

Subject: Informatics Practice
Maximum Marks: 100 (Theory: 70, Practical: 30)

Syllabus

| Unit | Topic | Marks |
|------|--|-------|
| I | Computer Networks and OSS | 20 |
| II | Visual Basics | 15 |
| III | Fundamentals of DBMS | 20 |
| IV | Internet and Web Application Development | 15 |

Model Question Paper prepared as per new format of CBSE

| Q.No | Units Covered | Marks | Sub Questions | Marks Distribution |
|------|--|-------------|---------------|--------------------|
| 1 | I (Computer Networks and OSS) | 10 | 6 (a - f) | (1x3)+(2x2)+3 = 10 |
| 2 | II (Visual Basics) | 10 | 6 (a - f) | (1x3)+(2x2)+3 = 10 |
| 3 | III (Fundamentals of DBMS) | 10 | 6 (a - f) | (1x3)+(2x2)+3 = 10 |
| 4 | IV (Internet and Web Application Development) | 10 | 6 (a - f) | (1x3)+(2x2)+3 = 10 |
| 5 | I (Computer Networks and OSS) | 10 | 3 (a - c) | (1x2)+(2x4) = 10 |
| 6 | III (Fundamentals of DBMS) | 10 | 3 (a - c) | (1x2)+(2x4) = 10 |
| 7 | II & IV (Fundamentals of DBMS/ Internet and Web Application Development) | 10 (5+5) | 3 (a - c) | (1x2)+(2x4) = 10 |

Note:

- Q. 1 to Q. 4 have six sub-questions carrying 1, 2 and 3 marks.
- Q.5 to Q. 7 has three sub-questions. Carrying 2 and 4 marks.
- Alternative Choice has been provided in Q.No 5, 6 and 7 for the sub questions (b) and (c) carrying 4 marks.
- Marks distributions with respect to total question is in below mentioned table.

| Marks | Total Questions | Total Marks |
|--------------|-----------------|-------------|
| 1 | 12 | 12 |
| 2 | 11 | 22 |
| 3 | 4 | 12 |
| 4 | 6 | 24 |
| Total | | 70 |

- The same question paper can be converted in the older format of CBSE with Very short/Objective, Short answer and Long answer type questions.

Model Paper-2020 Informatics Practices

Instructions

- (i) All questions are compulsory.
- (ii) Answer the questions after carefully reading the text.
- (iii) This question paper contains 7 questions carrying 10 marks each.
- (iv) Q. 1 to Q. 4 have six sub-questions carrying 1, 2 and 3 marks.
- (v) Q.5 to Q. 7 has three sub-questions carrying 2 and 4 marks.

Time allowed: 3 hours

Maximum Marks: 70

Q. 1

- a) Define MAC address along with an example? (1)
- b) The Length of IPv4 and IPv6 address in bits are_____ and _____. (1)
- c) What is an Open Source Software? (1)
- d) Define Computer Network? Name different types of computer networks. (2)
- e) What is a Cyber-Crime and also mention the act that deal with cyber-crime in India? (2)
- f) Define the following Networking Devices: (3)
 - (i) Router (ii) Modem (iii) Switch

Q. 2

- a) What is VB (Visual Basic) Form? (1)
- b) The full form of IDE is _____. (1)
- c) What is the purpose of Message Box Function MsgBox () in VB? (1)
- d) Why is VB Programming language called as Event driven language? (2)
- e) Differentiate between SDI and MDI forms? (2)
- f) Define the following terms: (3)
 - (i) Error (ii) Failure (iii) Fault

Q. 3

- a) Define DBMS (Database Management Systems)? (1)
- b) What do you mean by Cardinality and Cardinality Ratio in DBMS? (1)
- c) Write down the name of three commands of TCL? (1)

- d) Differentiate the usage of Drop and Delete commands of SQL along with syntax? (2)
- e) What is the difference between Primary key and Foreign Key? (2)
- f) Define the different types of integrity constraints of SQL? (3)

Q. 4

- a) What is a Web Browser? Write down name of world's first web browser? (1)
- b) What is difference between the Internet and WWW (World Wide Web)? (1)
- c) What is an Anchor tag in HTML? (1)
- d) What is the difference between JPEG and GIF image formats? (2)
- e) What is HTML and what is it used for? (2)
- f) What is a Search Engine? How does a search engine works? (3)

Q. 5

- a) Define Data Communication and the elements of data communication? (2)
- b) Differentiate between Guided and Unguided Media along with examples? (4)

OR

Define Network Topology? Explain different types of network topologies along with diagrams?

- c) Define Network Security and explain the different types of threats to network security? (4)

OR

Define the following terms?

- (i) Anti- Virus (ii) Firewall (iii) Snooping (iv) Denial of Service

Q. 6

- a) Write down the syntax and an example of following SQL Functions?
(i) ABS () (ii) CEIL () (iii) ROUND () (iv) MOD () (2)
- b) Write down the SQL script to create a table with table name as *Student* that will store the student's data with attributes as *Roll Number, Name, Parentage, Address* and *Date of Birth*? Which attribute will act as Primary key and also

mention the data type of each attribute? (4)

OR

Write down an SQL script to create a table with table name as *Employee* that will store the employee's data with attributes as *Employee ID, Name, Designation, Department* and *Address*? Which attribute will act as Primary key and also insert the data of 5 employees in it?

- c) Write down the different commands of DDL and DML along with syntax and an example for each command? (4)

OR

Define Database Transaction? What are the ACID properties of a database transaction?

Q. 7

- a) Define the Following terms: (2)

(i) Loops in Visual Basics (ii) Tags in HTML

- b) Write down the HTML code to create the below mentioned table? (4)

| Roll Number | Name | Class | D.O.B |
|-------------|-------|--------|------------|
| 101-2020 | John | HSC-II | 11-10-1999 |
| 102-2020 | Alex | HSC-II | 15-02-2001 |
| 103-2020 | Bob | HSC-II | 16-03-2005 |
| 104-2020 | David | HSC-II | 03-08-2002 |
| 105-2020 | Steve | HSC-II | 02-01-2003 |

OR

Define tag along with five attributes? Write down an HTML code to insert an image in a web page and hyperlink to the caption of image?

- c) Write a program in Visual Basics to swap two given numbers without using a third variable? (4)

OR

Write a program in Visual Basics to check whether a number is prime or not?