

GUIDELINE ANSWERS

PROFESSIONAL PROGRAMME

JUNE 2018

MODULE 2



**THE INSTITUTE OF
Company Secretaries of India**

भारतीय कम्पनी सचिव संस्थान

IN PURSUIT OF PROFESSIONAL EXCELLENCE

Statutory body under an Act of Parliament

ICSI House, 22, Institutional Area, Lodi Road, New Delhi 110 003

Phones : 41504444, 45341000; Fax : 011-24626727

E-mail : info@icsi.edu; Website : www.icsi.edu

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The Guideline Answers contain the information based on the Laws/Rules applicable at the time of preparation. However, students are expected to be well versed with the amendments in the Laws/Rules made upto **six** months prior to the date of examination.

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(i)

NOTE: Guideline Answers of the last Sessions may require updation in the light of changes and references given below:

PROFESSIONAL PROGRAMME

UPDATING SLIP

ETHICS, GOVERNANCE AND SUSTAINABILITY

MODULE – 2 – PAPER 3

<i>Examination Session</i>	<i>Question No.</i>	<i>Updatons required in the answers</i>
(1)	(2)	(3)
All Previous Sessions	—	All answers are based on the notified provisions of Companies Act, 2013 and the SEBI (LODR) Regulations, 2015.

PROFESSIONAL PROGRAMME EXAMINATION

JUNE 2018

INFORMATION TECHNOLOGY AND SYSTEMS AUDIT

Time allowed : 3 hours

Maximum marks : 100

NOTE: Answer **ALL** Questions.

Question 1

PQR Ltd. is an electronic goods manufacturing company having very wide customer base for past many years. The company has implemented a comprehensive management information system (MIS) for its business requirements. They have also developed their own private network (i.e. Intranet) to enable employees to share information amongst them. All strategic steps have been taken to encourage the employees to take maximum benefits of Intranet. The management of the company has always been prompt in accommodating latest technological developments in the industry suiting to its business. They have been using a highly organized computer based MIS to aid their managerial functions of planning and control. The company has also selected an Enterprises Resource Planning (ERP) system after a lot of deliberations on its essential qualities required. Further, the management of the company is very responsive to any suggestions of the report of system audit conducted from time to time. A specific attention is given to audit of environment controls for the safety of equipments and their spare parts, which are core to its running business.

Based on the above, answer the following :

- (a) What strategies would you suggest to implement, for effective success of intranet in the company ? (5 marks)*
- (b) Many medium and large sized organizations have found it convenient to computerize their MIS to make it automatic and highly organized. Write down some basic features of Computer based MIS. (5 marks)*
- (c) What are the qualities of ERP solution essentially required in the ERP Systems selection ? (5 marks)*
- (d) What are the environmental factors that need to be checked and commented upon by the auditor ? (5 marks)*

Answer 1(a)

For effective success of Intranet in a company, one may implement the following strategies:

1. *Include widely used Applications and make them Simple to use :* Use the intranet to simplify employee's lives. For instance, by putting travel expense reports on-line, employees do not have to waste time filling out hard-copy reports, making copies for numerous people, and sending them through regular or interoffice

mail, which can take days. Instead, they can complete reports and send them to as many people as needed. The recipients receive them in moments.

2. *Secure the System* : Security of intranets is vital. If the information on an intranet is corrupted (such as an inaccurate posting of company job openings) or if a competitor accesses the information (such as pricing policies for different products), it can lead to distrust.
3. *Integrate Databases into Intranet Applications* : Databases are at the heart of intranet applications. The data and information that employees access from the intranet come from one or more databases. Companies must invest the time and money to build databases that are accurate, complete, and reliable.
4. *Invest in Excellent Network Capacities* : Clearly, networks are essential for the success of intranets. Without a robust network infrastructure, an intranet simply will not be able to function. If the network is frequently down or if the network is too slow, employees will get frustrated and may not use the intranet.
5. *Motivate Employees to use the Intranet* : Change is not easy. Many people prefer to do things the way always have. To convince people of the benefit of change, intranets must be easy to use with user friendly, intuitive interfaces. Further, companies should give incentives encouraging employees to use the intranet.
6. *Align with your Business Strategy* : Intranet cannot be regarded as isolated system, it always requires to support the overarching business strategy, and enable each and every one to work towards the common goal.
7. *Employee Focus* : Build and develop content around your employees, having a employee portal or an employee social network is a viable strategy to ensure that users keep coming back and actively use the Intranet.
8. *Invest in Training* : Schedule proper training programs for your employees, no matter how intuitive a system may be users may not be able to take full advantage of the system

Answer 1(b)

Management information being a specialized information system conforms to certain characteristics. These characteristics are generic in nature. These characteristics remain more or less the same even when the technology around such management information system changes:

Management Oriented

One important feature of MIS is that MIS is designed top-down. This means that the system is designed around the need felt by the management at different levels for information. The focus of the system is to satisfy the information needs of management.

Management Directed

Since MIS is 'for the' management it is imperative that it also should have a very strong 'by the' management initiative. Management is involved in the designing process of MIS and also in its continuous review and up gradation to develop a good qualitative system. The system is structured as per directions factored by management. This

helps in minimizing the gap between expectations of management from the system and the actual system.

Integrated

MIS is an integrated system. It is integrated with all operational and functional activities of management. This is an important characteristic and- requirement for a system to qualify as MIS. The reason for having an integrated system is that information in the managerial context for decision-making may be required from different areas from within the organization. If MIS remains a collection of isolated systems and each satisfying a small objective, then the integrated information need of managers will not be fulfilled. In order to provide a complete picture of the scenario, complete information is needed which only an integrated system can provide.

Common Data Flows

Through MIS the data being stored into the system, retrieved from the system, disseminated within the system or processed by the system can be handled in an integrated manner. The integrated approach towards data management will result in avoiding duplication of data, data redundancy and will help to simplify operations.

Strategic Planning

MIS cannot be designed overnight. It requires very high degree of planning which goes into creating an effective organization. The reason for this kind of planning is to ensure that the MIS being built not only satisfies the information need of the managers today but can also serve the organization for the next five to ten years with modifications. Sometimes when the planning part is done away with, systems tend to perform well in the present but they tend to become obsolete with time. Planning helps to avoid this problem.

Bias towards Centralization

MIS is required to give 'one version of the truth', i.e., it must supply the correct version of the latest information. There is a requirement for the data repository to be centralized. Centralized data management helps MIS to exercise version control as well as provide an integrated common view of data to the managers. In a non-centralized system, data will get entered, updated and deleted from the system from different locations. In such a case it becomes difficult to provide correct information to managers. For example, in a decentralized System if a person superannuates from an organization and his superannuating is only recorded in the human resource system but not communicated to the finance department system, then it is quite likely that his salary may be generated by the finance system for the next month. A centralized system where data is entered, updated and deleted from only one location does not suffer from such problems. In a centralized system, the superannuating employee's details are deleted from the master file from which all departments' access data, thereby eliminating the risk of generating his salary for the next month.

1. Organization and updating of huge mass of raw data of related and unrelated nature derived from internal and external sources at different period of time.
2. Ability to process data into information with accuracy and high speed. It involves making complex computations, analysis, comparisons and summarization's.

Though humans can do the processing, the computer's ability to process huge data is phenomenal, considering its speed, reliability and faithfulness in perfectly following the set of instructions.

3. Super-human memory, tremendous volume of data and information and the set of instructions can be stored in the computer and can be retrieved as and when needed. Management can get any bit of stored information from the computer in a matter of seconds.
4. The input data in the computer can be processed into a number of different outputs and for a variety of purposes. The system is so organized that managers at different levels and in different activity units are in a position to obtain information in whatever form they want, provided that relevant "Programmes" or instructions have been designed for the purpose.
5. The information processing and computer technology have been so advanced that managers are able to obtain real time information without any waiting period.
6. Computer based MIS opens up new vistas for management to make efficient timely decisions on vital operations of the enterprise and major strategic and tactical problem. It also helps organizations to gain substantial economies by reduction of clerical and computational time.
7. Role based access can be made possible, so that information will go to concerned users only.
8. Computerized MIS also ensures Push reports on regular basis.

Answer 1(c)

Six essential qualities to be considered in ERP system selection are:

1. Functionality

This is the most important characteristic of an ERP system to research. You first need to ask yourself what areas are of most importance to you. You should look into a system that more represents your specific needs. Functionality is the base of a great ERP solution, while additional features are bonuses.

2. Common Platform with Wide Recognition

Choosing a commonly accepted cloud based ERP platform will ensure there is a high amount of products and support for those products available. Well recognized ERP solutions have plenty of resources available for support and implementation. By choosing a solution with many certified partners, call centers, support plans, and support teams who are familiar with related systems to choose from, you increase your likelihood of effective use. Find an ERP solution that others in your industry use comfortably and effectively.

3. Support and Stability

It is essential that the ERP software companies that you are considering come with a support guarantee; otherwise you may leave yourself vulnerable to hidden costs for necessary upgrades if the product you chose becomes obsolete. It is

also important to consider how stable the software publisher is and whether they are likely to retain their position within the market, thereby continuing to provide the support you require.

4. Costs and Fees

This includes not only the initial purchasing and implementation cost, but any on-going costs you are likely to incur through the need for maintenance, upgrades, additional users, etc.

5. Effective Data Usage

One of the distinct advantages of ERP systems is the ability to efficiently access and use your data. While most provide adequate transaction processing, it is equally important that the data can be easily accessible by decision makers. Timely and current information access ensures critical decisions can be made based upon the most recent data.

6. Fast Adoption

The ERP system you choose should be easy to adapt to for end users. It is crucial that those users become both familiar and comfortable with those functions and use.

7. Flexibility

Enterprise Resource Planning is a long-range investment. A flexible system will grow with the company, accommodating new specifications as they emerge. Flexibility is also crucial in the implementation phase, to ensure that the program can align with existing business needs and achieve integration.

8. Reporting

The ERP system should be able to provide proper reporting/data as per the requirement of an organization.

9. Web Enabled

The ERP should be accessible from all protocols and devices and HTTP, WAP enabled etc.

Answer 1(d)

The following environmental factors need to be checked and commented upon by the auditor:

- (i) Online UPS not used; either line-interactive UPS or Offline UPS used, or CVT used.
- (ii) Electrical cabling loose / points having loose contact.
- (iii) No separate earth pit for the Computing equipment.
- (iv) Switches/Hubs/Routers not fed with UPS power.
- (v) Server room door kept open.

- (vi) AC not functioning properly, especially in summer.
- (vii) Positioning of AC and Servers in the Server room.
- (viii) No pest control measures taken.
- (ix) Eatables taken into server room/ Smoking in the server room.
- (x) Heavy duty printer kept inside server room: scope for dust.
- (xi) UPS, AC, other electrical equipment not under regular AMC.
- (xii) No power backup in case City power supply fails for long hours.
- (xiii) No smoke detectors/fire alarms in server room area.
- (xiv) Fire extinguishers not kept filled and ready.
- (xv) No fire drill carried out to make people aware of dos and don'ts

The above are serious lapses that can seriously affect the functioning of the IT Setup and cause work stoppages.

Attempt all parts of either Q. No. 2 or Q. No. 2A

Question 2

- (a) *As a manager of an organisation, you may need various types of information for arriving at various decisions. The quality of decision making depends upon the value of the information. What criterias are used to distinguish more valuable information from less valuable information ?* (4 marks)
- (b) *Discuss any two kinds of storage technologies used in modern computers.* (4 marks)
- (c) *What do you understand by Firmware? Explain.* (4 marks)
- (d) *Briefly explain various disadvantages of Database Management System (DBMS).* (4 marks)

OR (Alternate question to Q. No. 2)

Question 2A

Distinguish between the following:

- (i) *Primary Information and Secondary Information*
- (ii) *Analog Computers and Digital Computers*
- (iii) *System Software and Application Software*
- (iv) *Data Model and Data Structure.* (4 marks each)

Answer 2(a)

Information is of value to decision makers if it is accurate, timely, complete, and relevant. If it is poor on any of these criteria, it will be less useful hence may not have that value. These four criteria are used to distinguish valuable information from information that is of less value.

- (i) *Accurate information* provides a reliable and valid representation of reality. The

cost of inaccurate or distorted information can be extremely high. Consider the demise of the multimillion dollar Mars Climate Orbiter launched by NASA in 1998. The tragic outcome of this mission was blamed on the failure of one scientific team to recognize and correct an error in information from another team.

- (ii) *Timely information* is information that is available when it is needed. When information is needed almost always depends on the situation. Timely information can avoid accidents, prevent losses and keep your Business active/alive.
- (iii) *Complete information* tends to be comprehensive in covering the issue or topic of interest. Complete information tells a complete story. Without complete information, a decision maker will get a distorted view of reality. Incomplete market information can lead businesses to introduce products and services that customers don't want.
- (iv) *Relevant Information* : Information is relevant if it has significance or can be applied to a specific situation, problem, or issue of interest. Human resource managers need information on hiring and employee turnover; operations managers need information on costs and productivity; marketing managers need information on sales projections and advertising rates; top executives need information on the strategic actions of their competitors.
- (v) *Availability/Accessibility* : Information should be easy to obtain or access. Information kept in a book of some kind is only available and easy to access if you have the book to hand. A good example of availability is a telephone directory, as every home has one for its local area. It is probably the first place you look for a local number. But nobody keeps the whole country's telephone books so for numbers further afield you probably phone a directory enquiry number. For business premises, say for a hotel in London, you would probably use the Internet.
- (vi) *Level of Detail/Conciseness* : Information should be in a form that is short enough to allow for its examination and use. There should be no extraneous information. For example, it is very common practice to summarize financial data and present this information, both in the form of figures and by using a chart or graph. We would say that the graph is more concise than the tables of figures as there is little or no extraneous information in the graph or chart. Clearly there is a trade-off between level of detail and conciseness.
- (vii) *Cost of Information* : Information should be available within set cost levels that may vary dependent on situation. If costs are too high to obtain information an organization may decide to seek slightly less comprehensive information elsewhere. For example, an organization wants to commission a market survey on a new product. The survey could cost more than the forecast initial profit from the product. In that situation, the organization would probably decide that a less costly source of information should be used, even if it may give inferior information.

Answer 2(b)***Computer Storage Technology**

At present the following three kinds of storage technology are commonly used in modern computers.

1. Semiconductor storage technology.
2. Magnetic storage technology.
3. Optical storage technology.

Other types of unorthodox means of storage technology seldom used are

1. Paper based storage technology.
2. Vacuum Tube Memory.
3. Electro-Acoustic Memory.

Semiconductor Storage Technology

Semiconductor memory is an electronic data storage device, often used as computer memory, implemented on a semiconductor-based integrated circuit. Examples of semiconductor memory include non-volatile memory such as read-only memory (ROM), magneto resistive random-access memory (MRAM), and flash memory. It also includes volatile memory such as static random-access memory (SRAM), and dynamic random-access memory (DRAM).

Magnetic Storage Technology

Magnetic storage uses different patterns of magnetization in a magnetizable material to store data and is a form of non-volatile memory. The information is accessed using one or more read/write heads. Magnetic storage media, primarily hard disks, are widely used to store computer data as well as audio and video signals. Other examples of magnetic storage media include floppy disks, magnetic recording tape, and magnetic stripes on credit cards.

Optical Storage Technology

Optical storage is any storage method in which data is written and read with a laser for archival or backup purposes. Typically, data is written to optical media, such as CDs and DVDs.

Paper Based Storage Technology

A few technologies allow people to make marks on paper that are easily read by machine – these are widely used for tabulating votes and grading standardized tests. Barcodes made it possible to have some computer readable information securely pasted on paper, to be read through specified machines (Barcode readers).

VacuumTube Memory

Selectron tube used a large vacuum tube to store information as Primary Storage devices.

Electro-Acoustic Memory

It uses mercury to store information which was dynamically volatile, cycle sequential read/write storage and was used for primary storage

**Note : Students are required to explain any two of the above storage technologies.*

Answer 2(c)

Firmware is a software program or set of instructions programmed on a hardware device. It provides the necessary instructions for how the device communicates with the other computer hardware.

In other terms, firmware is a piece of hardware with a set of instructions that are stored in its own memory. The data which is stored in chip is used to boot the computer after power on and load the operating system from hard disk to main memory. Typical examples of devices containing firmware are embedded systems (such as traffic lights, consumer appliances, and digital watches), computers, computer peripherals, mobile phones, and digital cameras. The firmware contained in these devices provides the control program for the device.

Firmware is held in non-volatile memory devices such as ROM, EPROM, or flash memory. Changing the firmware of a device may rarely or never be done during its economic lifetime; some firmware memory devices are permanently installed and cannot be changed after manufacture. Common reasons for updating firmware include fixing bugs or adding features to the device. This may require physically changing ROM integrated circuits or reprogramming flash memory with a special procedure. Firmware such as the ROM BIOS of a personal computer may contain only elementary basic functions of a device and may only provide services to higher-level software. Firmware such as the program of an embedded system may be the only program that will run on the system and provide all of its functions.

Answer 2(d)**Disadvantages of DBMS**

1. As DBMS needs computers, we have to invest a good amount in acquiring the hardware, software, installation facilities and training of users.
2. Database systems require sophisticated hardware and software and highly skilled personnel.
3. The cost of maintaining the hardware, software, and personnel required to operate and manage a database system can be substantial. Training, licensing, and regulation compliance costs are often overlooked when database systems are implemented.
4. DBMS vendors frequently upgrade their products by adding new functionality. Such new features often come bundled in new upgrade versions of the software. Some of these versions require hardware upgrades. Not only do the upgrades themselves cost money, but it also costs money to train database users and administrators to properly use and manage the new features.
5. We have to keep regular backups because a failure can occur any time. Taking backup is a lengthy process and the computer system cannot perform any other job at this time.
6. While data security system is a boon for using DBMS, it must be very robust. If someone can bypass the security system then the database would become open to any kind of mishandling.

7. Management complexity: Database systems interface with many different technologies and have a significant impact on a company's resources and culture.

The changes introduced by the adoption of a database system must be properly managed to ensure that they help advance the company's objectives. Given the fact that database systems hold crucial company data that are accessed from multiple sources, security issues must be assessed constantly.

Frequent upgrade/replacement cycles:

DBMS vendors frequently upgrade their products by adding new functionality. Such new features often come bundled in new upgrade versions of the software. Some of these versions require hardware upgrades. Not only do the upgrades themselves cost money, but it also costs money to train database users and administrators to properly use and manage the new features.

Answer 2A(i)

Primary Information : Information in its original form, not translated by anyone else, has not been published elsewhere, is termed as primary. Examples of primary information needs: Explanation or instructions from an employer or teacher, an eyewitness account of a house fire, etc.

Secondary Information : It is repackaged examination, restatement or interpretation of primary information already collected by someone. Examples of secondary information needs: Notes borrowed from a classmate for a missed class, a bibliography on the letters of Ernest Hemingway and so on.

Answer 2A(ii)

Analog Computers	Digital Computers
1. Analog computers process measured data.	1. A digital computer processed discrete data (digits). In this case 0 and 1.
2. Analog Computers Work on continuous values.	2. Digital computers Work on discrete values.
3. Analog Computers have low memory.	3. Digital computers have a very large memory.
4. Analog computers have slow speed.	4. Digital computers have fast speed.
5. Analog computers are less reliable.	5. Digital computers are more reliable.
6. Analog computers are used to calculate/measure analog quantities like speed and temperature.	6. Digital computers are used to calculate mathematical and logical operations. It can solve addition, subtraction, division, multiplication and other mathematical and statistical operations.

- | | |
|--|---|
| 7. Analog computers provide less accurate results. | 7. Digital computers provide 100% accurate results. |
| 8. Normally Analog Computers are specific purpose. | 8. Digital Computers are general purpose. |
-

Answer 2A(iii)

System software

It is a program that manages and supports the computer resources and their operations. It executes various tasks such as processing data and information, controlling hardware components, and allowing users to use application software. It functions as a bridge between computer system hardware and the application software. It is made up of many control programs, including the operating system, communications software and database manager. An application software cannot run without a System software. Ex: DOS, Windows, Ubuntu.

Application software

Application software is program that performs common information processing jobs for end users. These do not require advanced level computer skills and allow users to do things like creating text documents, playing video games, listening to music or viewing websites. For example, word processing programs, electronic spreadsheet programs, database management programs, graphics programs, communications programs Example MS word, power point, Chrome, Internet Explorer.

Difference between System Software and Application Software

1. System software gets installed when the operating system is installed on the computer while application software is installed according to the requirements of the user.
2. System software includes programs such as compilers, debuggers, drivers, assemblers while application software includes media players, word processors, and spreadsheet programs.
3. Generally, users do not interact with system software as it works in the background whereas users interact with application software while doing different activities.
4. A computer may not require more than one type of system software while there may be a number of application software programs installed on the computer at the same time.
5. System software can run independently of the application software while application software cannot run without the presence of the system software.

Answer 2A(iv)

Data Model can be defined as an integrated collection of concepts for describing and manipulating data, relationships between data, and constraints on the data in an organization. The purpose of a data model is to represent data and to make the data understandable. It also documents the way data is stored and retrieved. Data models

facilitate communication business and technical development by accurately representing the requirements of the information system and by designing the responses needed for those requirements.

Data Structure is a particular way of storing and organizing data in a computer so that it can be used efficiently. Data Structures is about rendering data elements in terms of some relationship, for better organization and storage. Data structures provide a means to manage large amounts of data efficiently, such as large databases and internet indexing services. Usually, efficient data structures are a key to designing efficient algorithms.

Attempt all parts of either Q. No. 3 or Q. No. 3A

Question 3

- (a) *Information is needed for decision making at all levels of the management. Discuss the various factors, which affect the information need of an organization. (4 marks)*
- (b) *Explain "Authentication and Authorization" requirements under Immediate System Security measures, which are applied to Medium Criticality and High Criticality systems. (4 marks)*
- (c) *What do you understand by Algorithm for any program? Discuss different types of control structures for classification of Algorithm. (4 marks)*
- (d) *Despite the availability of technology today, there is a problem in developing a good and problem free MIS software for Microfinance Institutions (MFIs). What are the complexities involved in developing good MIS software to meet the needs of the MFIs ? (4 marks)*

OR (Alternate question to Q. No. 3)

Question 3A

Write short notes on the following :

- (i) *Platform-as-a-Service (PaaS)*
- (ii) *Registry Cleaner Software*
- (iii) *Advantages of using Flow Charts*
- (iv) *Characteristics of a good Executive Information System. (4 marks each)*

Answer 3(a)

Following are the factors which affect the information need of an organization:

1. *Management Hierarchy* : Management Hierarchy plays an important role in deciding the information need of a user. Information need of TOP management will be entirely different from the information needs of Operational Management.
2. *Purpose of seeking Information* : The information needs depends on the purpose of seeking information. If a person wants to invest in a company, he/she will be interested about the financial statement of the company.

3. *Role in the Organization* : Information need of a person also depends on the role of the concerned user. The information needs of different stakeholder in the organization will be different. For example, an employee of the organization will be interested in knowing about the company wage policy. He will have no interest in knowing company policy on market segmentation.

Answer 3(b)

Immediate System Security Measures define the security measures that must be applied to Medium Criticality and High Criticality systems. The requirements covered under Authentication and Authorization are:

- (a) *Remove or disable accounts upon loss of eligibility* : Accounts which are no longer needed must be disabled in a timely fashion using an automated or documented procedure.
- (b) *Separate user and administrator accounts* : Administrator accounts must not be used for non-administrative purposes. System administrators must be provisioned with non-administrator accounts for end-user activities, and a separate administrator account that is used only for system-administration purposes.
- (c) *Use unique passwords for administrator accounts* : Privileged accounts must use unique passwords that are not shared among multiple systems. Credentials which are managed centrally, such as the NetID/password combination, are considered a single account, regardless of how many systems they provide access to.
- (d) *Throttle repeated unsuccessful login-attempts* : A maximum rate for unsuccessful login attempts must be enforced. Account lockout is not required, but the rate of unsuccessful logins must be limited.
- (e) *Enable session timeout* : Sessions must be locked or closed after some reasonable period.
- (f) *Enforce least privilege* : Non-administrative accounts must be used whenever possible. User accounts and server processes must be granted the least-possible level of privilege that allows them to perform their function.

Answer 3(c)

Algorithm

To make a computer do anything, one need to write a computer program. To write a computer program, one have to tell the computer, step by step, exactly what he want it to do. The computer then “executes” the program, following each step mechanically, to accomplish the end goal.

An algorithm is a step to step procedure to solve a given problem. It is a sequence of instructions (or set of instructions) to make a program more readable; a process to answer a question. The number of steps of an algorithm will be countable and finite. In short an algorithm can be defined as: “A sequence of activities to be processed for getting desired output from a given input.”

Most computer programmers spend a large percentage of their time creating algorithms. The goal is to create efficient algorithms that do not waste more computer

resources (such as RAM and CPU time) than necessary. Poorly written algorithms can cause programs to run slowly and even crash.

Type of Algorithm

There are three types of control structure for the classification of Algorithm :

1. Sequence
2. Branching (Selection)
3. Loop (Repetition)

These three control structures are sufficient for all purposes.

The *sequence* is exemplified by sequence of statements placed one after the other – the one above or before another gets executed first.

The *branch* refers to a binary decision based on some condition. If the condition is true, one of the two branches is explored; if the condition is false, the other alternative is taken.

The *loop* allows a statement or a sequence of statements to be repeatedly executed based on some loop condition. It is represented by the 'while' and 'for' constructs in most programming languages, for unbounded loops and bounded loops respectively. The loop is also known as the repetition structure.

Answer 3(d)

Despite the availability of technology today there is a problem in developing a good and problem free MIS software for the MFIs. The diverse nature of microfinance creates an intriguing complexity for software application development. Some of the complexities in developing a single or a small number of software to meet the needs of the MFIs are discussed below:

- *Many Institutional Models* : The organizational forms is a function of the specific of social, political, economics, regulatory and legal environments throughout the world. There are a variety of organizational forms that are assumed by the MFIs for carrying on their work. The MFIs can be in the form of credit union, cooperatives, Non-governmental Organizations (NGO) and even banks. All have their own varied type of requirement for MIS and its automation.
- *Different Lending Methodologies* : MFIs have vastly different lending methodologies across the globe and even within the same country. In India for example some MFIs follow the Grameen Model as per the example of the Grameen Bank, Bangladesh while others follow the Self Help Group Model.
- *Methodology on Interest Payment* : The practices for calculating interest and the periodicity for its payment vary according to the product and organization. These variations can occur even within the same organization depending on the product and the area of operation.
- *Other varied Requirements* : There are variations in terms of the currencies, languages and reporting requirements of the MFIs.

Answer 3A(i)

Platform-as-a-Service : Platform as a Service (PaaS) is a cloud computing model in which a third-party provider delivers hardware and software tools. It is defined as a set of software development tools hosted on the provider's infrastructure. Developers create applications on the provider's platform over the Internet. As a result, PaaS frees users from having to install in-house hardware and software to develop or run a new application. PaaS providers may use APIs, website portals or gateway software installed on the customer's computer. Force.com, (an outgrowth of Salesforce.com) and Google Apps are examples of PaaS. Developers need to know that currently, there are not standards for interoperability or data portability in the cloud. Some providers will not allow software created by their customers to be moved off the provider's platform.

PaaS does not typically replace a business's entire IT infrastructure. Instead, a business relies on PaaS providers for key services, such as application hosting or Java development.

A PaaS provider builds and supplies a resilient and optimized environment on which users can install applications and data sets. Users can focus on creating and running applications rather than constructing and maintaining the underlying infrastructure and services.

Many PaaS products are geared toward software development. These platforms offer compute and storage infrastructure, as well as text editing, version management, compiling and testing services that help developers create new software more quickly and efficiently. A PaaS product can also enable development teams to collaborate and work together, regardless of their physical location.

Answer 3A(ii)**Registry Cleaner Software**

Registry cleaners are programs that allow scanning the computer for any errors in the registry, which is a collection of the core computer files that are essential to performance and functionality, and repairs them if needed. A registry cleaner is a third-party OS utility which keeps the system error free by deleting redundant items like e-registry files of already uninstalled software or shortcuts that have since been moved. Registry cleaners are widely available on the Internet and give a significant upper hand when cleaning up the mess that a virus or other malware has left on the computer. Likewise, some otherwise safe programs can cause errors in the registry without intending to. Registry files can also be corrupted if the user unknowingly deletes or modifies a file in the registry. This usually occurs when an inexperienced user tries to fix their computer and inevitably causes more damage than before.

Registry cleaners are required because the older versions of common OS like Windows tend to slow down with time due to size of unwanted registry database after a while of use. Manual cleanup of invalid entries, missing references or broken and invalid link registry entries becomes impractical because of the sheer number of entries, so finding the entry in question would be tedious; therefore the need for automation becomes apparent.

Answer 3A(iii)

Flowcharting can be a very effective way of recording document flows in a system. Advantages of using flowcharts are as follows:

1. *Communication* : Flowcharts are better way of communicating the logic of a system to all concerned. Information can be easily communicated and assimilated
2. *Effective analysis* : With the help of flowchart, problem can be analyzed in more effective way.
3. *Proper documentation* : Program flowcharts serve as a good program documentation, which is needed for various purposes.
4. *Efficient Coding* : The flowcharts act as a guide or blueprint during the systems analysis and program development phase.
5. *Proper Debugging* : The flowchart helps in debugging process.
6. *Efficient Program Maintenance* : The maintenance of operating program becomes easy with the help of flowchart. It helps the programmer to put efforts more efficiently on the complex part of the program.
7. *Relationship* : Flowcharts effectively highlight the relationship between different parts of the system.
8. *Audit* : The auditor can see the whole flow of documents, i.e., potential bottlenecks can be identified easily. Also, the auditor has to obtain a clear understanding of information flow in order to draw up a flowchart of a complex system.

Answer 3A(iv)

An Executive Information System (EIS) is a type of management information system intended to facilitate and support the information and decision-making needs of senior executives by providing easy access to both internal and external information relevant to meeting the strategic goals of the organization. The characteristics of a good executive information system are as follows:

- a. Simple use interfaces are crucial. Good systems provide a wide variety of user interfaces such as a mouse, a touch screen, or a keyboard and allow the executive to choose which ever he or she is comfortable with.
- b. An EIS should be secure because the data that is contained and (or accessed) by an EIS is obviously important and often proprietary information.
- c. An EIS should support what-if-analysis and ad-hoc queries.
- d. An EIS should have the capability of allowing the executives to drill down into the data.
- e. Very quick response time is necessary.
- f. Colour graphics capabilities are important for displaying the information.
- g. The data used in an executive information system may reside in many different locations therefore efficient network is essential for expert systems.

- h. The EIS should be capable enough to have data from all associated systems and should be flexible in integrate with basic tools like excel and Access or any other database systems.

Question 4

- (a) Explain the provisions for renewal of licence of Certifying Authority as per Information Technology Act, 2000.
- (b) What are the Operational Characteristics of good Software? Explain.
- (c) List out the factors on which the success of an e-supply chain depends.
- (d) Discuss the key strengths of Oracle's ERP solutions. (4 marks each)

Answer 4(a)

Renewal of License

A Certifying Authority can apply for renewal of license not less than forty-five days before the date of expiry of the period of validity of license and comply all the rules of Information Technology (Certifying Authorities) Rules, 2000 which are applied in case of fresh application for becoming certifying Authority.

The Controller may, on receipt of an application for appointment as certifying authority, after considering the documents accompanying the application and such other factors, as he deems fit, grant the license or reject the application: No application for becoming certifying Authority shall be rejected under unless the applicant has been given a reasonable opportunity of presenting his case.

Answer 4(b)

Operational Characteristics of Good Software are

- a. *Correctness* : The software should meet all the specifications stated by the customer.
- b. *Usability/Learnability* : The amount of efforts or time required to learn how to use the software should be less. This makes the software user-friendly even for IT-illiterate people.
- c. *Integrity* : Software should be integrated with other applications and it should not affect the working of another application.
- d. *Reliability* : The software should not have any defects. Not only this, it shouldn't fail while execution.
- e. *Efficiency* : The software should make effective use of the storage space and execute command as per desired timing requirements.
- f. *Security* : The software shouldn't have ill effects on data / hardware. Proper measures should be taken to keep data secure from external threats.
- g. *Safety* : The software should not be hazardous to the environment/life.
- h. *Maintainability* : refers to how easily modifications/changes can be made to the current architecture and correct any shortcomings.

- i. *Portability* : Porting software to other computer configurations is important for several reasons. Good software products can have a life of 15 years or more, whereas hardware is frequently changed at least every 4 or 5 years. Thus good software can be implemented, over its lifetime, on three or more different hardware configuration.

Answer 4(c)

The success of an e-supply chain depends on the following factors:

1. The ability of all supply chain partners to view partner collaboration as a strategic asset. Tight integration and trust among the trading partners generate speed, agility, and lower cost.
2. A well-defined supply chain strategy. This includes a clear understanding of existing strengths and weaknesses, articulating well-defined plans for improvement, and establishing cross-organizational objectives for supply chain performance. Senior executives' commitment is also essential and must be reflected through appropriate allocation of resources and priority setting.
3. Information visibility along the entire supply chain. Information visibility refers to the information about inventories at various segments of the chain, demand for products, capacity planning and activation, synchronization of material flows, delivery times, and any other relevant information that must be visible to all members of the supply chain at any given time.
4. Speed, cost, quality, and customer service. These are the metrics by which supply chains are measured. Consequently, companies must clearly define the measurements for each of these four metrics, together with the target levels to be achieved. The target levels should be attractive to the business partners.
5. Integrating the supply chain more tightly. An e-supply chain will benefit from tighter integration, both within a company and across an extended enterprise made up of suppliers, trading partners, logistics providers, and the distribution channel
6. Use advanced predictive tools and use data to access what the consumers want and to predict the demand instead of piling up inventory. This not only helps in reducing cost but also provide the management and partners' insights to better manage their inventories

Answer 4(d)**Oracle ERP Key Strengths**

1. Oracle's ERP solution suite helps customers achieve lower total cost of ownership, benefit from a predictable cost model, and reduce risk.
2. With Oracle's powerful, on-demand software technology, end users are able to increase their productivity and gain competitive advantage, resulting in a superior ownership experience.
3. Oracle Enterprise Manager is the only management software that provides complete management solution for business applications, using a unique top-

down approach. It provides strong monitoring and management that encompasses end-user experience, application flows, and the underlying software and system infrastructure.

4. Oracle offers proven and open solutions—and a network of partner expertise. The company's solutions are built on open standards and leverage third-party solutions and add-on applications. Oracle's strong partner network delivers deep, industry-specific functionality and best practices.
5. Oracle has a better security framework as compared to other ERP suites in the market. The offer a role based security which makes it easy to manage and only the required approved access is assigned to the user
6. Oracle ERPs offer extensive customizations; clients have the option to remodel the solution based on their specific requirements
7. Oracle interfaces have an improved UI with fluidic interfaces which provide better user experience to the customers
8. With advent of cloud technology more and more customers are moving to a cloud architecture. Oracle provides its customers with the option to directly mode to cloud with minimal hassles with Oracle Cloud.
9. Reporting is fast swift and easier as Oracle ERP suites are based on database technology and integrates all solutions in a single database

Question 5

- (a) *Explain in detail the various functions, which can be achieved through the use of Database Management System (DBMS). (8 marks)*
- (b) *Explain the functions of National e-Governance Division (NeGD). Also discuss the 'State Data Centre' which has been identified as one of the important element of the core infrastructure for supporting e-Governance initiatives of National e-Governance Plan (NeGP). (8 marks)*

Answer 5(a)

Database Management System (DBMS) performs several functions that guarantee the integrity and consistency of the data in the database. Some of the functions of DBMS are:

1. *Data Dictionary Management*: The DBMS stores definitions of the data elements and their relationships (metadata) in a data dictionary. The DBMS uses this dictionary to look up the required data component structures and relationships, thus relieving the programmer from having to code such complex relationships in each program. All programs that access the data in the database work through the DBMS and any changes made in a database structure are automatically recorded in the data dictionary. In this way the DBMS provides data abstraction, removes structural and data dependency from the system.
2. *Data Storage Management*: The DBMS creates and manages the complex structures required for data storage, thus relieving programmer from the difficult

task of defining and programming the physical data characteristics. Data storage management is also important for database performance tuning. Performance tuning relates to the activities that make the database perform more efficiently in terms of storage and access speed.

3. *Data Transformation and Presentation* : The DBMS transforms entered data to conform to required data structures by formatting the physically retrieved data in conformity to the user's logical expectations. Example: An end user in India would expect to enter data such as June 15, 2010 as 15/06/10 whereas the same date is entered in US as 06/15/10.
4. *Security Management* : The DBMS creates a security system that enforces user security and data privacy. Security rules determine which users can access the database which data items each user can access and which data operations (read, add, delete or modify) the user can perform. This is especially important in multiuser database system.
5. *Multi-user Access Control* : To provide data integrity and data consistency, the DBMS uses sophisticated algorithms to ensure that multiple users can access the database concurrently without compromising the integrity of the database.
6. *Backup and Recovery Management* : The DBMS provides backup and data recovery to ensure data safety and integrity. Current DBMS systems provide special utilities that allow the Database Administrator to perform routine and special backup and restore procedures. Recovery management deals with the recovery of the database after a failure such as a bad sector in the disk or a power failure.
7. *Data Integrity Management* : The DBMS uses data relationships stored in the data dictionary to enforce data integrity and, thus minimize data redundancy and maximize data consistency. The. Ensuring data integrity is especially important in transaction-oriented database systems.
8. *Database Access Languages and API* : The DBMS provides data access through a query language, that lets the user specify what must be done without having to specify how is to be done. SQL is the query language and data access standard supported by majority of DBMS vendors. The DBMS also provides application programming interfaces to procedural languages such as COBOL, C, Java, etc. In addition, the DBMS provides administrative utilities used by the DBA and the database designer to create, implement, monitor and maintain the database.
9. *Database Communication Interface* : Current generation DBMSs accept end-user requests via multiple, different network environments. For example, the DBMS might provide access to the database via the Internet through the use of Web Browsers such as Internet Explorer, Firefox.

Answer 5(b)

National e-Governance Division (NeGD) has been playing a pivotal role in supporting Ministry of Electronics & Information in the key roles/tasks associated with Programme Management of NeGP. NeGD acts as one of the key catalysts and integrators for

initiatives under Mission Mode Projects (MMP) and support components under NeGP across the country. NeGD is also expected to proactively support Central Ministries/ Departments/State Governments.

Functions of National e-Governance Division (NeGD)

1. Programme Management of NeGP, inter-alia including facilitating and supporting DIT in undertaking the following tasks and responsibilities assigned to DIT under NeGP:
 - a. Facilitating implementation of NeGP by various Ministries and State Governments.
 - b. Providing technical assistance to Central Ministries and State Line Departments.
 - c. Serving as a secretariat to the Apex Committee.
 - d. Undertaking technical appraisal of all NeGP projects to examine issues such as overall technology architecture, framework, standards, security policy, service delivery mechanism, sharing of common infrastructure etc.
 - e. Human Resource Development, Training and Awareness Building.
 - f. Framing core policies, technical assistance, R&D, awareness and assessment and creation of organization structure.
 - g. Acting as a Central Agency for an effective implementation of Capacity Building Scheme inter-alia involving provisioning of manpower at various SeMTs across States/ UTs.
2. Positioning of a Capacity Building Management Cell for effective management of manpower at SeMTs together with management of other Scheme activities including training, setting up HR policies, etc.
3. Conduct research in the area of e-Governance models and develop appropriate solutions useable in India.
4. Improve the Public-Private collaboration.
5. Improve awareness amongst citizens for e-Governance projects and initiatives.
6. Bridge the Digital Divide between common people and their accessibility to core e-Government services

State Data Centre

State Data Centre (SDC) has been identified as one of the important element of the core infrastructure for supporting e-Governance initiatives of National e-Governance Plan (NeGP).

State Data Centre acts as a mediator & convergence point between open unsecured public domain and sensitive government environment. It enables various State departments to host their services/applications on a common infrastructure leading to ease of integration and efficient management, ensuring that computing resources and

the support connectivity infrastructure (SWAN/NICNET) is adequately and optimally used.

Under NeGP, it is proposed to create State Data Centres for the States to consolidate services, applications and infrastructure to provide efficient electronic delivery of G2G, G2C and G2B services. These services can be rendered by the States through common delivery platform seamlessly supported by core Connectivity Infrastructure such as State Wide Area Network (SWAN) and Common Service Centre (CSC) connectivity extended up to village level. State Data Centre would provide many functionalities and some of the key functionalities are Central Repository of the State, Secure Data Storage, Online Delivery of Services, Citizen Information/Services.

Portal, State Intranet Portal, Disaster Recovery, Remote Management and Service Integration etc. SDCs would also provide better operation & management control and minimize overall cost of Data Management, IT Resource, Management, Deployment and other costs.

Department of Information Technology (DIT) has formulated the Guidelines to provide Technical and Financial assistance to the States for setting up State Data Centre. These Guidelines also include the implementation options that can be exercised by the State to establish the SDC.

Question 6

- (a) *Comment on the punishment for publishing or transmitting obscene material in electronic form as stated in section 67 of Information Technology Act, 2000.*
(4 marks)
- (b) *As a common internet user, what do you understand by Web Browsers ? Write down the name of any four popular Web Browsers.*
(4 marks)
- (c) *Briefly explain any four requirements for successfully implementing the e-governance plan across the nation.*
(4 marks)
- (d) *What technology specific factors should be identified and evaluated during the initial assessment phase prior to developing an automation project ? Explain.*
(4 marks)

Answer 6(a)

Punishment for Publishing or transmitting of obscene material in electronic form

As per 67 of the Information Technology Act, 2000 whoever publishes or transmits or causes to be published or transmitted in the electronic form, any material which is lascivious or appeals to the prurient interest or if its effect is such as to tend to deprave and corrupt persons who are likely, having regard to all relevant circumstances, to read, see or hear the matter contained or embodied in it, shall be punished on first conviction with imprisonment of either description for a term which may extend to three years and with fine which may extend to five lakh rupees and in the event of second or subsequent conviction with imprisonment of either description for a term which may extend to five years and also with fine which may extend to ten lakh rupees.

Answer 6(b)**Web Browsers**

A web browser is a software program that allows a user to locate, access, and display web pages. It is a piece of software that acts as interface between the user and inner workings of the internet specifically the World Wide Web. Browsers are used primarily for displaying and accessing websites on the internet, as well as other content created using languages such as Hypertext Mark-up Language (HTML) and Extensible Mark-up Language (XML). With a web browser, one can view web pages that may contain text, images, video and other multimedia, and navigate between them via hyperlinks (it is a method of moving between one website page and another indicated to the user by an image or text highlighted by underlying and/ or different colour). Browsers are also referred to as web clients, or universal clients, because in the client/server model, the browser functions as the client program. The browser acts on the behalf of user. The browser

- Contacts a web server and sends a request for information.
- Receives the information and then display it on the user's computer.

Text and graphical information can be displayed in browser. The www incorporate hypertext, photographs, sounds, video etc. that can be fully experienced through graphical browser. Browsers translate web pages and websites delivered using Hypertext Transfer Protocol (HTTP) into human-readable content. They also have the ability to display other protocols and prefixes, such as secure HTTP (HTTPS), File Transfer Protocol (FTP), email handling (mailto:), and files (file:).

Popular browser includes*

1. Netscape Navigator.
2. Microsoft Internet Explorer.
3. Mosaic.
4. Opera.
5. Lynx.
6. Hot Java.
7. Mozilla Navigator.
8. Safari.
9. Mozilla Firefox.
10. Google Chrome.

**Note : Students are required to write any four of the above mentioned popular web browser.*

Answer 6(c)

Some of the requirements for successfully implementing e-governance plan across the nation are:

1. E-Governance framework across the nation with enough bandwidth to service a population of one billion.

2. Connectivity frameworks for making the services reach rural areas of the country or development of alternative means of services such as e-governance kiosks in regional languages. There should be a strong connectivity for an effective e-governance.
3. National Citizen Database which is the primary unit of data for all governance vertical and horizontal applications across the state and central governments.
4. E-governance and interoperability standards for the exchange of secure information with non-repudiation, across the state and central government departments seamlessly.
5. A secure delivery framework by means of virtual private network connecting across the state and central government departments.
6. Data centers to handle the departmental workflow automation, collaboration, interaction, exchange of information with authentication.
7. IT Literacy and awareness regarding benefits of e-governance: There is general lack of awareness regarding benefits of e-governance as well as the process involved in implementing e-governance projects. The administrative structure is not geared for maintaining, storing and retrieving the governance information electronically. Moreover a majority of users especially in rural parts of country lack the intra skill sets to use an IT enabled system.
8. Optimum utilization of existing ICT infrastructure: To a larger extent, the computers in many departments are used for the purpose of word processing only, resulting in the underutilization of the computers in terms of their use in data processing capacities for supporting management decisions, thus the assets must be used properly.
9. Positive Attitude of Employees: Employees have derived their sustenance from the fact that they are important repositories of data and any initiative to e-governance may harm them. Thus any effort to implement DMS and workflow technologies or bringing out the change in the system is often met with resistance from the employees.
10. Co-ordination between Government Department and Solution developers: At present the users do not contribute enough to design the solution architecture. Consequently the solution developed and implemented does not address the requirements of an e-governance project effectively and hence does not get implemented.
11. Infrastructure for sustaining e-governance projects on national level: Infrastructure to support e-governance initiatives does not exist within government departments. Further, infrastructure creation is not guided by a uniform national policy, but is dependent on the needs of individual officers championing a few projects.
12. Bridging the Language Divide: The local dialect of communication for a majority of population still remains the regional language or Hindi. They are not too familiar with English which still remains the most prevalent medium of interacting with any IT based application. Government need to ensure that this barrier should

diminish with government initiatives to publish the portals in Hindi and local languages as well.

Answer 6(d)

A number of technology-specific factors should be identified and evaluated during this initial assessment phase, including:

- a. The problem (s) to be resolved by the development of a new automated system.
- b. How technology initiatives fit into overall mission and business objectives.
- c. Current or pending legislation that may affect the choice or use of technology.
- d. The state of existing systems within the organization and how they should relate to any new system.
- e. The system of managing materials in agency records offices as well as in the records center.
- f. The nature of any existing or planned records management initiatives within the organization and how they affect or should co-exist with any new system.
- g. The expected benefits resulting from the implementation of an automated system.
- h. How costs will be measured and at what point the costs will outweigh the benefits.
- i. The constraints and limitations of the automation project, including policy, financial requirements and technical skills.
- j. The time and resources required to conduct a feasibility study.
- k. The level of senior management support (it is best to seek a champion for the records system automation project to offer support at senior levels).
- l. The project team members, their roles and responsibilities.
- m. Estimation of the work that needs to be automated and developing detailed test scenarios beforehand.
- n. It is important to consider further future expansion while assessing current tools to automate.

FINANCIAL, TREASURY AND FOREX MANAGEMENT

Time allowed : 3 hours

Maximum marks : 100

NOTE : 1. Answer ALL Questions.

2. Tables showing the present value of ₹1 and the present value of an annuity of ₹1 for 15 years are annexed.
3. Suitable assumptions, if considered necessary, may be made while answering a question. However, such assumptions must be stated clearly.
4. Working notes form the part of answer.

Question 1

Comment on the following :

- (a) The key areas with respect to structural reforms and development of financial system have been specified by Economic Development Institute of the World Bank.
- (b) The strong position of domestic currency is at large good for the economy.
- (c) The efficient market hypothesis supports the assumption of supremacy to market forces.
- (d) Efficient cash pooling structures are keys to efficient and effective liquidity management. (5 marks each)

Answer 1(a)

The Economic Development Institute of the World Bank while dealing with structural reforms and development of financial system has specified the following key areas of reforms:

1. Reforms of structure of financial systems;
2. Policies and Regulations to deal with insolvency and illiquidity of financial intermediaries;
3. The development of markets for short and long term financial instruments;
4. The role of institutional elements in development of financial systems;
5. The links between financial sector and the reality sectors, particularly in the case of restructuring financial and industrial institutions or enterprises.
6. The dynamics of financial systems management in terms of stabilisation and adjustment, and;
7. Access to International Markets.

Answer 1(b)

A strong local or domestic currency, i.e., Indian rupee makes imports cheaper while a weak or not so strong rupee makes exports dearer. For an economy to perform well

both exports and imports should be at a reasonable level. Exports lead to job creation and economic development of a country. A strong domestic currency will lead to exports getting stagnated. If exports are stagnated then economic development will suffer.

If the domestic currency is strong then imports will be cheap and easy to procure. But if there are no exports there will be no foreign exchange to pay for the imports. Both exports and imports are necessary for a healthy economy. Therefore, a strong domestic currency may not be good for the economy. The relevant point is that the domestic currency should be at a reasonably healthy level.

Answer 1(c)

Efficient Market Hypothesis accords supremacy to market forces. A market is treated as efficient when all known information is immediately discounted by all investors and reflected in share prices. In such a situation, the only price changes that occur are those resulting from new information. Since new information is generated on a random basis, the subsequent price changes also happen on a random basis. Major requirements for an efficient securities market are:

- a. Prices must be efficient so that new inventions and better products will cause a firm's securities prices to rise and motivate investors to buy the stocks.
- b. Information must be discussed freely and quickly across the nations so that all investors can react to the new information.
- c. Transaction costs such as brokerage on sale and purchase of securities are ignored.
- d. Taxes are assumed to have no noticeable effect on investment policy.
- e. Every investor has similar access to investible funds at the same terms and conditions.
- f. Investors are rational and make investments in the securities providing maximum yield.

Answer 1(d)

Efficient cash pooling structures are keys to efficient and effective liquidity management. A cash pool is a structure which allows the balances on different bank accounts of a company or a group of companies to be treated as one single balance. It allows a company to combine the balances, both positive and negative, of all the accounts that are in the pool. Cash pooling provides a group with subsidiaries with a number of potential benefits like control over cash flows, funding benefits, investment opportunities, minimization of interest charge, reduction in payment costs etc.

Every investment has a cost to the company even the shares tapped from the share holders. Deposits are tapped in exchange of payment of interest. Borrowing has cost of payment of interest to creditors. So every fund has dividend/interest payment risks for the banks/company. So, if funds tapped are not properly utilized, the banks/company may suffer loss. Idle cash balance in hand has no yield. On the other hand, if sufficient cash balance is not maintained, then the probability of technical insolvency may arise.

Attempt all parts of either Q. No. 2 or Q. No. 2A**Question 2**

Distinguish between the following :

- (a) *Fund based financial activities and Non-fund based financial activities.*
- (b) *Private equity and Public issue.*
- (c) *Accounting rate of return and Internal rate of return.*
- (d) *Project monitoring and Project evaluation.* (4 marks each)

OR (Alternate question to Q. No. 2)**Question 2A**

- (i) *Illustrate the negative covenants those are normally part of the loan agreement that is entered between a financial institution and a borrower.* (4 marks)
- (ii) *For the purpose of efficient treasury management in a firm, the treasury manager has to take in to consideration both macro and micro parameters. Discuss.* (4 marks)
- (iii) *The meaningful and successful finalisation of the deal of securitization will be achieved only if other parties are involved in addition to primary parties to the deal. Briefly explain the other parties those are involved in the securitization process.* (4 marks)
- (iv) *The stock exchanges in India have made noteworthy contribution for the development of an organised capital market. To introduce the trading of derivatives on exchange platform, certain conditions are needed to be fulfilled. Discuss those conditions in brief.* (4 marks)

Answer 2(a)**Fund based financial activities**

It refers to services that are used to acquire assets or funds for a customer. It consists of-

- Primary market activities
- Secondary market activities
- Foreign exchange activities
- Specialized financial services

The traditional services which come under fund based activities are the following:

- Underwriting or investment in shares, debentures, bonds, etc. of new issues (primary market activities).
- Dealing in secondary market activities.
- Participating in money market instruments like commercial Papers, certificate of deposits, treasury bills, discounting of bills etc.

- Involving in equipment leasing, hire purchase, venture capital, seed capital etc.
- Dealing in foreign exchange activities.

Examples of some important fund based activities are:

- Leasing
- Hire purchase
- Factoring
- Forfaiting
- Mutual funds
- Housing finance
- Venture capital etc.

Non-fund based financial activities

Financial intermediaries provide services on the basis of non-fund activities also. This is also called 'fee based' activity. When financial institutions operate in specialised fields to earn income in form of fees, commission, brokerage or dividend it is called a fee based service. They include:

- Managing the capital issue — i.e. management of pre-issue and post-issue activities relating to the capital issue in accordance with the SEBI guidelines and thus enabling the promoters to market their issue.
- Making arrangements for the placement of capital and debt instruments with investment institutions.
- Arrangement of funds from financial institutions for the client's project cost or his working capital requirements.
- Assisting in the process of getting all Government and other clearances.

Examples of some Non-fund based activities are:

- Issue management
- Portfolio management
- Credit rating
- Stock broking
- Merchant banking
- Debt restructuring etc.

Answer 2(b)

Private equity

Private equity consists of investors and funds that make investments directly into private companies or conduct buyouts of public companies that result in a delisting of public equity. Capital for private equity is raised from retail and institutional investors,

and can be used to fund new technologies, expand working capital within an owned company, make acquisitions, or to strengthen a balance sheet. Generally, the private equity fund raise money from investors like Angel investors, Institutions with diversified investment portfolio like –pension funds, insurance companies, banks, funds of funds etc.

Public issue

Public issue of shares results in to offer of equity shares by the firm to the public at large. In turn, those shares are listed on the stock exchange. It enables the promoters to raise funds from the public, and public also gets a chance to invest in remunerative projects and to avail the share of benefits of company in form of dividend payment or/ and capital gain.

Answer 2(c)

Accounting rate of return and Internal rate of return

The Accounting rate of return or average rate of return (ARR) method is a non discounted technique of evaluating capital budgeting decision. It is based on accounting information rather than cash flows. For the computation of accounting rate of return the following formula is used:

$$\text{Accounting rate of return} = \frac{\text{Average annual profits after taxes}}{\text{Average capital invested}} \times 100$$

The Internal rate of return (IRR) is a discounted cash flow technique used to evaluate capital budgeting decision. Unlike ARR method, the IRR method considers time value of money by discounting the cash streams. IRR is the discount rate which equates the aggregate present value of net cash inflows with the aggregate present value of cash outflows of a project. In other word, it is the rate which gives the project Net present value (NPV) of zero.

The distinction between the two can be on the following grounds:

1. *Cash flows vs. Net profit* : IRR takes into account the cash flows whereas the Accounting rate of return takes into account the average net profit over the years.
2. *Time value of money* : the IRR takes into account the time value of money whereas the ARR does not.
3. Decision making under IRR is a scientific method and a good measure of the rate of return, whereas ARR is not.
4. *Denominator* : Under IRR, cash flows are matched with original investment whereas under the ARR, average investment is taken into account.
5. *Reinvestment Assumption* : Under IRR cash inflows are assumed to be reinvested at internal rate of return, whereas no such reinvestment assumption applies in ARR.

Answer 2(d)

<i>Project Monitoring</i>	<i>Project Evaluation</i>
1. It is a continuous process throughout the project	1. It is a periodic review at significant point of time.
2. It focuses on day to day activities, output, as indicators of progress and change	2. It assesses overall delivery of outputs, and progress towards objectives and goals.
3. Main participants are project staff and project users	3. Main participants are evaluators, facilitators, project users and project staff in addition to donors, if any.
4. Regular meetings, interviews, monthly or quarterly reviews etc.	4. Extra - ordinary meetings, additional data collection exercises etc.
5. It answers questions like: is the work of the project progressing as projected.	5. It answers questions like; Is the project successful at achieving its outcome, Is the project contributing to its ultimate goal.
6. Regular reports and updates to project users, management and donors.	6. Written reports with recommendations for changes to project presented in the meetings to different stakeholders.

Answer 2A(i)

Following are the possible negative covenants those are normally part of the loan agreement that is entered between a financial institution and a borrower:

1. Restriction on the company to pay commission to promoters, directors, managers or other persons for furnishing guarantee or indemnity or for undertaking any other liability in connection with any financial assistance obtained and/or to be obtained by the borrower for the purpose of the project;
2. Restriction to pay dividend to the equity share holders if default has been committed in payment of interest or repayment of installments of principal to the lenders;
3. Restriction to create charge or lien on its assets;
4. Restriction to enter into any partnership, profit-sharing or royalty agreements or enter into any similar arrangements whereby the business or operations of the company are affected;
5. Restriction to create any subsidiary or become subsidiary to any other existing concern;
6. Restriction to recognize or register any transfer of shares in the borrowers' share capital by the promoter directors, their relatives and associates who are required to furnish "Undertaking for non-disposal of shares" to the Financial Institutions;

7. Restriction to permit withdrawal of unsecured loans and deposits brought in or to be brought in by the Promoter Directors Group or Associates to finance capital cost of the project and to meet the working capital needs unless such withdrawal or payment of interest on such unsecured loan and deposit is permitted by the lenders.
8. Not to carry out the amendment of the Memorandum of Association and articles of association or alteration in the capital structure of the Company i.e. borrower.
9. No transfer of undertaking, trading activity other than the activities permitted by the Lenders.
10. No payment of directors remuneration, in addition to what has been approved by the Central Government and the Institution.

Answer 2A(ii)

Treasury management is concerned with both macro and micro facets of the economy. At the macro level, the inflows and outflows of cash, credit and other financial instruments are the functions of the government and the business sectors. These inflows are arranged by them as borrowing from the public. The micro units utilize these inflows and build up their capacities for production of output. This leads to establishment of a production system which logically leads us to the natural consequence, i.e. the establishment of distribution and consumption systems. Once the production, distribution and consumption systems are in place at the micro level, the generation of surpluses at the units begins. These surpluses are channeled back into the macro system as outflows from the micro system. The inflows are the taxes paid to the government and repayment of loans made to the banks and financial institutions. These inflows into the macro level have to be managed by the treasury managers at the micro level.

Answer 2A(iii)

Securitisation is a technique by which identified receivables and other financial assets can be packaged into transferable securities and sold to investors. Besides, the primary participants like the Originator, the SPV(Special Purpose Vehicle), the Investors, the Obligors and the Guarantor / Credit Enhancement Provider / Insurer , there are other parties involved in a securitization deal are as follows:

1. *Rating Agency* : Since structured finance deals are generally complex with intricate payment structures and legal mechanisms, rating of the transaction by an independent qualified rating agency plays an important role in attracting Investors.
2. *Administrator or Servicer* : The Servicer performs the functions of collecting the cash flows, maintaining the assets, keeping records and general monitoring of the Obligors.
3. *Agent and Trustee* : The Trustee is the manager of the SPV and plays a key role in the transaction. The Trustee generally administers the transaction, manages the inflow and outflow of moneys, and does all acts and deeds for protecting the rights of the Investors including initiating legal action against various participants in case of any breach of terms and triggering payment from various credit enhancement structures.

4. *Structurer*: Normally, an investment banker acts as the structurer and designs and executes the transaction. The Structurer also brings together the Originator, Credit Enhancement Provider, the Investors and other parties to a deal.

Answer 2A(iv)

To start the trading of derivatives in exchange, following have been considered as the pre-requisites:

1. Strong and Healthy Capital Market

The first and foremost requirement is the existence of a strong and healthy capital market. An efficient, transparent and fair capital market with strong settlement cycles helps in building an efficient derivatives market.

2. Clearing Corporation and Settlement Guarantee

Existence of a common clearing corporation providing settlement guarantee as well as cross margining is essential for speedy settlement as well as for risk minimization. This is particularly important in the case of derivatives where there are often no securities to be delivered and the settlement is arranged in the form of cash difference.

3. Reliable Wide Area Telecommunication Network

Since derivative trading must be introduced on nation-wide basis so as to provide equal opportunities for hedging to the investor population throughout the country, existing and reliable telecommunications network along with existence of proven automated trading systems is extremely important.

4. Risk Containment Mechanism

There should exist a strong and disciplined margining system in the form of daily and mark to market margins, which provide a cover for exposure along with price risk and notional loss in case of default in settling outstanding positions, thereby minimizing market risk.

Attempt all parts of either Q. No. 3 or Q. No. 3A

Question 3

- (a) *M/s Abacus Ltd. has decided to fill up the position of finance officer. To test the analytical capacity of applicant, following information is provided in the scanning test. You are one of the applicants for the position of finance officer. You are required to prepare the Income Statement in the vertical format based on information given hereunder.*

1. *The operating leverage is 2.50.*
2. *The financial leverage is 3.00.*
3. *The earnings per share is ₹30.*
4. *Present market price per share is ₹225.*
5. *Applicable tax rate is 33.0357%.*

6. Number of equity shares outstanding as of date are 20,000. (4 marks)

(b) The following rates are quoted in the Forex market of the London. From the information as given in the table, you are required to calculate the cost and/or value in terms of £ for Lila Ltd., who wishes to

(a) Buy € 45,520 - one month forward from now.

(b) Sell Canadian\$ 95,750 - three months forward from now.

Foreign Currency	Spot	Swap Points - One month forward	Swap Points - three months forward
Canadian\$	1.8640-8650	40-30	90-80
€	1.1468-72	10-20	45-55
US\$	1.4865-70	20-30	25-35

(4 marks)

(c) Jeeyu Ltd., is incorporated as per Companies Act, 2013, one year ago, in the State of Maharashtra. The first year's operation is being successful and company has worked above the breakeven point. The management of Jeeyu is thinking to manage ₹10 lakh, from the market. To avail the benefit of trading on equity, they are planning to make issue of debentures. The investment banker has suggested that they could issue the debentures at the face value of ₹100 and can offer the interest rate 11%. One of the directors has mentioned that, now-a-days investors are expecting the rate of return 12.50%. The company covered under the tax rate of 33%. You are required to work out :

(a) The issue price of debenture in terms of per debenture, and

(b) The effective cost of debentures from the view point of Jeeyu Ltd. (4 marks)

(d) Vivu Ltd. is a reputed chemical producing company. Vivu's shares are quoted in the market at the price of ₹340. Roma Mutual Fund's manager is thinking to buy the shares of Vivu. Advice the manager of Roma with respect to buy decision through the application of Gordon model based on the following information.

(1) The expected rate of return by equity shareholders is 10%.

(2) The retention ratio is 40%.

(3) The earnings per share recorded in the recent past year is ₹20.

(4) The expected earnings per share for next year is ₹25.

(5) The internal rate of return of Vivu Ltd. is 15%.

(4 marks)

OR (Alternate question to Q. No. 3)

Question 3A

(i) Strawberry Ltd. is an established confectionary maker company. Chairman of

the Strawberry has recently attended one of the Management Development Programme in premier institution. He is willing to work out the Economic Value Added (EVA) of the firm. He has provided to you, the following information. You are required to calculate the EVA from the same.

1. Profit after interest and tax	₹150 lakh	
2. Interest	₹25 lakh	
3. Borrowing interest rate	10%	
4. Owners' cost of capital	18%	
5. Net worth of the company	₹300 lakh	
6. Tax rate applicable	33%	
7. Overall cost of capital	15%	(4 marks)

- (ii) Trufen Ltd.'s equity shares are quoted in the BSE for physical and de-mat based delivery. The derivatives of Trufen's shares are in the form of option. The share is presently traded in the market at the price of ₹50. The following table indicates the quoted exercise price and its related premium for call option :

Exercise Price ₹	Option Premium ₹
48	6
50	4
55	5
60	7

Required to indicate for each exercise price, whether the option is At the money, Out of the money or In the money. Also calculate the intrinsic value and time value for each exercise price. (4 marks)

- (iii) Santra Ltd. is planning to replace an old lathe machine with a new one. The production manager has shortlisted the two alternative types of lathe machines, and provided the following information :

Particulars	Alternative I	Alternative II
Name of supplier	Apple Ltd.	Grapes Ltd
Cost of machine	₹100 lakh	₹50 lakh
Resultant savings in cost		
Year 1	₹10 lakh	₹20 lakh
Year 2	₹35 lakh	₹20 lakh
Year 3	₹25 lakh	₹20 lakh
Year 4	₹40 lakh	₹20 lakh
Economical life in years	4	4

You are required to suggest which lathe machine to be purchased, by using the discounted payback period method, and considering the applicable discount rate of 10%. (4 marks)

- (iv) Jakarta Ltd. is considering financing an expansion project of ₹100 lakh. The finance manager has worked out the two options by studying the macro factors of the economy, and also the operating performance of the company. The present tax rate applicable to company is 30%. The details of present position and different financing plans are as under.

Particulars	Present position and Financial plans
Present	20 lakh equity shares and debentures of ₹50 lakh carrying interest rate 8%
Plan A	Issue of Equity shares at the rate of ₹12.50 The expected Price earnings Ratio : 14
Plan B	Issuance of Debentures carrying interest rate 14%. The expected Price earnings Ratio : 12

From the above information, calculate the Indifference point at which EPS would be the same by both plan. (4 marks)

Answer 3(a)

Income statement of M/s Abacus Ltd.

Particulars	Amount (₹)
Contribution	67,20,000
Less : Fixed cost	(40,32,000)
EBIT	26,88,000
Less : Interest	(17,92,000)
EBT	8,96,000
Less : Tax @ 33.0357%	(2,96,000)
EAT or PAT	6,00,000

Working Notes:

- No. of shares outstanding = 20,000
- EPS = ₹ 30
- EPS = EAT/ No. of share outstanding
 $30 = \text{EAT} / 20,000$
 EAT = Rs. 6,00,000

4. $EBT = EAT / (1 - \text{Tax rate})$
 $EBT = \text{Rs. } 6,00,000 / (1 - 0.330357)$
 $EBT = \text{Rs. } 8,96,000$
5. $DFL = EBIT / EBT$
 $3 = EBIT / \text{Rs. } 8,96,000$
 $EBIT = \text{Rs. } 26,88,000$
6. $DOL = \text{Contribution} / EBIT$
 $2.5 = \text{Contribution} / \text{Rs. } 26,88,000$
 $\text{Contribution} = \text{Rs. } 67,20,000$
7. $\text{Fixed cost} = \text{Contribution} - EBIT$
 $\text{Fixed cost} = \text{Rs. } 67,20,000 - \text{Rs. } 26,88,000$
 $= \text{Rs. } 40,32,000$
8. $\text{Interest} = EBIT - EBT$
 $= \text{Rs. } 26,88,000 - \text{Rs. } 8,96,000 = \text{Rs. } 17,92,000$

Answer 3(b)

If the swap points margin for ask greater than bid, then local currency (sterling Pound); considered at discount. Hence, the forward rate is calculated by adding the margin in the spot.

- (a) Buy Euro 45,520- one month forward from now
Euro forward 1 month = spot + swap points
Here banker is going to sale, hence ask rate applicable
 $1.1472 + 0.0020 = 1.1492$
Cost in terms of £ = $45,520 * 1.1492 = \text{£ } 52,311.58$
- (b) Sell Canadian \$ 95,750- three months forward from now
Canadian \$ Forward 3 months = Spot – Swap points
Here banker is going to buy, hence Bid rate applicable.
 $1.8640 - 0.0090 = 1.8550$
Value in terms of £ = $95,750 * 1.8550 = \text{£ } 1,77,616.25$

Answer 3(c)

- (a) Issue price of debenture = $\frac{\text{Expected interest to be received by investor}}{\text{Expected rate of return}}$
 $= \text{Rs. } 11 / 0.1250 = \text{Rs. } 88$

$$\begin{aligned}
 \text{(b) Effective cost of debenture} &= \{\text{Interest (1-t)}\} / \text{Net proceeds} \\
 &= \{11 (1-0.33)\} / 88 \\
 &= 0.08375 \text{ or } 8.375\%
 \end{aligned}$$

Answer 3(d)

According to Gordon model,

$$P = E(1-b) / (k_e - br)$$

where P - Market price of equity share

E - Earnings per share

b - Retention ratio

k_e - cost of equity share capital

br - growth rate of the firm

$$\begin{aligned}
 P &= \{25 (1-0.40)\} / \{0.10 - (0.40 \cdot 0.15)\} \\
 &= 15 / 0.04 = \text{Rs. } 375
 \end{aligned}$$

Decision : As the price of the share of Vivu Ltd. quoted in the market (Rs. 340) is less than the market price derived as per Gordon model (Rs. 375). Therefore, Roma Mutual fund should buy the shares.

Answer 3A(i)**Alternative Solution No.1**

$$\begin{aligned}
 \text{EVA} &= \text{PAT} - \text{Charges for equity} \\
 &= \text{Rs. } 150 \text{ lakh} - (\text{Rs. } 300 \text{ lakh} \cdot 0.18) \\
 &= \text{Rs. } 96 \text{ lakh}
 \end{aligned}$$

Alternative Solution No. 2

$$\begin{aligned}
 \text{EVA} &= \text{NOPAT} - \text{Charges for capital employed} \\
 \text{NOPAT} &= \text{PAT} + \text{Interest (1-t)} = \text{Rs. } 150 \text{ lakh} + \text{Rs. } 25 \text{ lakh} (1 - 0.33) \\
 &= \text{Rs. } 166.75 \text{ lakh}
 \end{aligned}$$

$$\begin{aligned}
 \text{Capital employed} &= \text{equity capital} + \text{debt} \\
 &= \text{Rs. } 300 \text{ lakh} + (\text{Rs. } 25 \text{ lakh} / 10\%) \\
 &= \text{Rs. } 550 \text{ lakh}
 \end{aligned}$$

$$\text{Cost of capital employed} = 0.15 \cdot \text{Rs. } 550 \text{ lakh} = \text{Rs. } 82.5 \text{ lakh}$$

$$\text{EVA} = \text{Rs. } 166.75 \text{ lakh} - \text{Rs. } 82.5 \text{ lakh} = \text{Rs. } 84.25 \text{ lakh}$$

Alternative Solution No. 3

$$\text{EVA} = (\text{ROCE} - \text{Overall cost of capital}) \cdot \text{capital employed}$$

$$\text{ROCE} = \text{EBIT} / \text{Capital employed}$$

EBIT (for the purpose of EVA) = PAT + Interest (1-t)

EBIT = Rs. 150 lakh + Rs. 25 lakh (1-0.33)
= Rs. 166.75 lakh

ROCE = Rs. 166.75 lakh/ Rs. 550 lakh
= 30.32%

EVA = (0.3032 – 0.15) * Rs. 550 lakh
= Rs. 84.26 lakh

Answer 3A(ii)

Option is call and market price is Rs. 50

Exercise price (Rs.)	Option Premium (Rs.)	Status	Intrinsic value	Time value
48	6	In the money	2	4
50	4	At the money	0	4
55	5	Out of money	0	5
60	7	Out of money	0	7

Answer 3A(iii)

Particulars	PVIF 10%	Alternate I (Rs. in lakh)	PV of Alternate I (Rs. in lakh)	Cum PV Alternate I (Rs. in lakh)	Alternate II (Rs. in lakh)	PV of Alternate II (Rs. in lakh)	Cum PV Alternate II (Rs. in lakh)
Name of supplier		Apple Ltd.			Grapes Ltd.		
Cost of machine (Rs. in lakh)		Rs. 100 lakh	(100)	(100)	Rs. 50 lakh	(50)	(50)
Resultant savings in cost (Rs. in lakh)							
Year 1	0.9091	Rs. 10 lakh	9.091	(90.909)	Rs. 20 lakh	18.182	(31.818)
Year 2	0.8264	Rs. 35 lakh	28.924	(61.985)	Rs. 20 lakh	16.528	(15.29)
Year 3	0.7513	Rs. 25 lakh	18.7825	(43.2025)	Rs. 20 lakh	15.026	(0.264)
Year 4	0.6830	Rs. 40 lakh	27.32	(15.8825)	Rs. 20 lakh	13.66	13.396
Economical life (in years)		4			4		
Discounted payback period							= 3+ (0.264/ 13.396) = 3.019 years

Decision : Alternative II, to purchase from Grapes Ltd. should be chosen as the discounted payback is near 3 years, while in Apple Ltd.; the money could not be recovered over the economic life of the machine.

Answer 3A(iv)

Indifference point is the level of EBIT at which the EPS under two or more capital structures are same.

Plan A (Equity financing)

Interest = Interest cost as per present position only = Rs. 4,00,000

$$\begin{aligned} \text{Effective no. of equity shares} &= \text{Present} + \text{new addition} \\ &= 20,00,000 + \text{Rs. } 100,00,000 / \text{Rs. } 12.50 \\ &= 28,00,000 \end{aligned}$$

Plan B (Debt financing)

Interest = Interest cost as per present position + new addition
= Rs. 4,00,000 + Rs. 14,00,000 = Rs. 18,00,000

Effective no. of equity shares = present only = 20,00,000

Calculation of indifference point

$$\begin{aligned} \text{EPS}_{\text{Plan A}} &= \text{EPS}_{\text{Plan B}} \\ \frac{\{(EBIT - \text{Rs. } 4,00,000)(1 - 0.30)\}}{28,00,000} &= \frac{\{(EBIT - \text{Rs. } 18,00,000)(1 - 0.30)\}}{20,00,000} \\ (0.70 \text{ EBIT} - \text{Rs. } 2,80,000) / 28 &= (0.70 \text{ EBIT} - \text{Rs. } 12,60,000) / 20 \\ 14 \text{ EBIT} - \text{Rs. } 56,00,000 &= 19.6 \text{ EBIT} - \text{Rs. } 3,52,80,000 \\ 2,96,80,000 &= 5.6 \text{ EBIT} \\ \text{EBIT} &= \text{Rs. } 53,00,000 \end{aligned}$$

Question 4

(a) From the information related to annual return earned by investor's through investment in the shares of Pink Ltd.; and also the return earned by investors' community at large from index rate movements in the recognised stock exchange; compute the beta value of Pink Ltd.

Year	Return on Shares of Pink Ltd. (%)	Return earned by Investors' Community (%)	
2012	14.00	6.00	
2013	21.00	8.00	
2014	(6.00)	(2.00)	
2015	4.00	12.00	
2016	20.00	14.00	
2017	19.00	16.00	(4 marks)

- (b) The shares of Paper Power Ltd. are presently quoted in the market at the rate of ₹504 per share. Abhay wants to play in the derivatives of Paper Power Ltd., as he holds the shares of the company. He decided to become the call option writer. The 3 months call options are quoted in the market at the rate of ₹505, with a premium of ₹5. The size of option is 100 shares of Paper Power Ltd. Work out Abhay's net payoff, if the prices of the shares on the exercise date is between ₹490 to 510, with intervals of price of ₹5. (4 marks)
- (c) Elaborate the symptoms through which an analyst can get indication about the probable financial distress of firm. (4 marks)
- (d) Comment on the following statement from the perspective of Miller and Modigliani: "It is considered as an essential for the firm to declare the dividend on equity shares to attract the fresh capital in future". (4 marks)

Answer 4(a)

Year	Return on shares of Pink Ltd.(%)	Return earned by Investors' community (%)	DP = Return of Pink Ltd. – Avg return of pink	DM = return of market – Avg return of market	DM ²	DP*DM
2012	14	6	14-12 = 2	6-9 = (3)	9	(6)
2013	21	8	21-12 = 9	8-9 = (1)	1	(9)
2014	(6)	(2)	(6)-12 = (18)	(2)-9 = (11)	121	198
2015	4	12	4-12 = (8)	12-9 = 3	9	(24)
2016	20	14	20-12 = 8	14-9 = 5	25	40
2017	19	16	19-12 = 7	16-9 = 7	49	49
	72	54			Variance of market = 214	Cov(pink, mkt) = 248
Average	12	9				

$$\text{Beta} = \text{Covariance} / \text{Variance of market} = 248 / 214 = 1.159$$

Answer 4(b)

Calculation of Net pay off as Call option Writer (Abhay), Exercise price Rs. 505, Premium Rs. 5

Market price	Action by call option buyer	Net pay off	Premium	Gross profit
490	Lapse	0	500	500
495	Lapse	0	500	500
500	Lapse	0	500	500
505	Indifferent	0	500	500
510	Exercise	(500)	500	0

Answer 4(c)

Following are the symptoms to get an indication of financial distress probability:

1. Liquidity problems.
2. Difficulty in obtaining market credit.
3. Higher prices charged by supplier of raw materials and services.
4. Difficulty in obtaining the market credit.
5. Delay in payment beyond the maturity or due date of payment.
6. Delay in realization of funds from debtors.
7. Excessive borrowing to meet the operating expenses.

Answer 4(d)

According to Modigliani and Miller, under a perfect market situation, the dividend policy of the firm is irrelevant, as it does not affect the value of the firm. Every investor in a security or a project looks for a return on his investment. The return should be a regular flow of income. Hence, it is correct that dividend declaration is important for attracting investment. However, the Modigliani and Miller model says that dividend is irrelevant and an investor is equally happy with capital appreciation which can be encashed through home-made dividends by selling part of the investment. What is really important is the return to the investor and not just dividend. If an investor can be reasonably certain that he will receive a return whether as dividend or as capital appreciation then he can be expected to invest and capital can be attracted.

Therefore, Modigliani and Miller do not consider dividend as essential, rather they argue that if the firm does not pay any dividend, a shareholder can create a 'home-made dividend' by selling part of his shares at the market price in the market and avail the cash balance. Therefore a shareholder is indifferent whether company pays dividend or not.

Question 5

- (a) *Lamuna Ltd., a carpet manufacturer in India is tendering for an export order for an America based buyer. The tender conditions state that payment will be made in US\$ at the end of 18 months from now. The marginal cost of producing the carpet is ₹600 per square feet. The tender quantity is 2,00,000 square feet of carpet. The normal mark-up is 25% on marginal cost, as per the practice of Lamuna Ltd. The present spot exchange rate in Mumbai is ₹ 65.08-65.18 per \$. Expected annual inflation rate in India is 9%, while in US is 3%.*

Recommend the price to be quoted in the tender by Lamuna Ltd., to American buyer. (8 marks)

- (b) *Aarvi, a portfolio manager of WX Mutual Fund coordinates and take all necessary decisions to provide the sufficient return to the investors' of fund. The following information is available with respect to the portfolio created and managed by her:*

- (1) *Risk free rate of interest generally applicable in an economy is 8%.*
- (2) *Expected market return by investing community is 14%.*

(3) Standard deviation of assets deployed by fund is 3.0%.

(4) Standard deviation registered and normally recorded by market is 4%.

(5) Correlation coefficient of portfolio of fund with market is 1%.

From the above information, calculate the expected rate of return of portfolio.

(8 marks)

Answer 5(a)

1. Forward rate at the end of one year from now, through the application of purchasing power parity principle.

Here, bid rate will be applicable, as banker is going to buy the foreign currency.

Forward 12 months/ Spot = $(1 + \text{rate in home currency}) / (1 + \text{rate in Foreign currency})$

Forward 12 months/ 65.08 = $(1 + 0.09) / (1 + 0.03)$

Forward 12 months = Rs. 68.87 per \$

2. Forward rate at the end of 18 months from now, through the application of purchasing power parity principle

Here, bid rate will be applicable, as banker is going to buy the Foreign currency

Forward 18 months/ Forward 12 months = $(1 + \text{rate in Home currency}) / (1 + \text{rate in foreign currency})$

Forward 18 months/ 68.87 = $(1 + 0.045) / (1 + 0.015)$

Forward 18 months = Rs. 70.91 per US \$

3. Computation of normal tender price in India Rs.

Marginal cost of manufacturing (2,00,000 * Rs. 600)	Rs. 12,00,00,000
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Add: Markup (25%)	<u>Rs. 3,00,00,000</u>
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Normal tender price	Rs. 15,00,00,000
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4. Quotation in US \$

Normal tender price	Rs. 15,00,00,000
---------------------	------------------

Forex rate applicable (forward 18 months)	Rs. 70.91 per US \$
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Quote in US \$	US\$ 21,15,357.49
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Answer 5(b)

Expected rate of return of a portfolio

$$R_e = R_f + \beta_j (R_m - R_f)$$

Where

R_e is expected rate of return of portfolio

R_f is risk free rate of return

β_j coefficient of portfolio of fund

R_m is expected rate of return of market portfolio

$$\beta_j = R_{sm} * \sigma_s / \sigma_m$$

Where R_{sm} is correlation coefficient of portfolio with market

σ_s is standard deviation of an asset

σ_m is market standard deviation

$$\beta_j = 1 * 3/4 = 0.75$$

$$R_e = 8 + 0.75(14 - 8) = 12.5\%$$

Question 6

Management of Rose Ltd. is contemplating the next year budget, and hence required to work out the working capital requirements for the next year. The following information has been provided by the budget committee.

A : Estimated value for per unit of finished product

Particulars	Amount ₹ (Per Unit)
Raw materials	60
Direct wages	30
Cash based Manufacturing and administrative overhead	20
Depreciation	10
Selling and distribution overhead	10
Total cost	130
Selling price	200

Additional information provided by the concerned committee member of budget committee is as under.

(1) Expected level of activity would be 60,000 units.

(2) Raw material cost consists of the following :

Particulars	₹ per unit
Dried milk powder	40
Coco butter	18
Vanila essence	2

(3) Raw materials are purchased from different suppliers, and those suppliers are extending different credit period as indicated hereunder :

Particulars	Credit period in months
Dried milk powder	2
Coco butter	½
Vanila essence	1

- (4) Product is in process for a period of $\frac{1}{2}$ month. Production process requires 100% of dried milk powder and coco butter in the beginning of the process. Vanilla essence is required at a uniform and constant rate during the process.
- (5) Direct wages and other overhead accrue at a uniform rate throughout production process.
- (6) Past trends indicate that dried milk powder is required to be stored for two months period and other materials to be stored for one month, before it would be given for the production process.
- (7) Finished goods are kept in stock for a period of one month.
- (8) It is estimated that one-fourth of total sales would be on cash basis.
- (9) The past experience also indicates that it took generally two months time to collect the receivables from the debtors.
- (10) Average time-lag in payment of all overhead is one month and $\frac{1}{2}$ month in case of labour payment.
- (11) Desired cash balance to be maintained throughout the year at the level of ₹ 1 lakh.
- From the above information, you are required to determine the net working capital requirement on cash basis. (16 marks)

Answer 6**Statement showing the calculation of working capital requirement**

<i>Particulars</i>	<i>Amount (Rs.)</i>	
CURRENT ASSETS		
1. Raw material		
Dried milk powder $(60,000 \times 40 \times 2) / 12$	4,00,000	
Coco butter $(60,000 \times 18 \times 1) / 12$	90,000	
Vanila essence $(60,000 \times 2 \times 1) / 12$	10,000	5,00,000
2. WIP $(60,000 \times 84 \times 0.5) / 12$		2,10,000
3. Finished goods $(60,000 \times 110 \times 1) / 12$		5,50,000
4. Receivables $(60,000 \times 120 \times 2) / 12 \times 75\%$	9,00,000	
5. Cash in hand		1,00,000
Total (A)		<u>22,60,000</u>
CURRENT LIABILITY		
1. Creditors		
Dried milk powder $(60,000 \times 40 \times 2) / 12$	4,00,000	
Coco butter $(60,000 \times 18 \times 0.5) / 12$	45,000	
Vanila essence $(60,000 \times 2 \times 1) / 12$	10,000	4,55,000

PP-FTFM-June 2018	46	
2. Outstanding overheads $(60,000 * 30 * 1) / 12$		1,50,000
3. Outstanding wages $(60,000 * 30 * 0.5) / 12$		75,000
Total (B)		<u>6,80,000</u>
WORKING CAPITAL (A-B)		15,80,000

Working notes:

Calculation of per unit cost of WIP

<i>Particulars</i>	<i>(Rs.)</i>
Dried milk powder	40
Coco butter	18
Vanilla essence $(2 \times 50\%)$	1
Direct wages $(30 \times 50\%)$	15
Manufacturing & administrative overheads $(20 \times 50\%)$	10
Total cost for the purpose	<u>84</u>

TABLE - 1 : PRESENT VALUE OF RUPEE ONE

RATE	YEAR	YEAR	YEAR	YEAR														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
5%	0.9524	0.9070	0.8638	0.8227	0.7835	0.7462	0.7107	0.6768	0.6446	0.6139	0.5847	0.5568	0.5303	0.5051	0.4810			
6%	0.9434	0.8900	0.8396	0.7921	0.7473	0.7050	0.6651	0.6274	0.5919	0.5584	0.5268	0.4970	0.4688	0.4423	0.4173			
7%	0.9346	0.8734	0.8163	0.7629	0.7130	0.6663	0.6227	0.5820	0.5439	0.5083	0.4751	0.4440	0.4150	0.3878	0.3624			
8%	0.9259	0.8573	0.7938	0.7350	0.6806	0.6302	0.5835	0.5403	0.5002	0.4632	0.4289	0.3971	0.3677	0.3405	0.3152			
9%	0.9174	0.8417	0.7722	0.7084	0.6499	0.5963	0.5470	0.5019	0.4604	0.4224	0.3875	0.3555	0.3262	0.2992	0.2745			
10%	0.9091	0.8264	0.7513	0.6830	0.6209	0.5645	0.5132	0.4665	0.4241	0.3855	0.3505	0.3186	0.2897	0.2633	0.2394			
11%	0.9009	0.8116	0.7312	0.6587	0.5935	0.5346	0.4817	0.4339	0.3909	0.3522	0.3173	0.2858	0.2575	0.2320	0.2090			
12%	0.8929	0.7972	0.7118	0.6355	0.5674	0.5066	0.4523	0.4039	0.3606	0.3220	0.2875	0.2567	0.2292	0.2046	0.1827			
13%	0.8850	0.7831	0.6931	0.6139	0.5428	0.4803	0.4251	0.3762	0.3329	0.2946	0.2607	0.2307	0.2042	0.1807	0.1599			
14%	0.8772	0.7695	0.6750	0.5921	0.5194	0.4556	0.3996	0.3506	0.3075	0.2697	0.2366	0.2076	0.1821	0.1597	0.1401			
15%	0.8696	0.7561	0.6575	0.5718	0.4972	0.4323	0.3759	0.3269	0.2843	0.2472	0.2149	0.1869	0.1625	0.1413	0.1229			
16%	0.8621	0.7432	0.6407	0.5523	0.4761	0.4104	0.3538	0.3050	0.2630	0.2267	0.1954	0.1685	0.1452	0.1252	0.1079			
17%	0.8547	0.7305	0.6244	0.5337	0.4561	0.3898	0.3332	0.2848	0.2434	0.2080	0.1778	0.1520	0.1299	0.1110	0.0949			
18%	0.8475	0.7182	0.6086	0.5158	0.4371	0.3704	0.3139	0.2660	0.2255	0.1911	0.1619	0.1372	0.1163	0.0985	0.0835			
19%	0.8403	0.7062	0.5934	0.4987	0.4190	0.3521	0.2959	0.2487	0.2090	0.1756	0.1476	0.1240	0.1042	0.0876	0.0736			
20%	0.8333	0.6944	0.5787	0.4823	0.4019	0.3349	0.2791	0.2326	0.1938	0.1615	0.1346	0.1122	0.0935	0.0779	0.0649			
21%	0.8264	0.6830	0.5645	0.4665	0.3855	0.3186	0.2633	0.2176	0.1799	0.1486	0.1228	0.1015	0.0839	0.0693	0.0573			
22%	0.8197	0.6719	0.5507	0.4514	0.3700	0.3033	0.2486	0.2038	0.1670	0.1369	0.1122	0.0920	0.0754	0.0618	0.0507			
23%	0.8130	0.6610	0.5374	0.4369	0.3552	0.2888	0.2348	0.1909	0.1552	0.1262	0.1026	0.0834	0.0678	0.0551	0.0448			
24%	0.8065	0.6504	0.5245	0.4230	0.3411	0.2751	0.2218	0.1789	0.1443	0.1164	0.0938	0.0757	0.0610	0.0492	0.0397			
25%	0.8000	0.6400	0.5120	0.4096	0.3277	0.2621	0.2097	0.1678	0.1342	0.1074	0.0859	0.0687	0.0550	0.0440	0.0352			

ETHICS, GOVERNANCE AND SUSTAINABILITY

Time allowed : 3 hours

Maximum marks : 100

NOTE: Answer **ALL** Questions.

PART A

Question 1

- (a) *India has been flooded with various Ponzi schemes that take advantage of suspicious investors looking for alternate banking options. Lacking access to formal banks, low income Indians often rely on informal banking. These informal banks invariably consist of money lenders who charge interest at inflated rates and are soon replaced by more sophisticated methods of cunning people through disguised Ponzi schemes. Fund raising is done through legal activities such as collective investment schemes, non-convertible debentures and preference shares, as well as illegally through hoax financial instruments such as fictitious ventures in construction and tourism. The rapid spread of Ponzi schemes, especially in North India has various causes, not the least of which, include the lack of awareness about banking norms, steadily falling interest rates, lack of legal action against such activities and the security of political patronage.*

The Ponzi scheme run by Saradha Group, collected money from investors by issuing redeemable bonds and secured debentures and promising incredibly high profits from reasonable investments. Local agents were hired throughout the State of West Bengal and given huge cash payouts from investor deposits to expand quickly, eventually forming a conglomerate of more than 200 companies.

SEBI first detected something suspicious in the group's activities in 2009. It challenged Saradha because the company had not complied with the provisions of Indian Companies Act, which requires any company raising money from more than 50 investors to have a formal prospectus, and categorical permission from SEBI, the market regulator. The Saradha Group sought to evade prosecution by expanding the number of companies, thus creating a convoluted web of interconnected players. This created innumerable complications for SEBI, which labored to investigate Saradha in spite of them. In 2012, Saradha decided to switch it up by resorting to different fundraising activities, such as collective investment schemes (CIS) that were disguised as tourism packages, real estate projects, and the like. Many investors were duped into investing in what they thought was a chit fund. This too, was an attempt to get SEBI off its back, as chit funds fall under the jurisdiction of the State Government, not SEBI. However, SEBI managed to identify that group was not, in fact, raising capital through a chit fund scheme and ordered Saradha to immediately stop its activities until cleared by SEBI. SEBI had previously warned the State Government of West

Bengal about Saradha Group's hoax chit fund activities in 2011 but to no avail. Both, the Government as well as Saradha, generally ignored SEBI until the company finally went bust in 2013.

After the scandal broke, an inquiry commission investigated the group, and a relief fund of approximately US \$90 million was created to protect low-income investors. In 2014, the Supreme Court transferred all investigations in the Saradha case to the Central Bureau of Investigation (CBI) amid allegations of political interference in the state-ordered investigation. In the light of the above, you are required to answer the following questions :

- (i) *Explain Ponzi scheme run by Saradha Group. Why chit funds or Ponzi schemes still persists in India inspite of many scams ? Comment. (5 marks)*
 - (ii) *Discuss Indian legislations and provisions to curb Ponzi schemes. (5 marks)*
- (b) *Answer the following in brief :*
- (i) *"A very old concept of ethics exists since the time of Aristotle (384 BC)". Discuss.*
 - (ii) *What are the ethical issues in finance ? Discuss.*
 - (iii) *Discuss the role and powers of the Board with respect to good corporate governance.*
 - (iv) *What are Companies (Meeting of Board and its Powers) Second Amendment Rules 2017 ? Briefly explain.*
 - (v) *Discuss the composition of Corporate Social Responsibility Committee with reference to the statutory provisions applicable. (2 marks each)*
- (c) *"Good Corporate Governance is about intellectual honesty and not just sticking to rules and regulations. It has been observed that capital comfortably flows toward companies that practice this type of good governance". Briefly comment. (5 marks)*

Answer 1(a)(i)

Ponzi scheme of Saradha Group : The Ponzi scheme run by Saradha Group collected money from investors by issuing redeemable bonds and secured debentures and promising high returns from reasonable investments. Local agents were hired throughout the state of West Bengal and given huge cash payouts from investor deposits to expand quickly, eventually forming a conglomerate of more than 200 companies. SEBI challenged Saradha Group for not complying with the provisions of the Companies Act but the group escaped prosecution by expanding the number of companies creating a web of interconnected players. In April 2013, the scheme collapsed completely causing a loss of approximately US \$5 billion and bankrupting many of its low-income investors.

Ponzi schemes are when investors are promised huge returns which are unrealistic and at very low risk.

The Ponzi schemes generally targets low income individuals luring them by high returns in short span of time. Rural poor have very few options available to invest and

often end up falling prey to dubious investment schemes. A combination of widespread corruption, low financial literacy, greed of investors demanding high returns and a weak banking sector in rural areas results in the survival of Ponzi schemes in India. There is also an urgent need for regulatory system that quickly spots any scheme seeking to raise money from large numbers of people by promising exceptional returns, and treats it as prima facie suspect and fit for quick investigation and regulatory action.

Answer 1(a)(ii)

Provisions to curb Ponzi schemes

Chit funds in India are governed by the Chit Funds Act, 1982 and other State laws. Under the Act, the Central Government can choose to notify the Act in different states on different dates. States are responsible for notifying rules and have the power to exempt certain chit funds from the provisions of the Act.

SEBI (Collective Investment Schemes) Regulation, 1999 provides details of compulsory registration, business activities and obligations, trustees and their obligations, collective investment scheme, general obligations, inspection and audit, etc., of Collective Investment Management Company.

Though SEBI's CIS Regulations are in force since 1999, yet till date only one company got its registration with the SEBI. Many other entities are playing and raising crores of Rupees from the public by portraying the rosy pictures in the name/activity of real estate, plantation, teak-wood, mutual investment, etc., but the real motto of such entities behind the curtain is the greed to create their own financial empire. Looking to the increasing number of cases of violations of the CIS Regulations, it is high time to give more powers to the SEBI to arrest such cases at the early stage.

SEBI Act made it mandatory for money pooling schemes collecting in excess of Rs.100 crore to register with SEBI unless already registered with another regulatory agency and also prescribes penalties where such schemes operate without SEBI registration. The expanded definition of "collective investment scheme" now enables SEBI to curb, control and prevent such schemes.

Besides this, most of the States in India have enacted Protection of Interest of Depositors in Financial Establishments Act. Many States have also started State level co-ordination for exchange of information on fraudulent fund raising.

Answer 1(b)(i)

Virtue Theory of ethics is a very old concept existing since the time of Aristotle (384 BC). According to Aristotle, "role of ethics is to enable us to lead a successful and good life". The other normative theories attempts to answer the question of 'the right action' (or ethical behavior), virtue theory is more concerned with answering the question of how to live a good life or how to be a good person. Virtue theory aims to offer an account of the characteristics one must have to be considered virtuous. Aristotle considers pride and shame to be virtues on the grounds that we should be proud of our accomplishments and ashamed of our failings. The virtues of successful living apply to business as well. But everyday life virtues cannot be applied to business unconditionally.

Answer 1(b)(ii)

The ethical issues in finance that companies and employees are confronted with include:

- (i) In accounting - window dressing, misleading financial analysis;
- (ii) Related party transactions not at arm's length;
- (iii) Insider trading, securities fraud leading to manipulation of the financial markets;
- (iv) Executive compensation;
- (v) Bribery, Kickbacks, over billing of expenses and facilitation of payments;
- (vi) Fake reimbursement.

Answer 1(b)(iii)

As an element of good corporate governance the role of the Board should be clearly documented in a Board Charter. The Board as a main functionary is primary responsible to ensure value creation for its stakeholders. The absence of clearly designated role and powers of Board weakens accountability mechanism and threatens the achievement of organizational goals. Therefore, the foremost requirement of good governance is the clear identification of powers, roles, responsibilities and accountability of the Board, CEO, and the chairman of the Board.

Role and powers of the Board

- The board should retain full and effective control over the company and monitor the executive management.
- Board should exhibit total commitment to the company. An efficient and independent board should be conscious of protecting the interests of all stakeholders and should attend and actively participates in the meetings.
- The board should ensure a clearly accepted division of responsibilities at the top level of a company, which will ensure a balance of power and authority.
- The Board should ensure the company's prosperity by collectively directing the company's affairs, whilst meeting the appropriate interests of its shareholders and stakeholders.

Answer 1(b)(iv)

The details of Companies (Meeting of Board and its Powers) Second Amendment Rules, 2017 are as under:

- *Meeting through electronic mode* : Any director who intends to participate in the meeting through electronic mode may intimate about such participation at the beginning of the calendar year and such declaration shall be valid for one year. Such declaration shall not debar him from participation in the meeting in person in which case he shall intimate the company efficiently in advance of his intention to participate in person.
- *Preservation of draft minutes of video conferencing* : When a Board meeting is

held through video conferencing or other audio visual means, the draft minutes recorded shall be preserved by the company till the confirmation of the draft minutes in accordance with rule 3(12).

- *Committees of the Board*: The Board of directors of every listed company and a company covered under rule 4 of the Companies (Appointment and Qualification of Directors) Rules, 2014 shall constitute an 'Audit Committee' and a 'Nomination and Remuneration Committee of the Board'.

Answer 1(b)(v)

According to Section 135(1) of the Companies Act 2013 read with rule 3 of the Companies (Corporate Social Responsibility Policy) Rules, 2014 every company which fulfills any of the following criteria during any of the three preceding financial years shall constitute a CSR Committee of the Board consisting of three or more directors, out of which at least one director shall be an independent director:

- having net worth of rupees five hundred crore or more, or
- having turnover of rupees one thousand crore or more, or
- having net profit of rupees five crore or more.

The composition of the CSR Committee shall be disclosed in the Board's report.

Answer 1(c)

Good Corporate Governance is integral to the existence of the company and ensures the following:-

- Corporate Performance* - Improved governance structures and processes ensure quality decision making, encourage effective succession planning for senior management and enhance long-term prosperity of companies.
- Enhanced Investor Trust* - Investors consider corporate governance as important financial performance when evaluating companies for investment.
- Better Access to Global Market* - Corporate governance systems attracts investments from global investors.
- Combating Corruption* - Companies that are transparent, provide environment where corruption would certainly fade out.
- Easy finance from Institutions* - The credit worthiness of a company can be trusted on the basis of corporate governance practiced in the company.
- Enhancing Enterprise Valuation* - Improved management accountability and operational transparency increases the value of corporation.
- Reduced Risk of corporate crisis and scandals* - Effective corporate Governance ensures efficient risk mitigation systems in place.
- Accountability* - Good Corporate Governance practices create the environment whereby Boards cannot ignore their accountability to the stakeholders.

The above mentioned factors make it clear that good corporate governance can help companies improve their performance and gain access to capital.

Attempt all parts of either Q. No. 2 or Q. No. 2A**Question 2**

- (a) Discuss in brief the developments of corporate governance in U.S.A.
- (b) "Independent directors are directors who apart from receiving director's remuneration do not have any other material pecuniary relationship or transactions with the company, its promoters, its management or its subsidiaries". Elucidate.
- (c) "Board and executive leaders need to work together based on mutual respect, trust and commitment". In the light of this statement discuss in brief the relationship between the Board and Executive Management. (5 marks each)

OR (Alternate question to Q. No. 2)**Question 2A**

- (i) *With the increasing use of internet, the listed entities have started adopting a functional website for publication of information. In the context of this, analyze the major elements to be considered in Website Disclosure Regulations.* (5 marks)
- (ii) *Discuss the rights of shareholder under SEBI Listing Obligations and Disclosure Requirement (LODR) Regulations, 2015.* (5 marks)
- (iii) *Discuss the functions of Nomination and Remuneration Committee.* (5 marks)

Answer 2(a)**Corporate Governance Development in USA**

<i>Years</i>	<i>Development</i>
1977: The Foreign Corrupt Practices Act	Provides specific provisions for systems of internal control
1979: US Securities Exchange Commission	Prescribed mandatory reporting on internal financial control
1985: Treadway Commission	Emphasized the need of putting in place a proper control environment, desirability of constituting independent boards and its committees and objective internal audit function. As a consequence, the Committee of Sponsoring Organisations (COSO) took birth.
1992: COSO issued Internal Control – Integrated Framework	It is a framework to help business and other entities assess and enhance their internal control system
2002: Sarbanes Oxley Act	The Act made fundamental changes in virtually every aspect corporate

The Dodd-Frank Wall Street Reform and Customer Protection Act, 2010

governance and severe penalties for willful default by managers and auditors in particular.

Vote on Executive Pay and Golden Parachutes: Gives shareholders a say on pay with the right to a non-binding (advisory) vote on executive pay and golden parachutes (acquisitions). This gives shareholders a powerful opportunity to hold accountable executives of the companies they own, and a chance to disapprove where they see the kind of misguided incentive schemes that threatened individual companies and in turn the broader economy.

Answer 2(b)

Pecuniary relationship between a company and its Independent Director raises serious concerns on the independence of the director. Such a relationship may adversely influence an Independent Director's objectivity when it comes to taking key decisions and also results in conflict of interest of the concerned director.

Section 149(6) (c) of Companies Act, 2013 requires that an independent director should have no pecuniary relationship with the company, its holding, subsidiary or associate company, or their promoters, or directors, during the two immediately preceding financial years or during the current financial year.

MCA vide a General Circular in 2014 has issued the following clarifications with respect to 'Pecuniary Relationship' of Independent Director:

- In case, a company carries out transactions in the ordinary course of business at arm's length price with an Independent Director, such Independent Director would not be said to have 'pecuniary relationship' with the company.
- In case of Independent Directors, 'Pecuniary Relationship' does not include receipt of remuneration by way of sitting fees, reimbursement of expenses for participation in the Board and other meetings and remuneration in the form of commission.

The matter has been examined in consultation with SEBI and it is clarified that 'pecuniary relationship' provided in section 149(6)(c) of the Act does not include receipt of remuneration, from one or more companies, by way of fee provided under sub-section (5) of section 197, reimbursement of expenses for participation in the Board and other meetings and profit related commission approved by the members, in accordance with the provisions of the Act.

Answer 2(c)

Yes, it is true that the Board and Executive leadership need to work together based on mutual respect, trust and commitment. The Board provides counsel to management

and should not get involved in the day-to-day affairs of the organization. Clear expectations for the board and the director need to be established and maintained, because a board that is overly active in management can inhibit the organization's effectiveness. The Executive Management can help the board govern more and manage less by adopting the following three methods:

- Use a comprehensive strategic plan that has been developed in conjunction with the board, and supplement it with regular progress reports. This will keep the board's sights focused on the long term goals and mission of the organization. Regular reports will keep board members apprised of progress toward organizational goals, and provide part of the basis for evaluation of the executive management.
- Provide the board with relevant materials before board meetings, and explain why the materials are coming to the attention of the board. Let board members know how specific agenda items relate to the organization's larger mission, and what kind of action or discussion is desired of the board on each item.
- Facilitate board and board committee discussions so that the board stays focused on the larger issues. Refer to set policies that define the limits of the board's decision-making power, and strive to engage the board in a dialogue among themselves that leads to consensus-building.

Answer 2A(i)

Regulation 46 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 requires a listed entity to maintain a functional website. The listed entity shall ensure that the contents of the website are correct and shall update any change in the content of its website within two working days from the date of such change in content.

The listed entity shall disseminate the following information on its website:

- (a) details of its business;
- (b) terms and conditions of appointment of independent directors;
- (c) composition of various committees of board of directors;
- (d) code of conduct of board of directors and senior management personnel;
- (e) details of establishment of vigil mechanism / whistle blower policy;
- (f) criteria of making payments to non-executive directors , if the same has not been disclosed in annual report;
- (g) policy on dealing with related party transactions;
- (h) policy for determining 'material' subsidiaries;
- (i) details of familiarization programmes imparted to independent directors
- (j) the email address for grievance redressal and other relevant details;
- (k) contact information of the designated officials of the listed entity who are responsible for assisting and handling investor grievances;

- (l) financial information including:
- i. notice of meeting of the board of directors where financial results shall be discussed;
 - ii. financial results, on conclusion of the meeting of the board of directors where the financial results were approved;
 - iii. complete copy of the annual report including balance sheet, profit and loss account, directors report, corporate governance report etc;
- (m) shareholding pattern;
- (n) details of agreements entered into with the media companies and/or their associates, etc;
- (o) schedule of analyst or institutional investor meet and presentations made by the listed entity to analysts or institutional investors simultaneously with submission to stock exchange;
- (p) new name and the old name of the listed entity for a continuous period of one year, from the date of the last name change;
- (q) following information published in the newspaper-
- notice of meeting of the board of directors where financial results shall be discussed
 - financial results, as specified in regulation 33, along-with the modified opinion(s) or reservation(s), if any, expressed by the auditor:
 Provided that if the listed entity has submitted both standalone and consolidated financial results, the listed entity shall publish consolidated financial results along-with (1) Turnover, (2) Profit before tax and (3) Profit after tax, on a standalone basis, as a foot note; and a reference to the places, such as the website of listed entity and stock exchange(s), where the standalone results of the listed entity are available.
 - statements of deviation(s) or variation(s) as specified in sub-regulation (1) of regulation 32 on quarterly basis, after review by audit committee and its explanation in directors report in annual report;

Answer 2A(ii)

The right of shareholders under SEBI (LODR) Regulations, 2015:

- (a) The Rights of shareholder :** The listed entity shall seek to protect and facilitate the exercise of the following rights of shareholders:
- (i) right to participate in, and to be sufficiently informed of, decisions concerning fundamental corporate changes.
 - (ii) opportunity to participate effectively and vote in general shareholder meetings.
 - (iii) being informed of the rules, including voting procedures that govern general shareholder meetings.

- (iv) opportunity to ask questions to the board of directors, to place items on the agenda of general meetings, and to propose resolutions, subject to reasonable limitations.
 - (v) effective shareholder participation in key corporate governance decisions, such as the nomination and election of members of board of directors.
 - (vi) exercise of ownership rights by all shareholders, including institutional investors.
 - (vii) adequate mechanism to address the grievances of the shareholders.
 - (viii) protection of minority shareholders from abusive actions by, or in the interest of, controlling shareholders acting either directly or indirectly, and effective means of redress.
- (b) Timely information :** The listed entity shall provide adequate and timely information to shareholders, including but not limited to the following:
- (i) sufficient and timely information concerning the date, location and agenda of general meetings, as well as full and timely information regarding the issues to be discussed at the meeting.
 - (ii) capital structures and arrangements that enable certain shareholders to obtain a degree of control disproportionate to their equity ownership.
 - (iii) rights attached to all series and classes of shares, which shall be disclosed to investors before they acquire shares.
- (c) Equitable treatment :** The listed entity shall ensure equitable treatment of all shareholders, including minority and foreign shareholders, in the following manner:
- (i) All shareholders of the same series of a class shall be treated equally.
 - (ii) Effective shareholder participation in key corporate governance decisions, such as the nomination and election of members of board of directors, shall be facilitated.
 - (iii) Exercise of voting rights by foreign shareholders shall be facilitated.
 - (iv) The listed entity shall devise a framework to avoid insider trading and abusive self-dealing.
 - (v) Processes and procedures for general shareholder meetings shall allow for equitable treatment of all shareholders.
 - (vi) Procedures of listed entity shall not make it unduly difficult or expensive to cast votes.

Answer 2A(iii)

Under section 178 (2), (3) and (4) of the Companies Act, 2013, the Nomination and Remuneration Committee shall perform following functions:

- (i) Identify persons who are qualified to become directors in accordance with the criteria laid down and recommend to the Board their appointment and removal.

- (ii) Performance evaluation of every director
- (iii) Formulate the criteria for determining qualifications, positive attributes and independence of a director and recommend to the Board a policy, relating to the remuneration for the directors, key managerial personnel and other employees.
- (iv) While formulating the policy, the Committee shall consider the following:
 - the level and composition of remuneration is reasonable and sufficient to attract, retain and motivate directors of the quality required to run the company successfully;
 - relationship of remuneration to performance is clear and meets appropriate performance benchmarks; and
 - remuneration to directors, key managerial personnel and senior management involves a balance between fixed and incentive pay reflecting short and long-term performance objectives appropriate to the working of the company and its goals.

Additional functions suggested under regulations 19(4) of SEBI (LODR) Regulations, 2015 are:

- (i) Formulation of criteria for evaluation of performance of independent directors and the board of directors;
- (ii) Designing a policy on diversity of board of directors;
- (iii) Whether to extend or continue the term of appointment of the independent director, on the basis of report of performance evaluation of independent director.

Question 3

- (a) *“The institutional investors should use their powers and influence to ensure the implementation of the best practices set out in the Combined Code (2008)”. In the light of this statement state the observations of Kumar Mangalam Birla Committee on the principles of good corporate governance for the Institutional Shareholders in Indian scenario. (5 marks)*
- (b) *In Indian context, there is no single apex regulatory body which can be said to be the regulator of corporate but there exists a coordination mechanism among various functional regulators. Explain by providing examples. (5 marks)*
- (c) *“Stakeholder engagement provides opportunities to further align business practices with societal needs and expectations, helping to drive long-term sustainability and shareholder value”. In the context of this, discuss key principles of stakeholder engagement. (5 marks)*

Answer 3(a)

Institutional shareholders acquire a large stake in equity share capital of the listed companies. In some of the listed companies they are the major shareholders and own shares largely on behalf of the retail shareholders. They have special responsibility given the weightage of their votes and have a bigger role to play in corporate governance. They can effectively use their powers to influence the standard of corporate governance.

The recommendations of Kumar Mangalam Birla Committee for the institutional shareholders are:

- Take active interest in the composition of the Board of Directors.
- Be vigilant.
- Maintain regular and systematic contact at senior level for exchange of views on management, strategy, performance and the quality of management.
- Ensure that voting intentions are translated into practice.
- Evaluate the corporate governance performance of the company.

Answer 3(b)

In Indian context, there is no single apex regulatory body which can be said to be the regulator of corporate but there exists a coordination mechanism among various functional regulators:

In India there are different regulators for different following areas:

- Companies Act and Rules – Ministry of Corporate Affairs
- Capital Market and Stock Exchange - SEBI
- Insurance - IRDA
- Foreign Business - FIPB
- Imports and Exports - FEMA/DGFT
- Foreign investment - RBI

Examples:

- (1) *Applicability of SEBI (LODR) regulations* : SEBI is the prime regulatory authority which regulates all aspects of securities market and listed entities. The compliance with the corporate governance provisions as specified in SEBI (LODR) regulations shall not apply to a listed entity which has listed its specified securities on the SME Exchange, provided that for other listed entities which are not companies, but body corporate or are subject to regulations under other statutes, the provisions of corporate governance shall apply to the extent that it does not violate their respective statutes and guidelines or directives issued by the relevant authorities.
- (2) *Issue of shares to non-residents under automatic route* : An Indian company receiving foreign investment by issuing equity shares, under the FDI automatic route, should report the details of consideration received to the concerned Regional Office, Reserve Bank of India (RBI). For issuing shares the company shall comply with the provisions of Companies Act, 2013. For reporting issue and allotment of shares, the forms prescribed under Companies Act 2013 and as well as by Reserve Bank of India have to be filed within prescribed time limit.

Answer 3(c)

Stakeholder engagement is the process by which an organisation involves people who may be affected by the decisions it makes or can influence the implementation of its decisions.

The key principles of Stakeholders' engagement are:

- *Communicate* : Interactions from the various stakeholders should be promoted. The communication may be made through the print media elaborating about the progress of the company, which is also a part of the transparency and disclosure. Ensure intended message is understood and the desired response achieved.
- *Consult, early and often* : Always ask the right questions to get the useful information and ideas. To engage their support ask them for advice and listen how they feel.
- Remember they are human. Operate with an awareness of human feelings.
- *Plan it* : Time investment and careful planning against it, has a significant payoff.
- *Relationship* : Try to develop trust with stakeholders.
- *Simple but not easy* : Be empathetic. Listen to the stakeholders.
- *Managing risk* : Stakeholders can be treated as risk and opportunities that have probabilities and impact.
- *Compromise* : Across a set of stakeholder's diverse priorities.
- *Understanding what is success* : Explore the value of project to the stakeholder.
- *Take responsibilities* : Project governance is the key of project success. It's always the responsibilities of everyone to maintain an ongoing dialogue with stakeholders.

Question 4

- (a) Discuss stewardship code for insurers in India.
- (b) With the goal of promoting better corporate governance practices in India, the Government of India has set up National Foundation for Corporate Governance (NFCG). Explain in brief the mission of NFCG.
- (c) What is Asian Corporate Governance Association (ACGA) ? Discuss the scope of work of ACGA. (5 marks each)

Answer 4(a)

Insurance Regulatory and Development Authority of India decided to implement a code for stewardship for the insurers. The code is in the form of a set of principles, which the insurers would need to adopt. The code broadly requires the insurers to have a policy as regards their conduct at general meetings of the investee companies and the disclosures relating thereto.

The highlights of the Code/Guidelines are as under:

- Insurers should formulate a policy on the discharge of their stewardship responsibilities and publicly disclose it. The policy should clearly define the stewardship responsibilities as identified by the insurer and how it intends to fulfill the same to enhance the wealth of its clients.

- Insurers should have a clear policy on how they manage conflicts of interest in fulfilling their stewardship responsibilities and publicly disclose it.
- Insurers should monitor their investee companies by mechanisms for regular monitoring in respect of their performance, leadership effectiveness, succession planning, corporate governance, reporting and other parameters they consider important.
- *Annual Reporting to IRDA* : The insurers must file a status report to the IRDA at a specified format on annual basis indicating the reasons/justifications for the deviation /non-compliance with the principles in the Guidelines.

Answer 4(b)

With the goal of promoting better corporate governance practices in India, the Ministry of Corporate Affairs, Government of India, has set up National Foundation for Corporate Governance (NFCG) along with Confederation of Indian Industry (CII), Institute of Company Secretaries of India (ICSI) and Institute of Chartered Accountants of India (ICAI).

In the year 2010, stakeholders in NFCG have been expanded with the inclusion of Institute of Cost Accountants of India and the National Stock Exchange of India Ltd.

The mission of NFCG is:

- To foster a culture for promoting good governance, voluntary compliance and facilitate effective participation of different stakeholders;
- To create a framework of best practices, structure, processes and ethics;
- To make significant difference to Indian Corporate Sector by raising the standards of corporate governance in India towards achieving stability and growth.

NFCG endeavours to build capabilities in the area of research in corporate governance and to disseminate quality and timely information to concerned stakeholders. It works to foster partnerships with national as well as international organisations.

NFCG works to have arrangements with globally reputed organizations with the aim of promoting bilateral initiatives to improve regulatory framework and practices of corporate governance in a concerned and coordinated manner.

Answer 4(c)

The Asian Corporate Governance Association is an independent, non-profit membership organisation dedicated to working with investors, companies and regulators in the implementation of effective corporate governance practices throughout Asia. ACGA was founded in 1999 from a belief that corporate governance is fundamental to the long-term development of Asian economies and capital markets.

ACGA's scope of work covers three areas:

- Research* : Tracking corporate governance developments across 11 markets in Asia and producing independent analysis of new laws and regulations, investor activism and corporate practices.
- Advocacy* : Engaging in a constructive dialogue with financial regulators, stock

exchanges and institutional investors and companies on practical issues affecting the regulatory environment and the implementation of better corporate governance practices in Asia.

- (iii) *Education* : Organizing conferences and seminars that foster a deeper understanding of the competitive benefits of sound corporate and ways to implement it effectively.

ACGA is funded by a network of sponsors and corporate members, including leading pension and investment funds, other financial institutions, listed companies, multinational corporations, professional firms and educational institutions. It is incorporated under the laws of Hong Kong and is managed by a secretariat based there. Its governing Council comprises directors from around Asia.

PART B

Question 5

- (a) *What is sustainable development ? Discuss principles of sustainable development agreed upon by the world community.* (5 marks)
- (b) *During the "Earth Summit" at Rio (Brazil) in 1992, a blueprint for sustainable development in 21st century was signed by 179 Heads of State Governments as Agenda 21. Discuss this Agenda 21.* (5 marks)
- (c) *"Business cannot exist in isolation; it cannot be oblivious to Societal Development". Elaborate this statement.* (5 marks)

Answer 5(a)

Sustainable development is a broad concept that balances the need for economic growth with environmental protection and social equity. It is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. Sustainable development is a broad concept and it combines economics, social justice, environmental science and management, business management, politics and law.

Sustainable Development indicates development that meets the needs of the present generation without compromising with the ability of the future generations to meet their needs. The principle behind it is to foster such development through technological and social activities which meets the needs of the current generations, but at the same time ensures that the needs of the future generation are not impaired.

Four fundamental Principle of Sustainable Development agreed by the world community are:

1. *Principle of Intergenerational equity* : Need to preserve natural resources for the future generations.
2. *Principle of sustainable use* : Use of natural resources in a prudent manner without or with minimum tolerable impact on nature.
3. *Principle of equitable use or intergenerational equity* : Use of natural resources by any state / country must take into account its impact on other states.

4. *Principle of integration* : Environmental aspects and impacts of socio-economic activities should be integrated so that prudent use of natural resources is ensured.

Answer 5(b)

Agenda 21 – a blueprint for sustainable development into the 21st century was agreed during the "Earth Summit" at Rio in 1992, and signed by 179 Heads of State Government.

Agenda 21 is a guide for individuals, businesses and governments in making choices for the development that would help the society and environment.

Agenda 21 deals with:

1. *Social and economic dimensions* : developing countries; poverty; consumption patterns; population; health; human settlements; integrating environment and development.
2. *Conservation and management of resources* : atmosphere; land; forests; deserts; mountains; agriculture; biodiversity; biotechnology; oceans; fresh water; toxic chemicals; hazardous radioactive and solid waste and sewage.
3. *Strengthening the role of major groups* : women; children and youth; indigenous peoples; nongovernmental organisations; local authorities; workers; business and industry; farmers; scientists and technologists.
4. *Means of implementation* : finance; technology transfer; science; education; capacity-building; international institutions; legal measures; information.

Answer 5(c)

Yes, it is true that business cannot exist in isolation; it cannot be oblivious to societal development. The social responsibility of business can be integrated into the business purpose so as to build a positive synergy between the two.

It is the duty of company to undertake CSR activities because company and society are mutually interdependent on each other. No corporation in present world of globalization and liberalization can bear to have indifferent attitude towards the society, isolated existence is not possible.

It is rightly said that business cannot exist in isolation; business cannot be oblivious to societal development. The social responsibility of business can be integrated into the business purpose so as to build a positive synergy between the two.

Points explaining the synergy between the two are as follows:

1. CSR creates a favourable public image, which attracts customers. Reputation or brand equity of the products of a company which understands and demonstrates its social responsibilities is very high. Customers trust the products of such a company and are willing to pay a premium on its products.
2. CSR activities have its advantages. It builds up a positive image encouraging social involvement of employees, which in turn develops a sense of loyalty towards the organization, helping in creating a dedicated workforce proud of its company.

3. Society gains through better neighbourhoods and employment opportunities, while the organization benefits from a better community, which is the main source of its workforce and the consumer of its products.
4. Public needs have changed leading to changed expectations from consumers. The industry/ business owes its very existence to society and has to respond to the needs of the society.
5. The company's social involvement discourages excessive regulation or intervention from the Government or statutory bodies, and hence gives greater freedom and flexibility in decision-making.
6. The internal activities of the organisation have an impact on the external environment, since the society is an inter-dependent system.
7. A business organisation has a great deal of power and money, entrusted upon it by the society and should be accompanied by an equal amount of responsibility. In other words, there should be a balance between the authority and responsibility.
8. The good public image secured by one organisation by their social responsiveness encourages other organizations in the neighbourhood or in the professional group to adapt themselves to achieve their social responsiveness.
9. The atmosphere of social responsiveness encourages co-operative attitude between groups of companies. One company can advise or solve social problems that other organizations could not solve.
10. Companies can better address the grievances of its employees and create employment opportunities for the unemployed.
11. A company with its "ear to the ground" through regular stakeholder dialogue is in a better position to anticipate and respond to regulatory, economic, social and environmental changes that may occur.
12. Financial institutions are increasingly incorporating social and environmental criteria while assessing their projects. When making decisions about where to place their money, investors are looking for indicators of effective CSR management.
13. In a number of jurisdictions, governments have expedited approval processes for firms that have undertaken social and environmental activities beyond those required by regulation.

Attempt all parts of either Q. No. 6 or Q. No. 6A

Question 6

Discuss in brief the following :

- (a) Life Cycle Assessment.*
- (b) Environment, Social and Governance (ESG) Index.*
- (c) Global Compact Self-Assessment Tool.*
- (d) Brundtland Commission.*

- (e) *Discuss Millennium Development Goals (MDGs) that were officially established by Millennium Summit of the United Nations in 2000. (3 marks each)*

OR (Alternate question to Q. No. 6)

Question 6A

- (i) *The Ministry of Corporate Affairs issued the Corporate Governance Social Responsibility Voluntary Guidelines 2009, which emphasize that every business should design and formulate a CSR policy to guide the strategic planning and a roadmap for its CSR initiatives. Outline the core elements of CSR policy.*
- (ii) *“Tata steel’s Vision strikes a balance between economic value as well as ecological and societal value”. Comment.*
- (iii) *Discuss convention on Biological Diversity. (5 marks each)*

Answer 6(a)

Life Cycle Assessment tracks the environmental impact of a product from the use of its raw materials to the end of its useful life. LCA is an important tool for developing an environment self-portrait and for finding ways to minimize harm. A good LCA can shed light on ways to reduce the resources consumed and lower costs all along the value chain.

A LCA looks at this complete circle and measures environmental impact at every phase. It provides the foundation for understanding the issues a company must address and clues to help find Eco-Advantage.

Answer 6(b)

ESG describes the environmental, social and corporate governance issues that investors consider in the context of corporate behavior. Integration of ESG refers to the active investment management processes that include an analysis of environmental, social and corporate governance risks and opportunities and sustainability aspects of the company performance evaluation.

The ESG index employs a unique and innovative methodology that quantifies a company’s ESG practices and translates them into scoring system which is then used to rank each company against its peers in the market.

Key Performance Indicators

- *Environment* - Energy use and efficiency, Greenhouse gas emissions, water use, use of ecosystem services – impact & dependence and innovation in environment friendly products and services.
- *Social* - Employees, poverty and community impact and supply chain management
- *Governance* - Codes of conduct and business principles, accountability, transparency and disclosure and implementation – quality and consistency.

Answer 6(c)

The *Global Compact Self Assessment Tool* is an easy-to-use guide designed for use by companies of all sizes and across sectors committed to upholding the social and environmental standards within their respective operations. The tool consists of 45 questions with a set of three to nine indicators for each question. It consists of management section and for other sections, including human rights, labour, environment and anti-corruption and relate to the principles of the UN Global Compact. The tool is in line with the UN guiding principles on Business and Human Rights. For a small company, this tool acts as a measure to the company's performance in all areas of the UN Global Compact and how well these issues are managed. For a large organization, this tool helps to continuously improve existing policies and systems, engage subsidiaries, suppliers or other stakeholders and improves internal and external reporting.

Answer 6(d)

The Brundtland Commission, formally the World Commission on Environment and Development (WCED), known by the name of its Chairman Gro Harlem Brundtland, was convened by the United Nations in 1983. The Commission was created to address growing concern "about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development."

In establishing the Commission, the UN General Assembly recognized that environmental problems were global in nature and determined that it was in the common interest of all nations to establish policies for sustainable development.

The Report of the Brundtland Commission, *Our Common Future*, published in 1987, deals with sustainable development and the change of policies needed for achieving that. The definition of this term in the report is quite well known and often cited:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Answer 6(e)

The Millennium Development Goals (MDG's) are eight international development goals that were officially established following the Millennium Summit of the United Nations, 2000, following the adoption of the United Nations Millennium Declaration. All 189 United Nations members states agreed to achieve these goals by the year 2015. These goals are:

- Eradicating extreme poverty and hunger,
- Achieving universal primary education,
- Providing gender equality and empowering women
- Reducing child mortality rates,
- Improving maternal health,
- Combating HIV/AIDS, malaria, and other diseases,
- Ensuring environmental sustainability, and
- Developing a global partnership for development.

The Rio+20 vision of sustainable development as a holistic concept addresses four dimensions of society: economic development (including the end of extreme poverty), social inclusion, environmental sustainability, and good governance including peace and security.

Answer 6A(i)

CSR is the concept that an enterprise is accountable for its impact on all relevant stakeholders. It is the continuing commitment by business to behave fairly and responsibly and contribute to economic development while improving the quality of life of the work force and their families as well as of the local community and society at large.

Core elements of a CSR Policy are as follows:

1. *Care for all stakeholders* : The companies should respect the interests of, and be responsive towards all stakeholders, including shareholders, employees, customers, suppliers, project affected people, society at large etc. and create value for all of them. They should develop mechanism to actively engage with all stakeholders, inform them of inherent risks and mitigate them where they occur.
2. *Ethical functioning* : Their governance systems should be underpinned by Ethics, Transparency and Accountability. They should not engage in business practices that are abusive, unfair, corrupt or anti-competitive.
3. *Respect for workers' rights and welfare* : Companies should provide a workplace environment that is safe, hygienic and humane and which upholds the dignity of employees. They should provide all employees with access to training and development of necessary skills for career advancement, on an equal and nondiscriminatory basis. They should uphold the freedom of association and the effective recognition of the right to collective bargaining of labour, have an effective grievance redressal system, should not employ child or forced labour and provide and maintain equality of opportunities without any discrimination on any grounds in recruitment and during employment.
4. *Respect for Human Rights* : Companies should respect human rights for all and avoid complicity with human rights abuses by them or by third party.
5. *Respect for Environment* : Companies should take measures to check and prevent pollution; recycle, manage and reduce waste, should manage natural resources in a sustainable manner and ensure optimal use of resources like land and water, should proactively respond to the challenges of climate change by adopting cleaner production methods, promoting efficient use of energy and environment friendly technologies.
6. *Activities for Social and Inclusive Development* : Depending upon their core competency and business interest, companies should undertake activities for economic and social development of communities and geographical areas, particularly in the vicinity of their operations. These could include: education, skill building for livelihood of people, health, cultural and social welfare etc., particularly targeting at disadvantaged sections of society.

Answer 6A(ii)

Yes, Tata Steel's Vision strikes a balance between economic value as well as ecological and societal value. Its vision statement is 'We aspire to be the global steel industry benchmark for Value Creation and Corporate Citizenship.'

In the initial years, Tata Steel's CSR interventions were more as a 'provider' to society where the community was given support for its overall needs, both for sustenance and development. Gradually, the shift in approach led to Tata Steel being an 'enabler' focusing on building community capacity through training programmes; focusing on providing technical support rather than giving aid. At present, CSR interventions of Tata Steel focus on 'sustainable development' to enhance the quality of life of people. It guides the Company in its race to excel in all areas of sustainability. J R D Tata the Chairman of the Tata Group believed that, "to create good working conditions, to pay the best wages to its employees and provide decent housing to its employees are not enough for the industry, the aim of an industry should be to discharge its overall social responsibilities to the community and the society at large, where industry is located."

Guided by this mandate, Tata Steel has for decades uses its skills and resources, to the extent it can reasonably afford, to give back to the community a fair share of the product of its efforts. It was the first to establish labour welfare practices, even before these were made statutory laws across the world.

The Company also instituted an eight-hour workday in 1912, free medical aid in 1915, a Welfare Department in 1917, leave with pay, Workers Provident Fund and Workmen's Compensation in 1920 and Maternity Benefit for ladies in 1928.

The Company supports and propagates the principles of the United Nations Global Compact as a Founder Member, is a signatory to the Worldsteel Sustainability Charter and supports the Affirmative Action programme of the Confederation of Indian Industry.

Tata Steel's approach to business has evolved from the concept that the wealth created must be continuously returned to society. The responsibility of combining the three elements of society - social, environmental, and economic - is of utmost importance to the way of life at Tata Steel. Today, Tata Steel's CSR activities in India encompass the Company's Steel Works, Iron ore mines and collieries, reaching out to the city of Jamshedpur, its peri-urban areas and over 800 villages in the states of Jharkhand, Odisha and Chhattisgarh. Community involvement is a characteristic of all Tata Steel Group companies around the world. It can take the form of financial support, provision of materials and the involvement of time, skills and enthusiasm of employees. The Group contributes to a very wide range of social, cultural, educational, sporting, charitable and emergency assistance programmes.

Answer 6A(iii)

The Convention on Biological Diversity, known informally as the Biodiversity Convention, is an international treaty that was adopted in Rio de Janeiro in June 1992. The Convention has three main goals:

1. conservation of biological diversity;
2. sustainable use of its components; and

3. fair and equitable sharing of benefits arising from genetic resources.

In other words, its objective is to develop national strategies for the conservation and sustainable use of biological diversity. It is often seen as the key document regarding sustainable development.

Some of the issues dealt within the convention include:

- Measures and incentives for the conservation and sustainable use of biological diversity.
- Regulated access to genetic resources and traditional knowledge, including Prior Informed Consent of the party providing resources.
- Sharing, in a fair and equitable way, the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources (governments and/or local communities providing the traditional knowledge or biodiversity resources utilized).
- Access to and transfer of technology, including biotechnology, to the governments and/or local communities that provide traditional knowledge and/or biodiversity resources.
- Technical and scientific cooperation.
- Impact assessment.
- Education and public awareness.
- Provision of financial resources.
- National reporting on efforts to implement treaty commitments.
