SHAMBHUNATH INSTITUTE OF PHARMACY

Subject Code: BP205T   **Subject: Computer Application in Pharmacy**

B.PHARM: Ist year   **SEMESTER: II**

FIRST SESSIONAL EXAMINATION, EVEN SEMESTER,   (2019-2020)

Time –1hr 30 min   **Maximum Marks – 30**

SECTION – A

1. Attempt all questions in brief.   **(1*5 = 5)**

Q N	QUESTION	Marks	CO	BL
a. Ans.	Write full form of HTML, www and XML. HTML-hypertext markup language www-world wide web XML-extensible markup language	1	2	1
b. Ans.	Convert $(9AF)_{16} \rightarrow (?)_2$ $(100110101111)_2$	1	1	3
c. Ans.	Convert binary number into hexadecimal-$(101100110101)_2 \rightarrow (?)_{16}$ $(B35)_{16}$	1	1	3
• Ans.	Write the range of Binary, Octal, decimal and hexadecimal. Binary-0,1 Octal-0,1,2,3,4,5,6,7 Decimal-0,1,2,3,4,5,6,7,8,9 Hexadecimal- 0-9 and A-F	1	1	3
e. Ans.	List of two input and output devices of computer system. Input device-(1)keyboard (2)Mouse Output device-(1)Monitor (2)Printer	1	1	2

SECTION – B

2. Attempt any <u>TWO</u> of the following.   **(2*5 = 10)**

Q N	QUESTION	Marks	CO	BL
a.	Describe HTML with a suitable example.	5	2	1
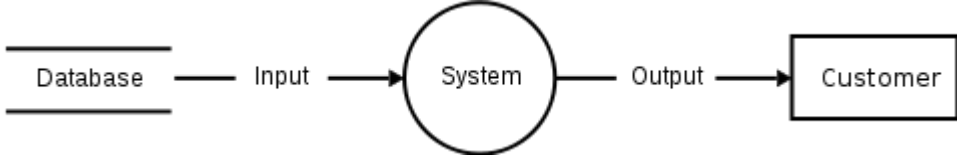
Ans.	HTML-HTML stands for **H**yper **T**ext **M**arkup **L**anguage. This acts as a foundation to hold every website.			
	• HTML is the **standard markup** language for Web pages			
	• HTML **elements** are the building blocks of HTML pages			
	• HTML elements are represented by <> tags			
	• It is not a programming language.			
	• It is not a case sensitive language.			
	• HTML tags come in pair and first tag in this pair is called start tag and second tag is called end tag.			
	• HTML tags are-<h1>…..<h6> for heading,<p> for paragraph, for line break etc.			
	HTML structure			
	<html>			
	<head><title>……….**</title>**			
	</head>			
	<body>			
	….			
	</body>			
	</html>			
b. Ans.	Describe XML with suitable Example. **Extensible Markup Language** (**XML**) is a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable.This language is self defining and uses DTD(Document type Definition)to describe its data. USE OF XML- • XML has become default for many office productivity. • It is used as a base language for communication protocols like XMPP. • It is in web development. • It is also used interchange data from one computer to another through internet. • XML can separate data from HTML. • XML is used to exchange data.	**5**	**1**	1

- XML can share data more useful.

Tags of XML-

1.start tag as <section>

2.End tag as </section>

3.Empty tag as <line break/>

Ex-For a note containing simple reminder from Sam to Tom.

<? xml version="1.0"encoding,"iso-8859-1"?>

<note>

<to>Tom</to>

<from>Sam</from>

<heading>Reminder</heading>

<body>don't forget me this weekend!</body>

</note>

c.
 	
Ans.
	Solve the Binary addition- $(1111)_2$ + $(111)_2$ + $(11)_2$ + $(1)_2$
	1111
	  111
	    11
	     +1
	11010
	So Ans. Is $(11010)_2$
		5	1	3

d. Ans.	Solve the Binary subtraction-$(111001)_2$ –$(110)_2$ 111001 -110 110011 so answer is $(110011)_2$	5	1	3

SECTION - C

3. Attempt any ONE part of the following: (1*5 = 5)

Q N	QUESTION	Marks	CO	BL
a. Ans.	Describe Data Flow Diagram in your own words. A **data-flow diagram** (DFD) is a way of representing a flow of a data of a <u>process</u> or a system (usually an <u>information system</u>). The DFD also provides information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow, there are no decision rules and no loops. **Process** The process (function, transformation) is part of a system that transforms inputs to outputs. The symbol of a process is a circle, an oval, a rectangle or a rectangle with rounded corners (according to the type of notation). The process is named in one word, a short sentence, or a phrase that is clearly to express its essence.[2] **Data Flow** Data flow (flow, dataflow) shows the transfer of information (sometimes also material) from one part of the system to another. The symbol of the flow is the arrow. The flow should have a name that determines what information (or what material) is being moved. Exceptions are flows where it is clear what information is transferred through the entities that are linked to these flows. Material shifts are modeled in systems that are not merely informative. Flow should only transmit one type of information (material). The arrow shows the flow direction (it can also be bi-directional if the information to/from the entity is logically dependent - e.g. question and answer). Flows link processes, warehouses and terminators.[2] **Warehouse** The warehouse (datastore, data store, file, database) is used to store data for later use. The symbol of the store is two horizontal lines, the other way of view is shown in the DFD Notation. The name of the warehouse is a plural noun (e.g. orders) - it derives from the input and output streams of the warehouse. The warehouse does not have to be just a data file, for example, a folder with documents, a filing cabinet, and optical discs. Therefore, viewing the warehouse in DFD is independent of implementation. The flow from the warehouse usually represents the reading of the data stored in the warehouse, and the flow to the warehouse usually expresses data entry or updating (sometimes also deleting data). Warehouse is represented by two parallel lines between which the memory name is located (it can be modelled as a UML buffer node).[2] **Terminator** The Terminator is an external entity that communicates with the system and stands outside of the system. It can be, for example, various organizations (eg a bank), groups of people (e.g. customers), authorities (e.g. a tax office) or a department (e.g. a human-resources department) of the same organization, which does not belong to the model system. The terminator may be another system with which the modeled system communicates.[2]	5	1	2

	◯ Function ▬▬▬ File/Database ▭ Input/Output ↘ Flow			
b. **Ans.**	How will you convert binary number system into decimal number system and vice versa? Give example. Conversion- 1.Binary to decimal- Ex-$(11001)_2 \longrightarrow (?)_{10}$ $=1*2^4+1*2^3+0*2^2+0*2^1+1*2^0=(25)_{10}$ 2.Decimal to Binary- Ex-$(25)_{10} \longrightarrow (?)_2$ 2	25	1 2	12	0 2	6	0 2	3	1 1 So Answer is bottom to top-· $(11001)_2$	5	1	1

4. Attempt any ONE part of the following: (1*5 = 5)

Q N	QUESTION	Marks	CO	BL
a. **Ans.**	Find out 2's Complement of: (i) $(111)_2 - (101)_2$ (with carry) Step-1.find 2'^{s} complement of $(101)_2$ i.e. 010+ 1=011	5	1	3

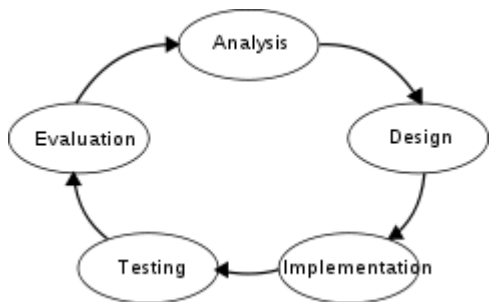|				
	Step-2.Add (011)$_2$ in (111)$_2$i.e. 111+011=1 010 Step-3.if any carry bit occur then drop the carry bit. Here 1 is carry bit Then drop 1 in resultant value.so answer is- (010)$_2$ (ii) (101)$_2$ – (111)$_2$ (without carry) Step-1. find 2'^{s} complement of (111)$_2$ i.e. 000+1=001 Step-2.Add (001)$_2$ in (101)$_2$i.e. 101+001=110 Step-3.if no carry bit occur then we take again 2's complement of resultant value with (-)ve sign. 110$^{2's\ complement}$→001+1= -010Ans.			
b. Ans.	Explain process life cycle. **Process Lifecycle** is a manner of looking at processes, in the context of their initial, maturing and final stages of evolution and growth. Understanding and analyzing processes in this manner helps to understand how they fit into a "system" of processes as well as how they change as a process matures within an organization. - **Project planning, feasibility study**: Establishes a high-level view of the intended project and determines its goals. - **Systems analysis, requirements definition**: Refines project goals into defined functions and operation of the intended application. Analyzes end-user information needs. - **Systems design**: Describes desired features and operations in detail, including screen layouts, business rules, process diagrams, pseudocode and other documentation. - **Implementation**: The real code is written here. - **Integration and testing**: Brings all the pieces together into a special testing environment, then checks for errors, bugs and interoperability. - **Acceptance, installation, deployment**: The final stage of initial development, where the software is put into production and runs actual business. - **Maintenance**: What happens during the rest of the software's life: changes, correction, additions, moves to a different computing platform and more. This, the least glamorous and perhaps most important step of all, goes on seemingly forever.	5	1	2

5. Attempt any ONE part of the following: (1*5 = 5)

Q N	QUESTION	Marks	CO	BL
a. **Ans.**	How will you convert octal to Hexadecimal number and vice versa? Give example. (i)Octal to Hexadecimal Conversion- Ex-$(345)_8 \longrightarrow (?)_{16}$ Step-1.First we find binary number in 3bit Step-2.Then we convert binary number into hexadecimal number in 4bit. $(345)_8 \longrightarrow (011100101)_2 \longrightarrow (E5)_{16}$ (ii) Hexadecimal to Octal Conversion- $(E5)_{16} \longrightarrow (?)_8$ Step-1.First we find binary number in 4bit Step-2.Then we convert binary number into octal number in 3bit $(E5)_{16} \longrightarrow (011100101)_2 \longrightarrow (345)_8$	5	1	3
b. **Ans.**	What is Planning and managing the project with a suitable figure? project planning should be effective so that the project begins with well-defined tasks. Effective project planning helps to minimize the additional costs incurred on the project while it is in progress. For effective project planning, some principles are followed. These principles are listed below. **Planning is necessary:** Planning should be done before a project begins. For effective planning, objectives and schedules should be clear and understandable. **Risk analysis:** Before starting the project, senior management and the project management team should consider the risks that may affect the project. For example, the user may desire changes in requirements while the project is in progress. In such a case, the estimation of time and cost should be done according to those requirements (new requirements). **Tracking of project plan:** Once the project plan is prepared, it should be	5	1	1

tracked and modified accordingly.

Meet quality standards and produce quality deliverables: The project plan should identify processes by which the project management team can ensure quality in software. Based on the process selected for ensuring quality, the time and cost for the project is estimated.

Description of flexibility to accommodate changes: The result of project planning is recorded in the form of a project plan, which should allow new changes to be accommodated when the project is in progress.

Project planning comprises project purpose, project scope, project planning process, and project plan. This information is essential for effective project planning and to assist project management team in accomplishing user requirements.

Project Purpose

Software project is carried out to accomplish a specific purpose, which is classified into two categories, namely, project objectives and business objectives. The commonly followed project objectives are listed below.

Meet user requirements: Develop the project according to the user requirements after understanding them.

Meet schedule deadlines: Complete the project milestones as described in the project plan on time in order to complete the project according to the schedule.

Be within budget: Manage the overall project cost so that the project is within the allocated budget.

Produce quality deliverables: Ensure that quality is considered for accuracy and overall performance of the project.