

Program Sem: T.Y.B.Com– Sem - V Course: Computer systems & applications paper - I

Program Code: UGCOM01 Course Code: 23120

Duration: 2 ½ Hours

10 NOV 2025

Max. Marks: 75

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat diagrams wherever necessary.

Q. 1 A. Attempt any **two** sub-question from (a), (b) & (c) in MS-EXCEL. (True / False) [02]

- (a). A function must have at least one argument.
- (b). Every formula must begin with \$ sign.
- (c). A pivot table is a dynamic summary of the data.

B. Attempt any **two** sub-question from (a), (b) & (c) in MySQL. (Multiple Choice) [02]

(d). To indicate that there should be 6 integer and 3 decimal positions we use _____.

- | | |
|------------------|------------------|
| (a) Decimal(7,3) | (b) Decimal(9,3) |
| (c) Decimal(7,2) | (d) Decimal(6,3) |

(e). To make changes in the structure of the existing table we use _____.

- | | |
|-----------|------------|
| (a) Alter | (b) Update |
| (c) Set | (d) Create |

(f). The statement used to perform queries on tables begin with _____.

- | | |
|------------|---------------|
| (a) Query | (b) Selection |
| (c) Select | (d) Search |

C. Attempt any **six** sub-question from (g), (h), (i), (j), (k), (l), (m), (n) & (o) in Data Communication, Networking & Internet. (True / False) [06]

- (g). A network is used to share hardware and software.
- (h). Dial up connection requires a modem and a phone call.
- (i). More than one file can be attached with an email.
- (j). Facebook is a search engine.
- (k). In client server architecture, all resources are controlled by server.
- (l). IP addresses are easier to remember.
- (m). Vishing uses VoIP to make a phishing attack.
- (n). Opera is web browser.
- (o). Wireless connection use radio and infrared signals.

D. Attempt any **five** sub-question from (p), (q), (r), (s), (t), (u), (v) & (w) in Data [05]
Communication, Networking & Internet. (Multiple Choice)

- (p). _____ is used to connect the network.
- (a) Bridge (b) Hub
(c) Network (d) Router
- (q). Which of the following channel is an odd man out ?
- (a) Twisted Pair Cable (b) Radio Wave
(c) Co-Axial Cable (d) Fiber-Optic Cable
- (r). There are _____ layers in OSI model.
- (a) 6 (b) 7
(c) 5 (d) 10
- (s). _____ hacker break to download into the security system for non-harmful reason.
- (a) Grey Hat (b) Blue Hat
(c) White hat (d) Black Hat
- (t). POP stands for
- (a) Post Office Protocol (b) Post Open Protocol
(c) Pre Open Protocol (d) Post One Protocol
- (u). The activity of updating a blog is called
- (a) User (b) Presenter
(c) Blogger (d) Blogging
- (v). A _____ network spans a number of cities and countries.
- (a) LAN (b) MAN
(c) WAN (d) PAN
- (w). The way in which computer are arranged physically is called
- (a) Network (b) Topology
(c) Router (d) Bridge

Q. 2 A. Attempt any one sub-question from (a) & (b)

[08]

- (a) Define network topology. Explain Bus topology with a suitable diagram and list its advantages and disadvantages.

OR

- (b) Write and explain components of data communication.

Q. 2 B. Attempt any one sub-question from (c) & (d)

[07]

- (c) Explain Twisted Pair cable and Co-axial media.

OR

- (d) Differentiate between LAN and WAN.

Q. 3 A. Attempt any one sub-question from (a) & (b)

[08]

- (a) Write MySQL statements to create a table called DEPOSIT having 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).

OR

- (b) Write MySQL statement to create a table called ACCOUNT having the columns Account Number (ANO, integer, primary key), Account holder name (NAME, character with variable width 25 columns), Gender (GEN, Boolean), Type of Account (TYPE, character with variable width 25 columns, default value 'SAVINGS') and Balance (BAL, very large integer).

Q. 3 B. Attempt any one sub-question from (c) & (d)

[07]

- (c) There exists a table called ESALARY having the following columns, Employee number (ENO, integer, primary key), employee name (ename, character with variable size 25), date of birth (dob, date) and salary (sal, 5 integers and 2 decimals).

Write MySQL statements for the following:

1. Decrease the salary of all employees by 2000.
2. Change the size of the column Sal to 7 integers and 3 decimals.
3. Rename the column DOB to DBT.
4. Delete the row where employee number is 179.
5. Delete the column ename.

OR

- (d) Explain the following inbuilt function in MySQL.

(i) NOW() (ii) DAYNAME (iii) ABS() (iv) POW()
(v) LTRIM (vi) Curdate() (vi) Upper()

Q. 4 A. Attempt any one sub-question from (a) & (b)

[08]

- (a) There exists a table called TOUR containing columns Traveler's Number (TNO, integer), Name (TNAME, character with variable size 20), Age (AGE, integer), Destination city (DCITY, character with variable width 10), Date of Travel (DOT, Date) and Fare (FARE, decimal (6,2)).

Write MySQL statements for the following:

Display traveler's Number and name where destination city is SHIMLA.

Display all rows in descending order of AGE.

Display all rows where the 3rd last letter in name is T.

Display all rows where the fare is below 2000.

Display 5% of Fare as Commission for all travelers.

OR

- (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:

1. Display the customer number, maximum balance due and total of balances due grouped by customer number.
2. Display the customer number, minimum balance due and number of balances due grouped by customer number.
3. Display all the rows where the balance due is more than average balance due.
4. Display all the rows where the name starts with 'R'.
5. Display the customer number, balance due and date of transaction for date of transaction before 20 July 2022.

Q. 4 B. Attempt any one sub-question from (c) & (d)

[07]

- (c) There exists a table GOAIR having the columns Flight Number (FNO, Integer), Destination Name (DNAME, Character), PRN Number (PRN, Integer), Fare Amount (FARE, Numeric).

Write MySQL statements for the following:

Display Flight Number, Destination Name and Fare Amount form this table.

Display Flight Number and Fare Amount for the records where Fare Amount is below the average Fare Amount.

Display PRN Number, Destination Name for the records where Fare Amount is equal to the Highest Fare Amount.

Display Destination Name, maximum Fare Amount and total Fare Amount from the table for each Destination Name.

Display all the rows from this table in the descending order of Fare Amount.

OR

- (d) There exists a table LIBRARY containing accession number (ASNO, integer), book name (BNAME, character), authors 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:

1. Display the book name, author name, student number and date of issue for LIBRARY having more than 150 pages using both the tables.
2. Display the book name, accession number and date of issue for all the books using both the tables.
3. 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.
4. Display student number, accession number and date of issue for student number 101 from the table BOOKS.

Q. 5 A. Attempt any one sub-question from (a) & (b)

[08]

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

| | A | B | C | D |
|---|------|-----|--------|-------|
| 1 | Name | Age | City | Sales |
| 2 | Anju | 43 | Mumbai | 32000 |
| 3 | Raj | 33 | Delhi | 20000 |
| 4 | Deep | 45 | Surat | 34000 |

Write the steps to :

- (i) Sort the data in the ascending order of Name.
- (ii) Calculate subtotal of sales for each city.

OR

- (b) In the following worksheet the cost of machinery is entered in cell B2, number of years is entered in B3 and rate of depreciation is entered in cell B4.

| | A | B | C | D | E | F |
|---|--------------|--------|---|--------------|------------|------------|
| 1 | | | | YEARS | DEP | WDV |
| 2 | COST | 750000 | | 1 | | |
| 3 | YEARS | 6 | | 2 | | |
| 4 | RATE | 12% | | 3 | | |
| 5 | | | | 4 | | |
| 6 | | | | 5 | | |
| 7 | | | | 6 | | |

Write the steps to obtain the year wise depreciation DEP and written down value WDV in columns E and F respectively where depreciation is computed using reducing balance method.

Q. 5 B. Attempt any one sub-question from (c) & (d)

[07]

- (c) Answer the following using spreadsheet giving the runs scored by a batsman in 4 matches.

| | A | B | C | D | E | F | G |
|---|---------------|--------|--------|--------|---------|-------|---------|
| 1 | Name | Match1 | Match2 | Match3 | Matche4 | Total | Average |
| 2 | Sachin | 73 | 78 | 76 | 56 | | |
| 3 | Kohali | 67 | 45 | 45 | 57 | | |
| 4 | Kapil | 45 | 56 | 57 | 56 | | |
| 5 | Sharma | 56 | 76 | 43 | 76 | | |
| 6 | Gill | 56 | 67 | 45 | 76 | | |
| 7 | | | | | | | |
| 8 | Highest score | | | | | | |
| 9 | Lowest score | | | | | | |

Write the steps to Calculate:

- (i) Total and Average score in column G and H.
- (ii) match-wise calculate the highest and the lowest score in row 8 and 9.

OR

- (d) Explain the following built-in function in MS-EXCEL.
- (i) PMT
 - (ii) ROUNDUP
 - (iii) FLOOR()
 - (iv) MIN()
 - (iv) COUNT()
 - (v) PV()
 - (vi) SQRT()

-- X -- X --