



# MUTHAYAMMAL ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi, Accredited by NAAC & Affiliated to Anna University)  
Rasipuram - 637 408, Namakkal Dist., Tamil Nadu



## MUST KNOW CONCEPTS

MKC

CSE

2021-2022

Course Code & Course Name: 19CSE03/ SALESFORCE CRM AND PLATFORM  
Year/Sem/Sec : III/V/A & B

S.No	Term	Notation Symbol)	Concept/Definition/Meaning/Units/Equation/ Expression	Units
<b>UNIT I : INTRODUCTION TO SALESFORCE</b>				
1.	<b>Salesforce</b>		Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers.	
2.	<b>CRM</b>		CRM stands for Customer Relationship Management. This technology allows you to manage relationships with your customers and prospects and track data related to all of your interactions. It also helps teams collaborate, both internally and externally, gather insights from social media, track important metrics, and communicate via email, phone, social, and other channels.	
3.	<b>Record</b>		An item you are tracking in your database; if your data is like a spreadsheet, then a record is a row on the spreadsheet	
4.	<b>Field</b>		A place where you store a value, like a name or address; using our spreadsheet example, a field would be a column on the spreadsheet	
5.	<b>Object</b>		A table in the database; in that spreadsheet example, an object is a tab on the spreadsheet	
6.	<b>Org</b>		Short for “organization,” the place where all your data, configuration, and customization lives. You log in to access it. You might also hear this called “your instance of Salesforce”	
7.	<b>App</b>		A set of fields, objects, permissions, and functionality to support a business process	
8.	<b>Trailhead Playground</b>		A Trailhead Playground is an org you can use to complete hands on challenges and try out new features and customizations. Much like a real playground, a Trailhead Playground lets you play around and make customizations without impacting anything else (in this case,	

			your production org).	
9.	<b>Package</b>		A package is a set of pre-created configurations and developments. At various points in your Trailhead learning journey, you may need to install a package in order to complete a challenge or work through the steps in a badge.	
10.	<b>Sales Cloud</b>		Sales Cloud part of the Salesforce.com platform which is focused on enhancing the effectiveness of the sales team of an organization and hence increases the amount of sales.	
11.	<b>Service Cloud</b>		This part of Salesforce platform is focused on providing support and help to the customers. This helps in retaining the customers, increasing their satisfaction and loyalty.	
12.	<b>Standard Objects</b>		The objects already created for you by the Salesforce platform.	
13.	<b>Custom Objects</b>		These are the objects created by you based on your business processes.	
14.	<b>External Objects</b>		The objects which you create map to the data stored outside your organization.	
15.	<b>Account</b>		Represents an individual account, which is an organization or person involved in the business like customers, competitors, partners, etc.	
16.	<b>Account History</b>		Represents the history of changes to the values in the fields of an account.	
17.	<b>Case</b>		Represents a case, which is a customer issue or problem.	
18.	<b>Contact</b>		Represents a contact, which is an individual associated with an account.	
19.	<b>User</b>		Represents a user in the organization.	
20.	<b>Asset</b>		Represents an item of commercial value, such as a product sold by the company or a competitor that a customer has purchased and installed.	
21.	<b>Fields</b>		You can restrict access to certain fields, even if a user has access to the object. For example, you can make the salary field in a position object invisible to interviewers but visible to hiring managers and recruiters.	
22.	<b>Records</b>		You can allow particular users to view an object, but then restrict the individual object records they're allowed to see. For example, an interviewer can see and edit her own reviews, but not the	

			reviews of other interviewers. You can manage record-level access in these four ways.	
23.	<b>Role Hierarchy</b>		A role hierarchy works together with sharing settings to determine the levels of access users have to your Salesforce data. Users can access the data of all the users directly below them in the hierarchy.	
24.	<b>Sharing rules</b>		<b>Sharing rules</b> are automatic exceptions to organization-wide defaults for particular groups of users, so they can get to records they don't own or can't normally see. Sharing rules, like role hierarchies, are only used to give additional users access to records. They can't be stricter than your organization-wide default settings.	
25.	<b>Manual sharing</b>		<b>Manual sharing</b> allows owners of particular records to share them with other users. Although manual sharing isn't automated like org-wide sharing settings, role hierarchies, or sharing rules, it can be useful in some situations, such as when a recruiter going on vacation needs to temporarily assign ownership of a job application to someone else.	

## UNIT II : SALESFORCE CRM FUNCTIONALITY

26.	<b>Sales Process</b>		Salesforce features designed to support your sales process include leads, campaigns, products, pricebooks, opportunities, and quotes.	
27.	<b>Object</b>		A table in the database; in that spreadsheet example, an object is a tab on the spreadsheet	
28.	<b>Accounts</b>		Accounts are the companies you're doing business with. You can also do business with individual people (like solo contractors) using something called Person Accounts.	
29.	<b>Contacts</b>		Contacts are the people who work at an Account.	
30.	<b>Leads</b>		Leads are potential prospects. You haven't yet qualified that they are ready to buy or what product they need. You don't have to use Leads, but they can be helpful if you have team selling, or if you have different sales processes for prospects and qualified buyers.	
31.	<b>Opportunities</b>		Opportunities are qualified leads that you've converted. When you convert the Lead, you create an Account and Contact along with the Opportunity.	
32.	<b>Home</b>		Home is a modern, intelligent home page, featuring a number of tools to help your sales team start their day fast. From Home, sales	

			<p>reps can monitor their performance to goal and get insights on key accounts. They can also access the Assistant, a list of things to do and places to be.</p>	
33.	<b>Opportunity Stages</b>		<p>Prospecting          Developing          Negotiation/Review          Closed/Won          Closed/Lost</p>	
34.	<b>Contact Roles on Opportunities</b>		<p>Contact Roles for opportunities tell you which contacts you're dealing with for the opportunity, and how each is related to the opportunity. You can also link contacts from other accounts to the opportunity using contact roles.</p>	
35.	<b>Assign Leads</b>		<p>Leads created from a web form or other automatic process are owned by the administrator who set up that process. You can manually change ownership of leads to another Salesforce user or to a queue.</p>	
36.	<b>Licenses for Service Cloud</b>		<p>Service Cloud User          Lets support agents use the console for service.          Knowledge User          Lets support agents create and edit knowledge base articles.          Chat User          Lets support agents communicate with customers using Web chat.          Customer Community          Lets support agents communicate with customers on an online community.</p>	
37.	<b>Cases</b>		<p>Cases are powerful records in Salesforce that not only track customer issues, but also show a 360-degree view of the customer. All unifying information about a customer is stored on a case—account, contact, history, products...whether the case has an email exchange, a reminder task, or a knowledge base article, it's all saved on the case so that any support agent can jump in to help a customer at any time.</p>	
38.	<b>Knowledge Articles</b>		<p>Knowledge articles in Salesforce are where you store answers to commonly asked questions, useful FAQs, and information that helps agents help customers and ultimately close cases. Salesforce Knowledge is powerful and feature-rich, so it's more than we'll want to cover in this specific module.</p>	

39.	<b>Case Automation</b>		Instead of hoping that someone forwards an important case to the right person by a specific time, you can set up those actions so that they happen automatically behind the scenes. Life gets easier for your support team, and customer service gets better, when you add a little automation.	
40.	<b>Queues</b>		Automatically prioritize your support team's workload by creating lists from which specific agents can jump in to solve certain types of cases.	
41.	<b>Assignment Rules</b>		Automatically assign incoming cases to specific agents so that the right people work on the right cases.	
42.	<b>Auto-Response Rules</b>		Automatically send personalized email responses to customers based on each case's details.	
43.	<b>Escalation Rules</b>		Automatically escalate cases to the right people when the cases aren't solved by a certain time.	
44.	<b>Macros</b>		Automatically complete repetitive tasks on cases, such as selecting the right email templates, so that agents can spend time doing more important things.	
45.	<b>Customer Channels</b>		The different ways your customers can reach out to your company are called channels, and they can include something as traditional as a phone number to something as revolutionary as video conferencing on a mobile app.	
46.	<b>Three Key Account and Contact Relationships</b>		<ol style="list-style-type: none"> <li>1. Relationships between companies (accounts) and the people who work at them (contacts).</li> <li>2. Relationships between your customers (accounts) and other customers (other accounts).</li> <li>3. Relationships between customers (accounts) and coworkers who deal with them (other Salesforce users).</li> </ol>	
47.	<b>Web-to-Lead</b>		You can also add leads by importing a file into Salesforce or through an automatic process, such as a Web-to-Lead form that collects leads from your business website.	
48.	<b>Web-to-Case</b>		Web-to-Case is an easy way to create online support. Essentially, it's a form of case fields that customers fill out and submit to agents.	
49.	<b>Email-to-Case</b>		<ul style="list-style-type: none"> <li>• Keeps all email traffic within your network's firewall.</li> <li>• Accepts email attachments larger than 25 MB.</li> <li>• Requires downloading and installing the Email-to-Case agent to your network.</li> </ul>	

50.	<b>On-Demand Email-to-Case</b>	<ul style="list-style-type: none"> <li>• Sends all email traffic outside of your network's firewall.</li> <li>• Accepts email attachments smaller than 25 MB.</li> <li>• Uses Apex email services to convert email to cases</li> </ul>
<b>Unit – III - APEX PROGRAMMING BASICS</b>		
51.	<b>Apex</b>	Apex is a strongly typed, object-oriented programming language that allows developers to execute flow and transaction control statements on the Lightning platform server in conjunction with calls to the Lightning Platform API.
52.	<b>Apex supports the following data type</b>	<ul style="list-style-type: none"> <li>• A primitive, such as an Integer, Double, Long, Date, Datetime, String, ID, Boolean, among others.</li> <li>• An sObject, either as a generic sObject or as a specific sObject, such as an Account, Contact, or MyCustomObject__c</li> </ul>
53.	<b>AppExchange</b>	The AppExchange is a sharing interface from Salesforce that allows you to browse and share apps and services for the Lightning Platform.
54.	Collections	A collection is a type of variable that can store multiple numbers of records. For example, List can store multiple number of Account object's records. Let us now have a detailed overview of all collection types.
55.	<b>Approval Process</b>	An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including who to request approval from and what to do at each point of the process.
56.	<b>Campaign</b>	A marketing initiative, such as an advertisement, direct mail, or conference that you conduct in order to generate prospects and build brand awareness.
57.	<b>Lists</b>	<b>List can contain any number of records of primitive, collections, sObjects, user defined and built in Apex type. This is one of the most important type of collection and also, it has some system methods which have been tailored specifically to use with List.</b>
58.	<b>Chatter Feed</b>	A list of recent activities in Salesforce. Chatter feeds display: On the Chatter or Home tab, On profiles, On records, On Chatter

			groups,	
59.	<b>Community</b>		Communities are customizable public or private spaces for employees, end-customers, and partners to collaborate on best practices and business processes.	
60.	<b>Sets</b>		A Set is a collection type which contains multiple number of unordered unique records. A Set cannot have duplicate records. Like Lists, Sets can be nested.	
61.	<b>Contract</b>		A contract is an agreement defining the terms of business between parties.	
62.	<b>Custom Field</b>		A field that can be added in addition to the standard fields to customize Salesforce for your organization's needs.	
63.	<b>Dashboard</b>		A dashboard shows data from source reports as visual components, which can be charts, gauges, tables, metrics, or Visualforce pages. The components provide a snapshot of key metrics and performance indicators for your organization. Each dashboard can have up to 20 components.	
64.	<b>SOSL Queries</b>		Salesforce Object Search Language (SOSL) is a Salesforce search language that is used to perform text searches in records. Use SOSL to search fields across multiple standard and custom object records in Salesforce. SOSL is similar to Apache Lucene.	
65.	<b>Maps</b>		It is a key value pair which contains the unique key for each value. Both key and value can be of any data type.	
66.	<b>Apex - Interfaces</b>		An interface is like an Apex class in which none of the methods have been implemented. It only contains the method signatures, but the body of each method is empty. To use an interface, another class must implement it by providing a body for all of the methods contained in the interface.	
67.	<b>Apex - Objects</b>		An instance of class is called Object. In terms of Salesforce, object can be of class or you can create an object of sObject as well.	
68.	<b>Global Variable</b>		A special merge field that you can use to reference data in your organization.	
69.	<b>Basic SOQL Syntax</b>		This is the syntax of a basic SOQL query:  SELECT fields FROM ObjectName [WHERE Condition]	



			The WHERE clause is optional. Let's start with a very simple query. For example, the following query retrieves accounts and gets Name and Phone fields for each account.	
70.	<b>Junction Object</b>		A custom object with two master-detail relationships. Using a custom junction object, you can model a "many-to-many" relationship between two objects. For example, you create a custom object called "Bug" that relates to the standard case object such that a bug could be related to multiple cases and a case could also be related to multiple bugs.	
71.	<b>DML Statements</b>		<p>The following DML statements are available.</p> <ul style="list-style-type: none"> <li>• insert</li> <li>• update</li> <li>• upsert</li> <li>• delete</li> <li>• undelete</li> <li>• merge</li> </ul>	
72.	<b>Lookup Relationship</b>		Relationship between two records so you can associate records with each other. For example, cases have a lookup relationship with assets that lets you associate a particular asset with a case.	
73.	<b>Master-Detail Relationship</b>		A relationship between two different types of records that associates the records with each other. For example, accounts have a master-detail relationship with opportunities. This type of relationship affects record deletion, security, and makes the lookup relationship field required on the page layout.	
74.	<b>Merge Field</b>		Merge field is a field you can put in an email template, mail merge template, custom link, or formula to incorporate values from a record. For example, Dear {!Contact.FirstName}, uses a contact merge field to obtain the value of a contact record's First Name field to address an email recipient by his or her first name.	
75.	<b>Mini View</b>		The Agent console's right frame which displays the records associated with the record displayed in the detail view. The fields displayed in the mini view are defined in the mini page layouts by an administrator. The mini view does not display if the record in the detail view does not have any records associated with it.	



**UNIT IV : APEX PROGRAMMING DEVELOPMENT**

76.	<b>Group Edition</b>		A product designed for small businesses and workgroups with a limited number of users.
77.	<b>Database.com</b>		Database.com is an enterprise cloud database from Salesforce.
78.	<b>Developer Edition</b>		A free, fully-functional Salesforce organization designed for developers to extend, integrate, and develop with the Lightning Platform. Developer Edition accounts are available on developer.salesforce.com.
79.	<b>Enterprise Edition</b>		A Salesforce edition designed for larger, more complex businesses.
80.	<b>Formula Field</b>		A type of custom field. Formula fields automatically calculate their values based on the values of merge fields, expressions, or other values.
81.	<b>Apex Triggers</b>		Apex triggers enable you to perform custom actions before or after events to records in Salesforce, such as insertions, updates, or deletions. Just like database systems support triggers, Apex provides trigger support for managing records.
82.	<b>Trigger Syntax</b>		<pre>trigger TriggerName on ObjectName (trigger_events) {     code_block }</pre>
83.	<b>trigger events</b>		<ul style="list-style-type: none"> <li>• before insert</li> <li>• before update</li> <li>• before delete</li> <li>• after insert</li> <li>• after update</li> <li>• after delete</li> <li>• after undelete</li> </ul>
84.	<b>Types of Triggers</b>		<ul style="list-style-type: none"> <li>• Before triggers are used to update or validate record values before they're saved to the database.</li> <li>• After triggers are used to access field values that are set by the system (such as a record's Id or LastModifiedDate field), and to affect changes in other records. The records that fire the after trigger are read-only.</li> </ul>
85.	<b>Trigger Context Variables</b>		<code>isExecuting</code> Returns true if the current context for the

			Apex code is a trigger, not a Visualforce page, a Web service, or an executeanonymous() API call.	
			isInsert Returns true if this trigger was fired due to an insert operation, from the Salesforce user interface, Apex, or the API.	
			isUpdate Returns true if this trigger was fired due to an update operation, from the Salesforce user interface, Apex, or the API.	
86.	<b>Asynchronous Apex</b>		<ul style="list-style-type: none"> <li>Asynchronous Apex is used to run processes in a separate thread, at a later time.</li> <li>An asynchronous process is a process or function that executes a task "in the background" without the user having to wait for the task to finish.</li> </ul>	
87.	<b>Scalability</b>		<ul style="list-style-type: none"> <li>By allowing some features of the platform to execute when resources become available at some point in the future, resources can be managed and scaled quickly. This allows the platform to handle more jobs using parallel processing.</li> </ul>	
88.	<b>Asynchronous processing challenges</b>		<ul style="list-style-type: none"> <li>Ensure fairness of processing</li> <li>Ensure fault tolerance</li> <li>Enqueue</li> <li>Persistence</li> <li>Dequeue</li> </ul>	
89.	<b>Future Apex</b>		Future Apex is used to run processes in a separate thread, at a later time when system resources become available.	
90.	<b>Future Method Syntax</b>		Future methods must be static methods, and can only return a void type. The specified parameters must be primitive data types, arrays of primitive data types, or collections of primitive data types.	
91.	<b>Test Classes</b>		Testing future methods is a little different than typical Apex testing. To test future methods, enclose your test code between the startTest and stopTest test methods. The system collects all asynchronous calls made after the startTest. When stopTest is executed, all these collected asynchronous processes are then run synchronously	
92.	<b>Batch Apex</b>		Batch Apex is used to run large jobs (think thousands or millions of records!) that would exceed normal processing limits. Using Batch Apex, you can process records asynchronously in batches (hence the name, "Batch Apex") to stay within platform limits. If you have a lot of records	

			to process, for example, data cleansing or archiving, Batch Apex is probably your best solution.
93.	<b>Batch Apex Syntax</b>		<p>To write a Batch Apex class, your class must implement the Database.Batchable interface and include the following three methods:</p> <ul style="list-style-type: none"> <li>• Start</li> <li>• <b>Execute</b></li> <li>• <b>Finish</b></li> </ul>
94.	<b>Queueable Apex</b>		Queueable Apex is essentially a superset of future methods with some extra #awesomesauce. We took the simplicity of future methods and the power of Batch Apex and mixed them together to form Queueable Apex!
95.	<b>Queueable Syntax</b>		<pre>public class SomeClass implements Queueable {     public void execute(QueueableContext context) {         // awesome code here     } }</pre>
96.	<b>Scheduled Apex</b>		The Apex Scheduler lets you delay execution so that you can run Apex classes at a specified time. This is ideal for daily or weekly maintenance tasks using Batch Apex. To take advantage of the scheduler, write an Apex class that implements the Schedulable interface, and then schedule it for execution on a specific schedule.
97.	<b>Scheduled Apex Syntax</b>		<pre>global class SomeClass implements Schedulable {     global void execute(SchedulableContext ctx) {         // awesome code here     } }</pre>
98.	<b>Execution Context</b>		For ASP.NET applications, code is executed in the context of an application domain. In the Lightning Platform world, code executes within an execution context. In a nutshell, this context represents the time between when the code is executed and when it ends.
99.	<b>Salesforce CLI</b>		Salesforce CLI allows you to interact with your Salesforce environments in many ways, like retrieving or pushing code or interacting with data. The CLI consists of several plugins. These plugins provide important specific functionality. For example, the salesforcedx plugin provides the ability to interact with Salesforce orgs and their data.
100.	<b>Visual Studio Code</b>		Visual Studio Code is the go-to code editor for Salesforce developers. It is free, open-source, and available for Windows, Linux, and macOS. Visual Studio Code is a well-established IDE among web developers.

**Unit –V - VISUALFORCE DEVELOPMENT**

101.	<b>Visualforce</b>	Visualforce is a web development framework that enables developers to build sophisticated, custom user interfaces for mobile and desktop apps that can be hosted on the Lightning Platform. You can use Visualforce to build apps that align with the styling of Lightning Experience, as well as your own completely custom interface.
102.	<b>Visualforce Pages</b>	Visualforce pages are basic building blocks for application developers. A Visualforce page is similar to a standard Web page, but includes powerful features to access, display, and update your organization’s data. Pages can be referenced and invoked via a unique URL, just as they would be on a traditional web server.
103.	<b>Global Variables</b>	Use global variables to access and display system values and resources in your Visualforce markup.
104.	<b>Conditional Expressions</b>	The first is a Boolean: something that is either true or false. For example, the CONTAINS() function, which you used earlier. The second argument is the value that will be returned if the first parameter is true. The third argument is the value that will be returned if the first parameter is false.
105.	<b>Syntax of a Visualforce expression is as below</b>	{! expression }
106.	<b>Custom controllers</b>	Custom controllers contain custom logic and data manipulation that can be used by a Visualforce page.
107.	<b>New Action Method</b>	Create action methods in your custom controller to respond to user input on the page. Showing data is great, but responding to user actions is essential to any web app. With a custom controller, you can create as many custom actions as you want to support on a page, by writing action methods to respond to user activity.
108.	<b>Static resources</b>	Static resources are managed and distributed by Lightning Platform, which acts as a content distribution network (CDN) for

			the files. Caching and distribution are handled automatically.	
109.	<b>Tag</b>		In Salesforce, a word or short phrases that users can associate with most records to describe and organize their data in a personalized way. Administrators can enable tags for accounts, activities, assets, campaigns, cases, contacts, contracts, dashboards, documents, events, leads, notes, opportunities, reports, solutions, tasks, and any custom objects (except relationship group members) Tags can also be accessed through the SOAP API.	
110.	<b>Workflow Action</b>		A workflow action, such as an email alert, field update, outbound message, or task, fires when the conditions of a workflow rule are met.	
111.	<b>Workflow Rule</b>		A workflow rule sets workflow actions into motion when its designated conditions are met. You can configure workflow actions to execute immediately when a record meets the conditions in your workflow rule, or set time triggers that execute the workflow actions on a specific day.	
112.	<b>Tag Cloud</b>		In Salesforce CRM Content, a way of showing you how the content in your libraries has been tagged. Tag names increase in size within the tag cloud according to popularity, meaning that the largest tags have been assigned to the most files or web links.	
113.	<b>Task Bar Links</b>		Links on tabbed pages that provide quick access to the most common operations available for a particular page, for example, creating an account.	
114.	<b>Software as a Service (SaaS)</b>		A delivery model where a software application is hosted as a service and provided to customers via the Internet. The SaaS vendor takes responsibility for the daily maintenance, operation, and support of the application and each customer's data.	
115.	<b>Sales Price</b>		The price of a product on an opportunity. This can be different than the product's standard or list price.	
116.	<b>Salesforce Connect</b>		Salesforce Connect provides access to data that's stored outside the Salesforce org, such as data in an enterprise resource planning (ERP) system and records in another org. Salesforce Connect represents the data in external objects and accesses the external data in real time via Web service callouts to external data sources.	

117.	<b>Salesforce Console</b>		The Salesforce console is designed for users in fast-paced environments who need to find, update, and create records quickly. It improves upon the Agent Console in the Console tab by displaying records and related items as tabs on one screen.	
118.	<b>Salesforce Console Integration Toolkit</b>		An API that uses browsers as clients to display pages as tabs for the Salesforce Classic console; it provides developers with programmatic access to the console so that administrators can extend it to meet your business needs.	
119.	<b>Salesforce CRM Call Center</b>		A Salesforce feature that seamlessly integrates Salesforce with third-party computer-telephony integration (CTI) systems.	
120.	<b>Salesforce CRM Content</b>		An on-demand, content-management system that allows you to organize, share, search, and manage content within your organization and across key areas of the Salesforce application. Content can include all file types, from traditional business documents such as Microsoft PowerPoint presentations to audio files, video files, and Web pages.	
121.	<b>Salesforce for Outlook</b>		Salesforce for Outlook, a Microsoft® Outlook® integration application that you install, syncs contacts, events, and tasks between Outlook and Salesforce. In addition to syncing these items, you can add Outlook emails, attachments, events, and tasks to multiple Salesforce contacts, and view Salesforce records related to the contacts and leads in your emails and events—all directly in Outlook.	
122.	<b>Provider Organization</b>		When using the cross-org adapter for Salesforce Connect, the provider org stores the data that's accessed by the subscriber org.	
123.	<b>Profile, Chatter</b>		A personal page for each Salesforce user that includes contact information, following and followers lists, a Chatter feed, and a photo.	
124.	<b>Public Calendar</b>		A calendar in which a group of people can track events of interest to all of them (such as marketing events, product releases, or training classes) or schedule a common activity (such as a team vacation calendar). For example, your marketing team can set up an events calendar to show upcoming marketing events to the entire sales and marketing organization.	

125.	<b>Push Notifications, Mobile</b>		Push notifications are alerts that apps render on mobile device home screens when users aren't using the app. These alerts can consist of text, icons, and sounds, depending on the device type.	
<b>PLACEMENT QUESTIONS</b>				
126.	What is the average of first five multiples of 10?		$\text{Average} = 10 \times (1+2+3+4+5) \times \frac{1}{5}$ $= 10 \times 15 \times \frac{1}{5}$ $= 10 \times 3 = 30$	
127.	What is the difference in the place value of 5 in the numeral 754853?		<p>The digit 5 has two place values in the numeral, <math>5 \times 10^5 = 50,000</math> and <math>5 \times 10^1 = 50</math>.</p> <p><math>\therefore</math> Required difference = <math>50000 - 50 = 49950</math></p>	
128.	A number added to 1459 so that it is exactly divisible by 12.		<p>On dividing 1459 by 12, the remainder is 7.</p> <p><math>\therefore</math> The number to be added would be = <math>12 - 7 = 5</math></p>	
129.	In the given expression $(1.05)^2 \times x = 44.1$ , find the value of x.		$(1.05)^2 \times x = 44.1$ <p>Or, <math>x = 44.1 / (1.05)^2 = 44.1 / (1.05 \times 1.05)</math></p> <p>Hence, <math>x = 40.00</math></p>	
130.	If January 1, 1996, was Monday, what day of the week was January 1, 1997?		<p>The year 1996 is divisible by 4, so it is a leap year with 2 odd days.</p> <p>As per the question, the first day of the year 1996 was Monday, so the first day of the year 1997 must be two days after Monday. So, it was Wednesday.</p>	
131.	A: B: C is in the ratio of 3: 2: 5. How much money will C get out of Rs 1280?		<p>C's share = <math>[\text{C's ratio} / \text{sum of ratios}] \times \text{total amount}</math></p> <p>C's share = <math>(5/10) \times 1280</math></p> <p>C's share = 640</p>	
132.	Today is Wednesday, after 69 days, it will be		<p>Each day of a week is repeated after 7 days, so after 70 days, it will be Wednesday.</p> <p>Therefore, after 69 days, it will be Tuesday.</p>	
133.	A Number times the hands of a clock coincide in a day		<p>The hands of a clock coincide only once between 11 O' clock and 1 O' clock, so in every 12 hours, the hands of a clock will coincide for 11 times.</p> <p><math>\therefore</math> In a day or 24 hours, the hands of a clock will coincide for 22 (11+11) times.</p>	

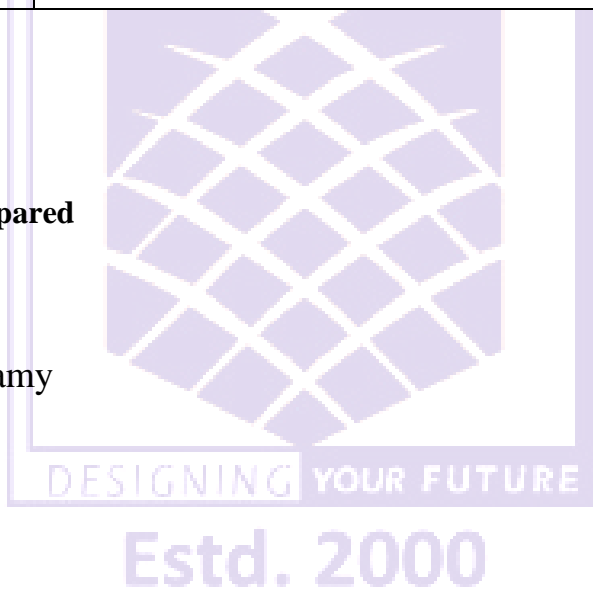


134.	The area of a triangle with base 10 meters and height 20 meters.		Area of a triangle = $\frac{1}{2} * \text{base} * \text{height}$ So, the area = $\frac{1}{2} * 10 * 20$ =100 square meters	
135.	A: B: C:D is in the ratio of 3: 2: 5:2. Calculate C's share out of 1260.		C's share = [C's ratio/ sum of ratios] * total amount C's share = $(5/10) * 1260$ C's share = 630	
136.	CKDL, EKFL, GKHL, _, KKLL,		The second and fourth letters (K and L) in the series are static. The first and third letters are in alphabetical order starting with the letter C. So, the missing letters are IKJL.	
137.	RQP, ONM, _, IHG, FED,		The series consists of letters in reverse alphabetical order. Therefore, the missing letters are LKJ.	
138.	GAH, IBJ, KCL, MDN		The middle letters in this series follow the order ABCDE. The first and third letters are in alphabetical order starting with the letter G.	
139.	E3FG, _, E5FG, E6FG, E7FG		The letters are the same in the series; they differ only in numbers. So, focus on the number series which is a simple series of numbers; 3, 4,5,6,7. Therefore, the missing letters are E4FG.	
140.	BKK, DMM, FOO, _, JSS		The first letters of the series are in an alphabetical order in which a letter is skipped between each two letters; B, D, F, H, J. The second and third letters are repeated in each segment, and they are also in alphabetical order with a skipped letter; K, M, O, Q, S. So, the missing letters are HQQ.	
141.	4, 7, 12, 19, _, 39		In this series, the difference between the consecutive numbers increases by 2; $7 - 4 = 3$ $12 - 7 = 5$ $19 - 12 = 7$ , Therefore, the next number would be $19 + 9 = 28$	
142.	15, 20, 24, 15, 28, 32, 15, _, _, 15		This is a simple addition series in which the number "15" is interpolated as every third number. And, except 15, four is added to each number to arrive at the next number	
143.	77, 70, 63, 56, 49, _		This is a simple subtraction series in which each number is 7 less than the previous number.	
144.	12, 24, 14, 28, 18, 36, _		This is an alternating multiplication and subtraction series; first multiply by 2 then subtract 10. Therefore, 26 (36 - 10) should come next.	
145.	72, 36, 18, .....		On dividing 72 by 2, we get 36 On dividing 36 by 2, we get 18 So, on dividing 18 by 2, we will get 9	
146.	40 % of 200 =		$x \% \text{ of a given number 'n'} = \frac{x}{100} * n$ $x = 40$ and $n = 200$ $\therefore 40 \% \text{ of } 200 = \frac{40}{100} * 200 = 80$	

147.	GAH, IBJ, KCL, MDN, _.		The middle letters in this series follow the order ABCDE. The first and third letters are in alphabetical order starting with the letter G.	
148.	U, O, _, E, A		The series contains vowels in reverse order, U, O, I, E, A. So, the missing letter is I.	
149.	467X4 is divisible by 9		The number is divisible by 9 so the sum of its digits would be divisible by 9. $\therefore 4 + 6 + 7 + X + 4 = 21 + X$ , must be divisible by 9. $X = 6$ , fulfills our requirement so the required digit is 6.	
150.	A shopkeeper sold an article for Rs. 3500. If the cost price of the article is 2000, find the profit percent.		<p>C.P. = Rs. 2000  S.P. = Rs. 3500  Profit or Gain = S.P. - C.P.  = 3500 - 2000 = 1500</p> <p><b>Apply formula:</b> Profit % = <math>\frac{\text{Profit}}{\text{C.P.}} \times 100</math></p> <p>= <math>\frac{1500}{2000} \times 100 = 75\%</math></p>	

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**Signatures**

**HoD**