

# T Y B com question paper of Mumbai University - April 2010

## Computer Systems and Applications (Revised Syllabus)

Note: (1) All questions carry equal marks and are compulsory. (2) Attempt either Question No.4 on Visual Basic OR Question No.4 on C language. (3) From each question attempt any two sub questions i.e. a, b or a, c or b, c. (4) Figures to the right indicate maximum marks for a question.

### Q. 1 A (I) State whether the following statements are true or false: Marks (4)

- (1) In Data Communication the medium of transmission cannot be wireless.
- (2) A single computer carries the entire task in distributed processing.
- (3) An IP address contains a set of 4 numbers separated by dots.
- (4) Dial-up connection provides fastest internet access.

(II) Answer the following in one or two lines:

- (1) What is the use of a Switch in a network? (2) What is the full form of TCP/IP?
- (3) What is an E-mail?
- (4) Name any two Boolean search operators.

### Q. 1 B Select the appropriate option from the following: Marks (4)

(1) A Network where individual computers or nodes share the processing and storage of data with the

server is -----

- (a) Peer to Peer network    (b) Client Server based network
  - (c) MTTP network    (d) None of these
- (2) In ----- topology all the nodes are connected with a single cable.
- (a) Bus    (b) Ring
  - (c) Star    (d) None of these
- (3) The protocol to fetch. E-mail from a remote mail-box into your computer is \_\_\_\_
- (a) POP    (b) SNTP
  - (c) FTP    (d) HTTP
- (4) \_\_\_\_ allows user to search simultaneously on several search engines.
- (a) Server    (b) Meta Search Engine
  - (c) Boolean Search    (d) None of these
- (II) Give one difference between each of the following:
- (1) LAN and MAN
  - (2) Bus and Ring Topologies

### Q.1 (C) Marks(8)

- (I) What is Domain Name System? What is its purpose?
- (II) Explain any two wired transmission media.

**Q.2 (A) (I) State whether the following statements are true or false: Marks (4)**

- (1) B2C refers to business selling goods to other business.
- (2) Decryption means converting readable text into cipher text.
- (3) In E-commerce Ubiquity refers to Universal Standards.
- (4) On limitation of E-Commerce is lack of PC penetration.

**(II) Answer in one line each of the following: Marks (4)**

- (1) What is the meaning of the term 'Portals' in E-Commerce?
- (2) What is Encryption?
- (3) What is the full form of P2P in E-Commerce?
- (4) What is a Digital Signature?

**(B) (I) Select the appropriate option from the following: Marks (4)**

- (1) The Revenue model in E-Commerce where companies earn revenue by Publicizing product/services is called.
  - (a) Sales Revenue
  - (b) Transaction Fee Revenue
  - (c) Advertising Revenue
  - (d) Affiliate Revenue
- (2) In E-commerce, to authenticate the sender of the message we use
  - (a) Digital Signature
  - (b) Privacy Protocol
  - (c) Digital Sending
  - (d) Digital Protocol
- (3) It is a convention that all sites that use SSL connection while making a secure connection, use instead of HTTP.
  - (a) HTTPS
  - (b) POP
  - (c) FTP
  - (d) TCP/IP
- (4) SSL stands for
  - (a) Single Socket Layer
  - (b) Secure Sockets Layer
  - (c) Secure Standard Layer
  - (d) Simple Sockets Layer.

**(II) Give one difference between each of the following: Marks (4)**

- (1) B2C and C2C types of E-Commerce.
- (2) Richness and Information density features of E-Commerce.

**(C) (I) Explain Secure Electronic Transaction in E-Commerce. Marks (4)**

**(II) What are the limitations of E-Commerce? Marks (4)**

**Q.(3) (A) (I) There exist a table called SALARY containing columns Employee number (ENO, Integer, Primary Key), Employee's name (ENAME, Character), gender (GENDER character, width 1) and BPA Y (basic pay, width 7 with two decimals).**

**(2) Write MySQL queries for the following:**

- (1) Display employees' number, gender and basic pay for all employees.
- (2) Display employee number, employees' name, gender and 30% of basic pay as HRA for all

employees.

**(II) Explain the use of the MySQL functions:**

- (1) LOWER ( )
- (2) ABS ( )

**(III)** Write a MySQL statement to create a table named OFFICE containing information of the employees with the following columns,  
Employee Number (EN, Integer, Primary key), Employee Name (ENAME, Character, variable width 20, should not be empty), gender (GENDER, Character, width 1, default value as "M") and date of joining (DOJ, Date).

**(B) (I)** There exists a table called WAGES containing columns Employee Id (EMP \_10, Integer, primary key), Employee name (NAME, Character), Department name (DEPT, Character) and Basic pay (BASIC, width 7 with 2 decimal places).

Write MySQL statements for the following:

- (1) Display Department name, number of employees in the department and total of the basic pay of the employees grouped departmentwise. Marks (2)
- (2) Display each department name & the minimum and maximum basic pay grouped departmentwise.

**(II)** There exists a table STUDENT, containing columns student's roll number (RNO, Integer, primary key), student's name (SNAME, Character), and date of birth (DOB, Date). There exists another table, EXAM containing columns roll number (RNO, primary key), class (CLASS, Character), total marks (TOT, Integer). Write MySQL statement to display the Roll number, Name, and total marks of the students whose total marks are 350 or more. Marks (4)

**(C) (I)** There exists a table called EMP containing columns Employee name (ENAME, Character), date of birth (BOT, Date), address (ADDR, Character), Gender (GEN, Character) and Phone number (PHONE, integer)

Write MySQL statements for the following: Marks (4)

- (1) Display the structure of the table.
- (2) Add a column called BONUS having width 7 with 2 decimals to the table.
- (3) Rename the column BONUS as BON.
- (4) Delete the table EMP.

**(II)** There exists a table called PAYEE containing columns Payee's identification (PAYEE\_ID, Integer), Payee's name (NAME, Character) and Sales tax (STAX, width 7 with 2 decimal places). Write a MySQL sub query to display Payee's identification, Payee's name and Sales tax for those payees whose sales tax payment is above the average sales tax. Marks (4)

**Q. 4 (A) (I) State whether the following statements are true or false: Marks (4)**

- (1) In Visual Basic a Form represents a Window.
- (2) Visual Basic is a Procedural Language.
- (3) Action associate with an object in Visual Basic is called its Method.
- (4) The Visual Basic Project file is saved with extension .frm.

- (II)** (1) What is the purpose of the Tool Box in Visual Basic?  
(2) Name any two properties of the Text box in Visual Basic.

- (B) (I)** What is the difference between:  
(1) Option Button and Check Box in Visual Basic.  
(2) Combo Box and List Box in Visual Basic.

**(II)** Create a Visual Basic Project that will allow the user to enter a positive number and determine whether it is odd or even. Marks (4)

**(C) (I)** What is the purpose of a Dialog Box Control in Visual Basic? Marks (2)

**(II)** Write a project to design a suitable form to allow the conversion of currency from Indian Rupees to US dollars or Vice-Versa. The project should provide two option buttons asking the user to select either Indian Rupees to US dollar or US dollar to Indian Rupees. Allow the user to enter the amount and based on the selection convert the amount to the desired currency and display the result. Marks (6)

**OR**

**Q.4 (A) (I)** Give the difference between the following with reference to C Language: Marks (4)

- (1) scanf ( ) and gets ( )  
(2) putchar ( ) and puts ( )

**(II)** Give the output of the following C-program? Marks (4)

```
main ( )  
(float a=-3517.276, b=48.99;  
printf{"%+010.2f%-6.1fn",a,b);  
printf("%+08.1f%+-5.0fn",a,b);}
```

**(B) (I)** Answer the following with reference to C Language: Marks (4)

- (1) What is an escape sequence? Give an example.  
(2) What are identifiers in C language? Give one example.

**(II)** Write a program in C Language to find and display the sum of  $5 \times 22 + 7 \times 52 + 9 \times 82 + \dots + 23 \times 29.2$  Marks (4)

**(C) (I)** What is the difference between break and continue statement in C Language? Marks (2)

**(II)** Write a C program to input the invoice number (ino) and sales amount (sa) and print the invoice number, sales amount, Sales tax (st) and total amount (t) where the Sales tax is calculated on the sales as follows: Marks (6)

Sales	Sales Tax
First 10,000	2%
Next 25,000	4%
Excess	5%

**(5) (A) (I)** Explain the terms Absolute cell reference and Relative cell reference in relation to Spreadsheets. Marks (2)

**(II)** Answer the following using Spreadsheet: Marks (6)

A	B	C	D	E	F	G	H	I	
1	NAME	ENG	HIN	ECO	BK	A/C	TAX	AVERAGE	RESULT
2	GUPTA	76	63	78	66	86	68		
3	SURI	54	49	48	52	46	59		
4	KHAN	72	69	66	78	75	81		
5	JUDE	87	73	84	82	91	93		
6	MINAZ	54	49	28	31	17	21		

For the above spreadsheet write the steps to obtain the average, as the average of the best five subjects for each student and the result which is "PASS" when this average is 50 or more otherwise "FAIL".

**(B) (I)** Explain the use of the following functions in Spreadsheets

(1) PMT ( )

(2) SUMIF ( )

**(II)** Answer the following using Spreadsheet: Marks (6)

In a worksheet, Names are entered in column A and corresponding Basic Pay is entered in column B for 30 persons, the first row contains the heading and the rest of the rows contain data. Write the steps to obtain in column C, D and E the HRA, DA and Total Pay where HRA is @ 20% of basic pay or Rs. 5,000 whichever is less, and DA is 25% of basic pay wherever basic pay is less than 5000 otherwise it is 40% of basic pay.

**(C) (I)** What is the difference between Sort and Filter options with reference to spreadsheets?

**(II)** Answer the following with reference to spreadsheets: Marks (6)

A spreadsheet contains Roll no. and marks out of 100 in 4 subjects entered in columns A, B, C, D, E respectively in first 26 rows. The first row contains headings and subsequent rows contain data. Write the steps to find average and grade in column F and G respectively where Grade is to be assigned as follows:

Average	Grade
75 or more	A
60 or more and below 75	B
Below 50	C