- iii) Add a new column Mobile Number (MOB, integer) at the end of the table Student
- iv) Delete the row where roll number of the student is 96.
- v) Change the Divison of students with roll number 95 to Div B
- vi) Update Mobile number 8652007978 of student whose rollno is 10.
- vii) Rename the table Student as Student\_Info.
- d** Explain the following built in function in My SQL
- 1)LEFT()                      2) RIGHT()                      3) MID()                      4) NOW()                      5) POW()  
6 )LENGTH()                      7) CONCAT ()
- Q 4 A** Answer any one sub question from a) and b) in My SQL **8**
- There exists a table LIBRARY containing accession number (ASNO, integer), book name(BNAME, character), author's name (AUTHOR, character) and number of pages (NUM, Integer). There exists another table BOOKS containing columns student number (SNO, integer), accession number (ASNO, integer) and date of issue (DOI, date)
- Write MySQL queries for the following:
- a**
- i) Display the book name, author name, student number and date of issue for LIBRARY having more than 150 pages using both the tables
- ii) Display the book name, accession number and date of issue for all the books using both the tables
- iii) Display book name, author name and number of pages from the table LIBRARY for those books where the number of pages is above the average number of pages.
- iv) Display student number, accession number and date of issue for student number 101 from the table BOOKS
- b** There exists a table CUSTOMER containing the following columns: customer number (CNO, integer), customer name (CNAME, character), balance due (BD, numeric)

and date of transaction (DT, date)

Write MySQL statements to

- i) Display the customer number, maximum balance due and total of balances due grouped by customer number
- ii) Display the customer number, minimum balance due and number of balances due grouped by customer number
- iii) Display all the rows where the balance due is more than average balance due
- iv) Display all the rows where the name starts with 'R'
- v) Display the customer number, balance due and date of transaction for date of transaction before 20 July 2022

**B** Answer any one sub question from c) and d) in My SQL

7

There exists a table called BANK containing columns bank account number (BAN, integer), name of the depositor (DNAME), Amount deposited (ADEP) and date of deposit (DOD)

Write My SQL statements for the following:

- i) Display the bank account number, name of the depositor, number of amount deposited and minimum amount deposited group account number wise
- c ii) Display the bank account number, name of the depositor maximum amount deposited and total of amount deposited grouped account number wise for bank account no 123

iii) Display the bank account number, name of the depositor, and date of deposit in descending order of date of deposit

iv) Display all information of bank account numbers 3 to 7

There exists a table COMPANY containing the columns employee number (ENO, integer) employee name (ENAME, character) salary (SAL, 5 integer and 2 decimal) and income tax (ITAX, numeric)

Write MySQL queries for the following:

- i) Display employee number, employer name and salary
- ii) Display employee name, income tax and 2% of the Income-Tax as 'Exemption' for all the employees
- d iii) Display all the rows where the salary is above 2 lacs
- iv) Display employee number employer name and income tax in descending order of employee number
- v) Display employee number, employer name and salary of the employees whose name is Shyam
- vi) Display all the rows where the employee name contains 'a'
- vii) Display all the rows from this table where the income tax is between 20000 and 50000

**Q 5 A** Answer any one sub question from a) and b) in MS- EXCEL

8

The following data has been entered in a worksheet.

**a**

	A	B	C	D	E	F
1	PRODUCT	UNIT PRICE	QTY SOLD	TOTALA MOUNT	DISCOUNT	NETAMO UNT
2	A	6000	10			
3	B	8500	2			
4	C	400	15			
5	D	8050	14			
6						
7						

8	RATE OF DISCOUNT	5%				
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Write the steps to obtain

The Total Amount, Discount Amount and Net Amount in columns D, E and F respectively.

The following data has been entered in a worksheet

	A	B	C	D
1	Emp No	Emp Name	Department	Salary
2	555	Virat	HR	24000
3	665	Sachin	ADMIN	15600
4	458	Sahil	HR	34500
5	255	Rahul	SALES	23500
6	125	Anish	HR	35900
7	488	Rupali	ADMIN	60000

Write the steps to do the following:

- 1 Arrange the data in alphabetical order of employee name.
- 2 Obtain the department wise subtotal of Salary.

**B** Answer any one sub question from c) and d) in MS- EXCEL

**c** Consider the following worksheet showing the cost of machinery find the depreciation using WDV (Written Down Value) Method.

	A	B	B	D	E	F
1	Cost	500000		Years	Depreciation	WDV
2	Dep. Rate(%)	10		1		
3	No. of Years	5		2		
4				3		
5				4		
6				5		

Explain the following built-in functions in MS-EXCEL

- d**
- |            |           |           |             |
|------------|-----------|-----------|-------------|
| 1.PMT()    | 2. RATE() | 3. MOD()  | 4.ROUNDUP() |
| 5. COUNT() | 6. SUM()  | 7. SQRT() |             |

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