GUIDELINE ANSWERS

PROFESSIONAL PROGRAMME

JUNE 2015

MODULE II

THE INSTITUTE OF
Company Secretaries of India
IN PURSUIT OF PROFESSIONAL EXCELLENCE
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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.

C O N T E N T S

Page

MODULE II

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NOTE: Guideline Answers of the last Four Sessions need to be updated in the light of changes and references given below:

PROFESSIONAL PROGRAMME

UPDATING SLIP

ETHICS, GOVERNANCE AND SUSTAINABILITY

MODULE – II – PAPER 3

Examination Session	*Question No.*	*Updating required in the answer*
(1)	*(2)*	*(3)*
All Previous Sessions	—	All answers are based on the notified provisions of Companies Act, 2013 and the provisions of Companies Act, 1956 which are still in force.

PROFESSIONAL PROGRAMME EXAMINATION

JUNE 2015

INFORMATION TECHNOLOGY AND SYSTEM AUDIT

Time allowed : 3 hours *Maximum marks : 100*

NOTE : *Answer **ALL** Questions.*

Question 1

(a) Comment on the punishment for publishing or transmitting of material containing sexually explicit act, etc., in electronic form as stated in section 67A of the Information Technology Act, 2000.

(b) How is decision support system (DSS) different from management information system (MIS) ?

(c) What is CPU ? Discuss any three important functions performed by CPU.

(d) Briefly describe any four elements of databases.

(e) How does a browser act as an interface between the user and world wide web (www) ? Also mention important features of the browser.

(4 marks each)

Answer 1(a)

As per Section 67A of the Information Technology Act, 2000, whoever publishes or transmits or causes to be published or transmitted in the electronic form any material which contains sexually explicit act or conduct shall be punished on first conviction with imprisonment of either description for a term which may extend to five years and with fine which may extend to ten lakh rupees and in the event of second or subsequent conviction with imprisonment of either description for a term which may extend to seven years and also with fine which may extend to ten lakh rupees.

Answer 1(b)

Difference between Management Information Services (MIS) and Decision Support Services (DSS):

1. A Management Information System provides managers with information and support the effective decision making by providing feedback on daily operations. While, DSS provides support for problem-solving phases including the intelligence, design, choice, implementation and monitoring.

2. MIS systems provide managers within routine flow of data and assist in the general control of the organization. In contrast, Decision Support Systems are slightly focused on a specific decision of classes of decision such as routing, querying.

3. MIS provides structured information to the end-users at all level in an organization. While, DSS provides integrated analytical tools, data, model base (a collection

of mathematical and analytical models) which helps decision makers to solve unstructured or semi-structured business problems.

4. MIS identify information requirement at different levels in the organization. Whereas, DSS establishes what tools are used to incorporate the decision making Process of an organization.

5. MIS deliver a system based on frozen requirements. On the other hand, the design of DSS is based on Iterative Process and keeps on changing with every feedback of the user.

Answer 1(c)

CPU is the abbreviation for Central Processing Unit, more commonly called processor. It is the brain of the computer where most calculations take place. In terms of computing power, the CPU is the most important element of a computer system.

A CPU has four primary functions: fetch, decode, execute, and write back.

1. *Fetch* : The CPU retrieves the instruction that it needs to run from program memory.

2. *Decode* : Here the compiler breaks down the program to Assembly Language. Assembly language is a language that the CPU understands. From there on, an assembler translates Assembly Language into binary code, which the CPU can manipulate to execute the instructions it is given.

3. *Execute* : Based on the instructions given, the CPU can then do one of three things:

   (1) Using its Arithmetic Logic Unit (ALU), the CPU can calculate extremely complicated mathematical functions;

   (2) Move data from one memory location to another;

   (3) Jump to different addresses in the program based on decisions made by the CPU itself.

4. *Write back* : Typically, each of the actions taken by the CPU produces some sort of output. The CPU takes this output and writes it into the computer's memory. For example, if a program wanted to add two operands, 3 and 5, the output, 8, would be written back into a specific address.

Answer 1(d)

A database is a collection of raw unprocessed data on any subject such as customers, products, behaviors, incidents reports. A database can contain many elements and features. Database has following elements:

1. *The database schema* - It is a structure defined in a formal language, supported by the database management system and often refered to the organization of data. It is also called blueprint of database system.

2. *Schema objects* : A schema is a collection of database objects and is owned by a database user. Schema contains certain objects which are the logical structures created by users. Example: tables, indexes etc.

3. *Indexes* : A database index is a data structure that improves the speed of data retrieval operations on a database table.
4. *Tables* : A database table is composed of records and fields that hold data. Data table is a set of data elements (values) that is organized using a model of vertical columns (which are identified by their name) and horizontal rows, the cell being the unit where a row and column intersect.
5. *Fields or columns* : A column is a set of data values of a particular simple type, one for each row of the table. The columns provide the structure according to which the rows are composed. Columns are also called fields.
6. *Records or rows* : Set of fields is called record, tuple or row. Data is stored in records. A record is composed of fields and contains data about one particular person, company, or item in a database.
7. *Keys* : Keys are an integral part of relational database. They ensure that each record within a table can be uniquely identified by one or a combination of fields within the table. There are various types of keys like super key, candidate key, primary key etc.
8. *Relationships* : We create different type of entities or tables in the database and these are related to each other in one or another way. There may be various kinds of relationships like one to one, one to many etc.
9. *Data types* :It is the characteristics assigned to a particular field regarding the kind of value it may contain. Like character, integer, float etc.
10. *Forms* : A database form shows all or selected fields for one record. Forms show field names and data in an attractive and easy-to-read format.

Answer 1(e)

A browser is a software that acts as interface between the user and inner workings of the internet specifically the World Wide Web. The browser functions as the client program which acts on the behalf of user. The browser:

— Contacts a web server and sends a request for information

— Receives the information from the web servers

— Display information on the user’s computer in the form of text, graphical information, hypertext, photographs, sounds, video etc.

Regardless of which browser one use, web browser may support some or all of these features:

1. Book mark for favourite websites
2. Multiple browsing windows
3. Frames or multiple views with in a window
4. Secure data transmission
5. Java and other Language support
6. Web interface to FTP and Gopher internet Sites.

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

Question 2

(a) What are the key dimensions to e-commerce security ?

(b) What do you mean by the goal of information generation ? State the basic processes involved in information generation ?

(c) Define 'off-the-shelf ' software packages. Describe briefly any six application softwares.

(d) What are the advantages of optical discs ? How many bytes of data are available in 8 GB of computer storage ? (4 marks each)

OR (Alternate question to Q.No. 2)

Question 2A

Distinguish between the following :

(i) 'Primary information' and 'secondary information'.

(ii) 'Random access memory' and 'cache memory'.

(iii) 'Structured decisions' and 'unstructured decisions'.

(iv) 'Machine language' and 'high level language'. (4 marks each)

Answer 2(a)

E-commerce security is the protection of e-commerce assets from unauthorized access, use, alteration, or destruction. It can be measured on the following dimensions:

1. *Integrity* : Prevention against unauthorized data modification
2. *Authenticity*: Authentication of data source
3. *Confidentiality* : Protection against unauthorized data disclosure
4. *Privacy* : Provision of data control and prevention of disclosure
5. *Availability* : Prevention against data delays or removal
6. *Non-repudiation* : Prevention against any party from reneging on an agreement after the fact.

Answer 2(b)

The goal of information generation is to generate information which is reliable, timely, user friendly and meet the intended user objectives. If it fails to meet the stated objectives, it is considered poor in quality. Therefore, information generation requires careful steps so that it serves it purpose.

The information generation process basically involves the following steps :

1. Understanding the user need in general
2. Creating framework to generate intended information

3. Collecting the data
4. Processing or analyzing data
5. Collating the result from data, interpreting it
6. Communicating the result of interpretation
7. Evaluation of data in form of Information to intended user

Answer 2(c)

"Off-the-shelf" software or COTS (Commercial off the Shelf) refers to the software packages developed by the software companies for the end users. These software are generally inexpensive in nature and are ready to use. These are sold to the public, ready to run, and contains all necessary components and documentation, products are designed to be implemented easily into existing systems without the need for customization. These are also called "shrink wrapped".

Examples of "off-the-shelf" software packages:

1. *Word processing applications* : These are used for writing reports, memos, letters etc. Example Microsoft word.
2. *Spreadsheet applications* : These are used for keeping simple company accounts, calculating employee commission payments, simple stock control system, modeling. Example Microsoft Excel.
3. *Analytics applications* : These are the advanced version of spreadsheet applications which are used for analyzing data. Example SPSS.
4. *Desktop publishing and graphics applications* : These are used for creating leaflets, posters, business cards etc. Example: Photoshop, CorelDraw etc.
5. *Anti-virus software* : These are used to protect the systems from malware and viruses. Example: Avast Anti-virus.
6. *Presentation softwares* are used for creating presentations to show to customers, staff etc. Example Microsoft Powerpoint.

Answer 2(d)

Optical disks are generally used for distributing large amount of data at low cost. Some of the advantages of optical disk are:

1. The cost-per-bit of storage for optical disks is very low, because of their low cost and enormous storage density.
2. The use of a single spiral track makes optical disks an ideal storage medium for reading large blocks of sequential data, such as music.
3. Optical disk drives do not have any mechanical read/write heads to rub against or crash into the disk surface. This makes optical disks a more reliable storage medium than magnetic tapes or magnetic disks.
4. Optical disks have a data storage life in excess of 30 years. This makes them a better storage medium for data archiving as compared to magnetic tapes or magnetic disks and even flash drives.

5. Since data once stored on an optical disk becomes permanent, the danger of stored data getting inadvertently erased/overwritten is not there with optical disks.
6. Due to their compact size and light weight, optical disks are easy to handle, store, and port from one place to another.

1 GB = 1024 MB

1 MB = 1024 Kilo Bytes

1 KB = 1024 Bytes

1 GB= [1024*1024*1024] Bytes = 1073741824 Bytes

8 GB = 8* 1073741824 Bytes = 8589934592 Bytes

Answer 2A(i)

Difference between Primary Information and Secondary Information

Sr.No	*Primary Information*	*Secondary Information*
1	This information is collected by the investigator himself/ herself for a specific purpose.	Information collected by someone else for some other purpose but being utilized by the investigator for another purpose.
2	This is more relevant as it is collected for the purpose it will serve.	It is collected for a purpose other than it is being used, hence these may not exactly suit the purpose.
3	It is more reliable.	There may be lower degree of reliability.
4	*Example*: Explanation by a teacher in the classroom.	*Example* : Notes borrowed from the classmate for missed class.

Answer 2A(ii)

Random Access Memory or RAM is a form of data storage that can be accessed randomly at any time, in any order and from any physical location in contrast to other storage devices, such as hard drives, where the physical location of the data determines the time taken to retrieve it. RAM is read write memory i.e. information can be read as well as written on this type of memory. RAM is referred to as volatile memory and is lost when the power is turned off.

Cache (pronounced cash) is a block of high speed memory and acts as a buffer memory where data is copied when it is retrieved from the RAM. This storage of key instructions enables a performance improvement in the processor. There are two groups of extremely fast memory chips that allow the computer to operate faster. One is internal cache (L1) which is built into the CPU, and other is external cache (L2) which resides on the motherboard. When the CPU needs data, it first checks the fastest source i.e. L1 and if the data is not there, the CPU checks the next-fastest source i.e.L2. If the data still cannot be found, a time-consuming search of the slower RAM is required.

Answer 2A(iii)

Sr.no	*Structured Decision*	*Unstructured Decision*
1	These can be programmed and well defined.	There may not be a proper format for such decision making. It requires lot of inputs in terms of information, but there is no fixed way of mixing those inputs, ambiguity is always there.
2	These are essentially repetitive and routine in nature.	These types of decisions are occasional and unique in nature.
3	These involve a definite procedure for handling them so they do not have to be treated as if they were new.	There are no predefined procedures available to solve these problems and a new analysis is required for each occurrence.
4	The cost of taking such decisions is not as high as that of unstructured ones.	The cost of taking such decisions is quite high.
5	Structured decisions can be delegated.	These decisions cannot be delegated.
6	These are generally handled at operational level.	Top or Strategic level managers are usually faced with more such unstructured decision making situations.

Answer 2A(iv)

In case of machine language, all instructions use binary notation and are written as a string of 1s and 0s. Machine language, or machine code, is the only language that is directly understood by the computer, and it does not need to be translated. It is a Low level language and requires more involvement with the actual register and interrupt interfaces to the hardware.

A high-level language is a programming language that uses english and mathematical symbols, like +, -, % etc. in its instructions. High level languages allow much more abstraction than low level languages and are closer and more understandable to humans. This allows algorithms and functions to be written without requiring detailed knowledge of the hardware used in the computing platform. The compiler provides this interface transparently for the programmer. Examples of high level languages are C++, Fortran, Java and Python.

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

Question 3

(a) *What are the information needs of top management ? Which information system is suitable for top management and why ?*

(b) *What are the types of files used by SQL server databases ?*

(c) What are the characteristics of a good executive information system (EIS) ?

(d) Discuss the features of sales and personnel modules of ERP.

(4 marks each)

OR (Alternate question to Q.No. 3)

Question 3A

Write notes on the following :

(i) Benefits of e-governance

(ii) Scope of information systems audit

(iii) Characteristics of B2B e-commerce

(iv) Characteristics of data warehouse. *(4 marks each)*

Answer 3(a)

Managers at different organizational levels have diverse information requirements. In order to efficiently do their work, managers must diagnose their information needs. Generally the Strategic Management information need comprises:

1. Information about market trend- Macro analysis
2. Information about Government Policies
3. Information about Competitors policies and tactics
4. Information about Major exceptions in implementing the company policy at tactical/operation level
5. Analysis about major happening/event which may have a long term bearing on the strategic decisions of the company

Strategic management or top management of a company comprises the owners/ managing director of a company. The information system such as Executive Information System (EIS) and Decision support system (DSS) are used by top management. It is because, the information need of top management is generally unstructured and is not easily defined. Further, they are responsible for taking strategic decisions for a company which have long term bearing on company. They make strategic plans and do the macro analysis and thus their decisions are based on macro analysis.

Answer 3(b)

SQL Server databases have following types of files:

1. *Primary* : The primary data file contains the startup information for the database and points to the other files in the database. User data and objects can be stored in this file or in secondary data files. Every database has one primary data file. The file extension used is .mdf acronym for Main Data File.
2. *Secondary* : Secondary data files are optional, user-defined, and store user data. Secondary files can be used to spread data across multiple disks by putting each file on a different disk drive. Additionally, if a database exceeds the

maximum size for a single Windows file, secondary data files can be used so that database can continue to grow.

3. *Transaction Log* : The transaction log files hold the log information that is used to recover the database. There must be at least one log file for each database.

Answer 3(c)

An executive information system (EIS) is a management information system intended to facilitate and support the information and decision-making needs of senior executives. The characteristics of a good executive information system are as follows:

1. Simple user 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.
2. An EIS should be secure because the data that is contained and /or accessed by an EIS is obviously important and often proprietary information.
3. An EIS should support what-if-analysis and adhoc queries.
4. An EIS should have the capability of allowing the executives to drill down into the data.
5. Very quick response time is necessary.
6. Colour graphics capabilities are important for displaying the information.
7. The data used in an executive information system may reside in many different locations therefore, efficient network is essential for expert systems.

Answer 3(d)

The major features of sales modules of ERP are given below:

1. Basic data (master) management
2. Order processing
3. Dispatching and invoicing
4. Order analysis, forecasting
5. Sales analysis, budgets and controls
6. Finished goods stores management
7. Dealer, distributor management system
8. Receivable analysis
9. Market/Customer/Product analysis
10. Sales forecasting and budgeting.

The major of features of personnel modules of ERP are given below:

1. Personnel data management
2. Personnel attendance system, time management

3. Payroll accounting: salary, wages, incentives, bonus, income tax and other deductions, and contributions to various public and provident funds
4. Human resources management: Planning, recruitment, training and up-gradation.
5. Personnel cost, projection and planning
6. Performance review and increment analysis

Answer 3A(i)

E-Governance or 'electronic governance' is the application of Information and communications Technology to the processes of Government functioning in order to bring about 'Simple, Moral, Accountable, Responsive and Transparent' (SMART) governance. Some of its benefits are:

1. *Better access to information* : It makes available timely and reliable information on various aspects of governance.
2. *Quality services for citizens* : As regards services, there is an impact in terms of savings in time, effort and money, resulting from online and one-point accessibility of public services backed up by automation of back end processes.
3. *Simplicity and efficiency in the government* : It leads to simplification of complicated processes, weeding out of redundant processes, simplification in structures and changes in statutes and regulations. The end result would be simplification of the functioning of government, enhanced decision making abilities and increased efficiency across government. This, in turn, would result in enhanced productivity and efficiency in all sectors.
4. *An accountable government machinery* : The simplification of process and availability of information enhances transparency and thus result in accountability.
5. *Expanded reach* : Rapid growth of communication technology and its adoption in governance help in bringing government machinery to the doorsteps of the citizens and facilitate delivery of a large number of services. This enhancement of the reach of government is spatial as well as demographic and enables better participation of citizens in the process of governance.

Answer 3A(ii)

The scope of systems audit covers the entire Information system management process. The scope includes review of the entire design & development process, the review of technology choice, the processes employed to assess risks and losses that could accrue to the system, the possibility of computer frauds, the care taken in managing changes to the system, extent of testing and reliability of the system.

It also covers senior management involvement, review of network, workstations, Internet, disaster recovery, and other Information Technology (IT) security policies review of overall security procedures, segregation of IT duties, internal quality and integrity controls, Data communication security, data capture sourcing and retrieval, User identification authorization, user level of accessibility, restricted transactions, activity and exception reports, backup procedures, other operational security controls, Insurance coverage, Network security including the internet, Internal auditing procedures, Contingency planning and disaster recovery, Internet security procedures, Vendor due diligence etc.

Answer 3A(iii)

B2B means an established working relationship between two Businesses. The essential characteristics of B2B e-commerce are :

(a) It requires two or more business entities interacting with each other directly or through an intermediary.

(b) The intermediaries in B2B may be the market makers and directory service providers that assist in matching the buyers and sellers and striking a deal.

(c) The business application of B2B electronic commerce can be utilized to facilitate almost all facets of the interactions among organizations, such as Inventory Management, Channel Management, Distribution Management, Order fulfillment and delivery, and payment management.

(d) The B2B electronic commerce can be Supplier-Centric, Buyer-centric, or Intermediary-centric.

Answer 3A(iv)

Data warehouse is a storage area for processed and integrated data across different sources. The distinct features of data warehouse are:

1. *Subject oriented* : A data warehouse is organized around major subjects such as customer, products, sales; etc.
2. *Integrated* : A data warehouse is usually constructed by integrating multiple, heterogeneous sources. When data is moved into the data warehouse, they assume a consistent coding convention. Data cleaning and data integration techniques are applied to maintain consistency in naming convention, measures of variables, encoding structure and physical attributes.
3. *Non-volatile* : A data warehouse is always a physically separate store of data, which is transformed from the application data found in the appropriate environment. Due to this separation, data warehouses do not require transaction processing, recovery, concurrency control, etc. The data is not updated or changed in any way once they enter the data warehouse, but are only loaded, refreshed and accessed for queries.
4. *Time variant* : Data is stored in data warehouse to provide a historical perspective. The data warehouse contains a place for sorting data that are 5 to 10 years old, or older, to be used for comparisons, trends and forecasting.

Alternative Answer 3A (iv)

Data warehouse is a storage area for processed and integrated data across different sources which will be both operational data and external data. The distinct features of data warehouse are:

1. Multidimensional conceptual view
2. Generic dimensionality

3. Unlimited dimensions and aggregation levels
4. Unrestricted cross-dimensional operations
5. Dynamic sparse matrix handling
6. Client-server architecture
7. Multi-user support
8. Accessibility
9. Transparency
10. Intuitive data manipulation
11. Consistent reporting performance
12. Flexible reporting

Question 4

(a) What is an 'expert system' ? Briefly explain its components.

(b) What is customer relationship management (CRM) ? How can CRM be maintained in e-commerce ?

(c) Why is data organised in star schema in a data warehouse ?

(d) Explain the components of a uniform resource locator (URL). *(4 marks each)*

Answer 4(a)

Expert Systems are knowledge intensive computer programs that capture the expertise of a human in a specific domain of knowledge and experience. The users of an expert system are the people who do value added work which requires a special skill or expertise. It provides tools, information, and structured methods for decision making. A system that advises builders about which cement to use is an expert system that suggests the best choice for the customer and thereby helps in organization's value added work.

The components of an expert system include:

(i) *A knowledge base* : It is a collection of rules or other information structures derived from the human expert. Rules are typically structured as If/Then statements of the form.

(ii) *User Interface* : It act as a link between the user and the system, it is where the user interacts with the expert system. These can be through dialog boxes, command prompts, forms etc.

(iii) *Interface engine* : It is the main processing element of the expert system. It performs inferences on the knowledge and communicate answers to user's questions.

Answer 4(b)

Customer relationship management (CRM) is an information industry term for methodologies, software, and usually internet capabilities that help an enterprise in managing customer relationships in an organized way. Today, CRM is the central customer repository for all things. Organizations build database about its customers that describes relationships in sufficient detail so that management, salespeople, people providing service, and perhaps the customer could access information, match customer needs with product plans and offerings, remind customers of service requirements, know what other products a customer had purchased, and so forth.

CRM has come a long way in last few years, particularly in this age of the global economy, where e-commerce solutions have graduated to a level far beyond a simple shopping cart. In e-commerce, CRM can be used to manage all aspects of the purchase and customers' relationship. As people in the company have minimal direct interaction with the customer, this central customer record becomes critical and it acts as a contact manager.

Harnessing the power of the Internet to drive a closer relationship with customers is the goal of CRM. It can be integrated at all the stages, from searching, placing of order, order confirmation and execution to user feedback, and thereby assist in providing simple, quick and seamless experience to the customers. In E-Commerce and CRM tools can be designed to learn more about customers, their preferences and a clever way to market and re-market to them. However, most importantly, these tools enhance convenience not only for customer, but also for company. CRM is enabling businesses of all sizes to be more efficient and predictable.

Answer 4(c)

Star schema is the simplest style of data warehouse schema. In data warehouse, data is organized in star schema because it quickly understands, navigate and analyze large multidimensional data sets. Further, star schema is designed to enforce referential integrity of loaded data and consists of a few "fact tables" (possibly only one, justifying the name) referencing any number of "dimension tables". Moreover, navigating through data is also efficient because dimensions are joined through fact tables.

Answer 4(d)

Uniform Resource Locator (URL) is an uniform method of accessing host at a specific address using a specific protocol. These are written as http://www.domain-name.extension/file name. Thus following are its components:

1. *http://www* : This prefix denotes the web protocol.
2. *Domain Name* : It refers to the name of server and usually selected to be the same as the name of the company.
3. *The extension* : It indicates type of organization. An important category for top level domains covers following:

   . com : Commercial Organisation

   .edu : Educational Institutions

   .net : Organisation involved in internet operations

   .org : Miscellaneous Organisations

   .in : It is the country code for India

   .gov : Government entities.

4. *File name* : It is the name of file hosted at the location which is to be accessed, this could be a pdf file, html file etc.

Question 5

(a) *What are the various threats in e-commerce ? How can these threats be counter measured ?* *(8 marks)*

(b) *What are the components and characteristics of management information system (MIS) ?* *(8 marks)*

Answer 5(a)

Details of some threats in e-commerce are as given:

1. *Intellectual property threats* : This is about using of existing materials found on the Internet without the owner's permission, e.g., music downloading, domain name (cyber squatting), software pirating.

2. *Client computer threats* : This is about spying software like Trojan horse, or of other computer software attacks like Active contents, Viruses etc.

3. *Communication channel threats* : It includes Sniffer program, Backdoor, Spoofing, and Denial-of-service, etc.

4. *Server threats* : It covers Privilege setting, Server Side Include (SSI), Common Gateway Interface (CGI), File transfer, Spamming etc.

Counter measure is a procedure that recognizes, reduces, or eliminates a threat. Now the counter measure adopted for different type of E-commerce threat are discussed below:

1. *Intellectual property protection* : Through Legislature & Authentication
2. *Client computer protection* : Through Cookie blockers, Digital certificate, Browser protection, Antivirus software, Computer forensics expert etc.
3. *Communication channel protection* : Through use of Encryption, Secure Sockets Layer (SSL), Secure Hyper Text Transfer Protocol (S-HTTP), Digital signature etc.
4. *Server protection* : Through Access control and authentication, Digital signature from user, Username and password, Access control list, Firewalls etc.

Answer 5(b)

Management Information System is an organized approach to study the information needs of an organization's management at every level in making operational, tactical, and strategic decisions. The three components of MIS are:

1. *Management* : It may be thought of as the sum total of the activities which relate to the laying down of certain plans, policies and purposes, securing men, money, materials and machinery needed for their goal achievements; putting all of them into operation, checking their performance and providing material rewards and mental satisfaction to the men engaged in the operation.
2. *Information* : It is a source for increment in knowledge. In MIS, it is obtained by processing data in to a form meaningful to the users.
3. *System* : It is a set of components that operate together to achieve a common

objective or multiple objectives. These objectives are realized in the output of the system. An efficient system uses its inputs economically in producing its outputs. An effective system produces the outputs that best meet the objectives of the system.

Some of the main characteristics of MIS are listed as under.

1. *Comprehensiveness* : Management Information System is comprehensive in nature. It takes inputs from transactions processing systems and process information for users at all levels.

2. *Co-ordinated* : Management information system is centrally co-ordinated to ensure that information is passed back and forth among the sub-systems as needed and to ensure that information system operates efficiently.

3. *Sub-systems* : A MIS is composed of sub-systems or quasi separate component system that is the part of the overall - unified system. Each of these systems shares the goals of the management information system and of the organization. Some of the systems serve just one activity or level in the organization, while others serve multi-levels or multiple activities.

4. *Integration* : A MIS is rationally integrated, so as to become more meaningful. Sub-systems are integrated so that the activities of each are inter-related with those of the others. A substantial degree of integration is required for an effective management information system.

5. *Transformation of Data into Information* : A MIS transforms data into information in variety of ways. The numerous ways in which MIS should transform data into information are determined by the characteristics of the organizational personnel, the characteristics of the task for which information is needed.

6. *Enhance Productivity* : A MIS enhances productivity in several ways. It enables routine tasks such as document preparation to be carried out more efficiently, it provides higher levels of service to external organizations and individuals, it supplies the organization with early warnings about internal problems and external threats, it gives early notice of opportunities, it facilitates the organization's normal management processes and it enhances managers' ability to deal with unanticipated problems.

7. *Conforms to Managers' Styles and Characteristics* : A management information system is developed in recognition of the unique managerial styles and behavioural patterns of the personnel who will use it, as well as the contributions made by managers.

8. *Relevant Information* : A MIS provides only relevant information.

9. *Uses Established Quality Criteria* : A management information system is designed to the required tolerance for timeliness, relevance, and accuracy of information. These tolerances vary from task to task and from level to level within an organization.

10. *Feedback* : A management information system provides feedback about its own efficiency and effectiveness.

11. *Flexibility* : It is designed to be easily modified and is capable of being easily

expanded the accommodate growth or new types of processing activities and also easily contracted.

12. *Modularity* : The MIS is composed of many modules or sub-systems rather than be designed as one and only one for a few large systems.
13. *Computerized* : It is possible to have a MIS without using a computer. However, use of computers increases the effectiveness of the System.

Question 6

(a) *What is the objective of establishing Cyber Appellate Tribunal under the Information Technology Act, 2000 ?*

(b) *What are the advantages of using flowchart while solving a problem ?*

(c) *List out the steps involved in the implementation of ERP in an organisation.*

(d) *What are the challenges of e-governance before stakeholders ?*

(4 marks each)

Answer 6(a)

The Cyber Appellate Tribunal (CAT) has been established with the objective to listen to the appeal of any person aggrieved by the order of Controller or an adjudicating officer. Thus, CAT act as a forum to seek redressal. However, the jurisdiction of this Tribunal cannot extend to hearing any other application or petition that is not an appeal from the order of the Controller or an adjudicating officer.

Answer 6(b)

Flowcharting can be a very effective way of recording document flows in a system and solving problems. Advantages of using flowcharting in problem solving are:

1. Problem can be easily communicated and assimilated;
2. Flowcharts highlight the relationship between different parts of the system, the the impact of an issue could be analysed easily;
3. Processes and sub process can be easily plotted along with dependencies;
4. The problem solver sees the overall flow and so the potential bottlenecks can be identified easily;
5. Flowcharts offer a consistent method of recording;
6. By drawing flowchart, the problem solver can obtain a clear understanding of information flow in order to solve a complex problem;
7. Flowchart makes cross-referencing between systems easier.

Answer 6(c)

The steps involved in the implementation of an ERP Solution are listed below:

1. Identification of the needs for implementing an ERP package
2. Evaluating the “as-is” situation of your business

3. Identifying the issues and additional data elements which need to be captured in a system
4. Deciding upon the desired would be situation for business
5. Reengineering of the business processes to achieve the desired results
6. Evaluation of the various ERP software
7. Finalizing of the ERP package
8. Finalizing the implementation consultants
9. Comparing the ERP with designed to-be processs and identifying Gaps
10. Installing the requisite hardware and networks
11. Developing/customizing the software
12. Testing the Finalized application
13. Training the end users for new ERP
14. ERP Go Live

Answer 6(d)

E-governance has steadily evolved from computerization of Government Departments to initiatives that encapsulate the finer points of Governance, such as citizen centricity, service orientation and transparency. However, there are certain challenges faced by the stakeholders in e-governance, these are:

1. *Lack of 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.

2. *Underutilization 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.

3. *Attitude of employees* : The psychology of government servants is quite different from that of private sectors. Traditionally, the government servants have derived their sustenance from the fact that they are important repositories of government data. Thus any effort to implement new technologies or bringing out the change in the system is met with resistance from the government servants.

4. *Lack of coordination 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.

5. *Resistance to re-engineering of departmental processes* : There is resistance in almost all the departments at all the levels which act as a challenge for stakeholders.

6. *Lack of 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.

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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.

Question 1

Comment on the following :

(a) Financial distress is different from insolvency.

(b) Treasury management has both macro and micro aspects.

(c) As there is no explicit cost of retained earnings, these funds are free of cost.

(d) Banks should lend prudently and with care. *(5 marks each)*

Answer 1(a)

The affairs of a firm should be managed in such a way that the total risk-business as well as financial-borne by equity holders is minimized and is manageable; otherwise, the firm would obviously face difficulties. If cash inflow is inadequate the firm will face difficulties in payment of interest and repayment of principal. If the situation continues long enough, a time will come when the firm would face pressure from creditors. Failure of sales can also cause difficulties in carrying out production operations. The firm would find itself in a tight spot. Investors would not invest further. Creditors would recall their loans. Capital market would heavily discount its securities. Thus, the firm would find itself in a situation called distress.

In general, insolvency occurs subsequent to a period of financial distress. Many a times, if financial distress is identified in time and remedial action taken, possibility of insolvency can be completely avoided. There is no accepted definition of financial distress but the key indicators of financial distress can be low interest coverage ratio, missed dividend payments, negative EBIT. Insolvency by contrast, is a decision which the business chooses to take to relieve itself from excess debt burden. It is a decision where the firm decides to sell its assets to discharge its obligations to outsiders at prices below their economic values i.e., resort to distress sale. So when the sale proceeds are inadequate to meet outside liabilities, the firm is said to have failed or become bankrupt or (after due processes of law are gone through) insolvent.

Answer 1(b)

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 macro level.

Answer 1(c)

Retained earning is an internal source of long-term financing and it is a part of shareholders equity. Since there is no explicit payout from the retained earnings, it has been argued that there is no cost to the firm for carrying these retained earnings as neither dividend nor interest is payable on retained earnings. However this statement is not true. It is further stated that these retained earnings acquire the character of owners' perpetual capital and as such, the return on investment of the firm is ultimately proportional to the rate of growth of retained earnings. The capital that is reinvested in business carry some cost if that is ideal and the firm bears a cost on it which affects the profitability of the firm. Therefore, the cost of retained earnings is the opportunity cost of returns obtained in a similar investment elsewhere.

Answer 1(d)

Banking is a risky business. It works on a very high level of leverage. Bankers are exposed to high levels of credit risks. Increasing rates of Non Performing Assets (NPAs) in the banking sector is a cause of concern for the healthy growth of the economy. A major safeguard in this regard has been the prescription of prudential norms relating to provisioning and capital adequacy by the Reserve Bank of India. These combined with higher standards of operational accountability and appraisal of credit risks would ensure that banks lend prudently and with care.

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

Question 2

(a) Distinguish between 'explicit cost' and 'implicit cost'. *(4 marks)*

(b) Write a note on domestic resource cost. *(4 marks)*

(c) Distinguish between 'ask price' and 'bid price' in foreign exchange. *(4 marks)*

(d) Explain the concept of sensitivity analysis. *(4 marks)*

OR (Alternate Question to Q.No. 2)

Question 2A

(i) Discuss the mark-to-market settlement of index futures. *(4 marks)*

(ii) High return on investment (ROI) indicates efficient use of assets. Comment. *(4 marks)*

(iii) Describe functions of treasury management. *(4 marks)*

(iv) Write a note on credit default swaps. *(4 marks)*

Answer 2(a)

The cost of capital may be explicit or implicit cost on the basis of its computation. Implicit cost is the cost which is not reported separately as against the explicit cost which represents clear, obvious cash outflows from a business and reduces its bottom-line profitability.

Explicit cost is the rate that the firm pays to procure financing. Implicit cost is the opportunity cost associated with the best alternative investment opportunity for the firm and its shareholders that will be forgone if the projects presently under consideration by the firm were accepted.

Answer 2(b)

Domestic resource cost measures the resource cost of manufacturing a product as against the cost of importing/exporting it. It indicates the long term comparative advantage a country enjoys in the production of a particular product. The output from any project adds to domestic availability implying a notional reduction in imports to the extent of output of the project or an addition to exports if the product is being exported. This in turn implies that foreign exchange is saved to the extent there is reduced imports or foreign exchange is earned to the extent there is increased exports. However, in the setting up of the project itself and in the manufacturing of the product, foreign exchange outflows may be incurred in order to procure machinery, raw materials etc. The foreign exchange saved or earned thus has to be adjusted for such outflow.

Answer 2(c)

The Ask Price is the rate at which the foreign exchange dealer asks its customers to pay in local currency in exchange of the foreign currency. In other words, ask price is the selling rate or the offer rate and refers to the rate at which the foreign currency can be purchased from the dealer. On the other hand, the Bid price is the rate at which the dealer is ready to buy the foreign currency in exchange for the domestic currency. So, the bid price is the rate which the dealer is ready to pay in domestic currency in exchange for the foreign currency and therefore, it is the buying rate.

Answer 2(d)

Sensitivity Analysis is a technique to determine how different values of an independent variable will impact a particular dependent variable under a given set of assumptions. It has been evolved to treat risk and uncertainty in capital budgeting decisions. The analysis is comprised of the following steps: (1) Identification of variables; (2) Evaluation of possibilities for these variables; (3) Selection and combination of variables to calculate NPV or rate of return of the project; (4) substituting different values for each variables in turn while holding all other constant to discover the effect on the rate of return; (5) Comparison of original rate of return with this adjusted rate to indicate the degree of sensitivity of the rate to change in variables; (6) subjective evaluation of the risk involved in the project.

Answer 2A(i)

Mark to Market, or Marking to Market, is when asset values are determined "according to market prices" at the end of each day in order to arrive at the profit or loss status of the parties in a futures transaction. Future contracts have two types of settlements – (Mark-to-market) MTM settlement and the final settlement. The open position of each trader is marked-to market on a daily basis. This is a mechanism by which the open positions are revalued every day and the resulting profit or loss is calculated and adjusted to margin account. If the market value of the open position indicates a loss. The trader has to pay additional mark to market margin. Similarly if the open position has gained on value, the trader receives the credit in his margin account. Marked-to market helps in setting the profit and loss position on a daily basis and ensures that the trader is never at default risk. MTM positions are calculated until the trader closes his open position or until the expiry date of the contract.

Answer 2A(ii)

Return on investment (ROI) is an important profitability ratio from the point of view of shareholders and reflects on the ability of management to earn a return on resources put in by the shareholders. Under ROI ratio the earning of the company can be viewed from different angles so as to take decisions on different causes responsible, to reduce or to enhance the profitability of the company. One way of finding out rate of return on assets employed in the company is to find the ratio of earnings before interest and taxes (EBIT) to capital employed. This ratio indicates operating income to the assets used to produce income. Another way of computing the ROI ratio is through the assets turnover ratio and margin of profit which gives the same results, as EBIT to capital employed. It may be seen from the following:

$$\text{ROI} = \frac{\text{EBIT}}{\text{Sales}} \times \frac{\text{sales}}{\text{Assets}} = \frac{\text{EBIT}}{\text{Assets}}$$

A high ratio of ROI indicates efficient use of assets and low ratio reflects inefficient use of assets by a company.

Answer 2A(iii)

Functions of Treasury Management include:

1. *Cash Management* : The Treasury Manager controls the cash, assets and liabilities of the organization
2. *Liquidity & Funds Management* : Analysis of cash flow arising out of asset liability transaction and funding various asset of balance sheet is the function of treasury management. It also involves policy inputs to strategic planning and yielding expected returns in credit and investment.
3. *Risk Management* : Treasury management plays an active role in risk management by managing the impact of the changes in interest rates, credit risk due to increasing NPA's. It includes customer credit management, vendor/contractor financial analysis, liability claims management, business disaster recovery, and employee benefits program risk.
4. *Reserve Management & Investment* : It includes selection of investment products, investment brokers and methods of borrowing. The treasury manager develops cash management information system and investment policy and processes.
5. Maintaining good relations with supplier of funds, particularly the investors and shareholders.

6. Looking after the financial implications of strategic and policy decisions.
7. Interaction with financial market in general and with capital market in particular.

Answer 2A(iv)

Credit Default Swaps is a bilateral contract on one or more reference assets in which the protection buyer pays a fee or a premium through the life of the contract in return for a contingent payment by the protection seller following a credit event. The amount to be paid by the seller in case of a credit event would be the difference between the original value of the asset and the amount recovered from it.

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

Question 3

(a) Apoorva Ltd. has assets of ₹ 32,00,000 that have been financed as follows :

	₹
Equity shares of ₹100 each	*18,00,000*
General reserve	*3,60,000*
Debt	*10,40,000*

For the year ended 31st March, 2014, the company's total profits before interest and taxes were ₹6,23,000. The company pays 8% interest on borrowed capital and the tax bracket is 40%. The market value of the equity as on 31st March, 2014 was ₹150 per share.

From the above, determine the weighted average cost of capital using market values as weights. *(8 marks)*

(b) Bharati Fibre Products produces a special fibre at the rate of 5,000 metres per hour. The fibre is used in other products made by the company at the rate of 20,000 meters per day. Cost of fibre is ₹5 per metre. The inventory carrying cost is 25% and set-up costs are ₹4,050. Compute the optimum number of cycles required in a year for the manufacture of this special fibre. Working hours per day are 8 hours. Assume 365 days in a year. *(8 marks)*

OR (Alternate question to Q.No. 3)

Question 3A

(i) Verona Enterprises Ltd. purchases 2,000 units of a particular item per year at a unit cost of ₹20. The ordering cost is ₹50 per order and the inventory carrying cost is 25%.

(a) Determine the optimal order quantity and minimum total cost including purchase cost.

(b) If a 3% discount is offered by the supplier for purchases in a lot of 1,000 or more, should the firm accept the offer ?

(ii) Anurag has invested in a share whose dividend is expected to grow @ 15% for 5

years and thereafter @ 5% till life of the company. Find out the value of the share, if current dividend is ₹4 per share and investors' required rate of return is 6%.

(iii) *An Indian importer company has to settle an import bill of $1,30,000. The exporter has given the Indian importer two options :*

(a) Pay immediately without any interest charges; or

(b) Pay after three months with interest @5% per annum.

The importer's bank charges 15% per annum on overdrafts.

The exchange rates in the market are as follows :

Spot rate for $1 : ₹48.35 / ₹48.36

3-month forward rate for $1 : ₹48.81 / ₹48.83

The importer company seeks your advice. Give your advice with reason.

(iv) *Snowman Enterprises is considering the possibility of manufacturing a particular component which at present is being bought from outside.*

The manufacture of the component would call for an investment of ₹7,50,000 in a new machine besides an additional investment of ₹50,000 in working capital. The life of the machine would be 10 years with a salvage value of ₹50,000. The estimated savings (before tax) would be ₹1,80,000 per annum. The income-tax rate is 50%. The company's required rate of return is 10%. Depreciation is provided on straight line basis.

Suggest the firm whether this investment be made or not. Show your workings.

(4 marks each)

Answer 3(a)

Cost of debt (K_d) = 0.08 (1 – 0.40) = 0.048 or 4.8%

Cost of equity (K_e) = (Earnings per share/market price per share) x 100

$$= \frac{[(\text{Rs. } 6{,}23{,}000 - \text{Rs. } 83{,}200)\ (1 - 0.40)]\ /\ 18000}{\text{Rs. } 150} \times 100 = 12\%$$

Calculation of WACC (based on market value)

Source	*Amount (Rs.)*	*Weight*	*Specific cost of capital*	*Weighted specific cost of capital*
Equity share capital	22,50,000	0.602	0.12	0.07224
Debt	10,40,000	0.278	0.048	0.01334
General reserves	4,50,000	0.120	0.12	0.0144
	37,40,000	1.00		0.09998

Therefore, the Weighted average cost of capital is 0.09998 or 10%

Note : Equity share capital and General reserves are divided in the ratio of 5:1 on the basis of their book value.

Answer 3(b)

Production rate (p) = 5000 m/hr

Usage rate (r) = 20,000/8 = 2,500 m/hr

Inventory carrying cost (Cc) = 25% of Rs. 5 = Rs. 1.25

Set-up cost (Co) = Rs. 4050

Annual requirement (A) = 20,000 * 365 = 73,00,000 m

$$EBQ = \sqrt{\frac{2C_oA}{\frac{C_c}{p} \times (p - r)}} = \sqrt{\frac{2 \times 4,050 \times 73,00,000}{\frac{1.25}{5,000} \times (5,000 - 2,500)}} = 307584.13$$

$\therefore$ Optimal no. of cycle = A/ EQB = 73,00,000/307584.13 = 23.73 = 24 cycles

Answer 3A(i)

(a) Economic order quantity (EOQ)

$$= \sqrt{\frac{2AB}{C}} = \sqrt{\frac{2 \times 2,000 \text{ units} \times \text{Rs. } 50}{\text{Rs. } 20 \times 25\%}} = 200 \text{ units}$$

Total cost under EOQ

No. of orders to be place = 2,000/200 = 10 orders

Average inventory = 200/2 = 100 units

	Amount (Rs.)
Ordering cost (10 * Rs. 50)	500
Carrying cost of average inventory (100 * Rs. 5)	500
Purchase cost (2,000 * Rs. 20)	40,000
Total cost	41,000

(b) Total cost when discount offer is availed

Units per order = 1,000 units

No. of orders to be placed = 2,000/1,000 = 2 orders

Average inventory = 1,000/2 = 500 units

Unit cost after discount = Rs. 20 – (3% of Rs. 20) = Rs. 19.40

Carrying cost = 25% of Rs. 19.40 = Rs. 4.85

	Amount (Rs.)
Ordering cost (2 * Rs. 50)	100
Carrying cost of average inventory (500 * Rs. 4.85)	2,425
Purchase cost (2,000 * Rs. 19.40)	38,800
	41,325

Advise : As the total cost of inventory is less in case of EOQ, therefore the firm should not accept discount offer.

Answer 3A(ii)

Calculation of present value of dividend at 15% for 5 years

Year	*Dividend* $D_t = D_o(1 + g)^t$	D_t	*PVF @ 6%*	*PV*
1	$4(1 + 0.15)^1$	4.6000	0.9434	4.3396
2	$4(1 + 0.15)^2$	5.2900	0.8900	4.7081
3	$4(1 + 0.15)^3$	6.0835	0.8396	5.1077
4	$4(1 + 0.15)^4$	6.9960	0.7921	5.5415
5	$4(1 + 0.15)^5$	8.0454	0.7473	6.0123
		31.0149		25.7092

Total dividends of Rs. 31.0149 are expected in the next 5 years, which has PV of Rs.25.7092 @ 6%.

The value of equity share at the end of the 6th year:

Dividend for 6th year

$D_6 = D_5 (1 + g)$

$= 8.0454 (1+0.05) = 8.4476$

$P_5 = D_6/(K_e – g) = 8.4476/(0.06 – 0.05) =$ Rs. 844.76

So, the share price is at P_5 = Rs. 844.76

Present Value of this @ 6% = 844.76 x 0.7473 = 631.29

Value of share = present value of dividend + present value of expected price

= 25.71 + 631.29 = Rs. 657

Answer 3A(iii)

Evaluation of two options offered by exporter for settlement of payment

Option I: Pay immediately without any interest charges

Bill value converted to Indian rupees ($ 1,30,000 x Rs.48.36)		Rs. 62,86,800
Add :	Overdraft interest @ 15% p.a. for 3 months (Rs. 62,86,800 *15%*3/12)	Rs. 2,35,755
Total		Rs. 65,22,555

Option II: Pay after 3 months with interest @ 5% p.a

Bill value	$ 1,30,000
Add : Interest @ 5% p.a. for 3 months	$1,625
	$1,31,625

Therefore amount to be paid in Indian Rupees after 3 months under forward purchase contract

= $ 1,31,625 * Rs.48.83 = Rs. 64,27,249

Difference in outflows in Option I and Option II

= Rs. 65,22,555 – Rs. 64,27,249 = Rs. 95,306

Advice : it is advisable to settle bill payable after three months (i.e. choose option II) since rupee outflow is less by Rs. 95,306.

Answer 3A(iv)

Cash outflows	*(Rs.)*
Cost of new machine	7,50,000
Add : Additional working capital	50,000
Total cash outflow	8,00,000

Calculation of CFAT

Particulars	*Amount (Rs.)*
Cost savings	1,80,000
Less: depreciation (Rs. 7,50,000 – Rs. 50,000)/10	70,000
Net cost savings/ earnings before tax	1,10,000
Less: tax @ 50%	(55,000)
Earnings after tax	55,000
CFAT (EAT + Depreciation)	1,25,000
Terminal cash inflow	
Salvage value	50,000
Add : Release of working capital	50,000
	1,00,000

Calculation of NPV

	Amount (Rs.)
PV of operating CFAT (1,25,000 * PV factor @ 10% for 10 years annuity i.e. 6.145)	7,68,125
PV of terminal cash inflow (1,00,000 * PV factor @ 10% for 10 years i.e. 0.386)	38,600
Total PV of cash inflows	8,06,725
Less : Initial cash outflow	(8,00,000)
NPV	6,725

Advise : since NPV is positive, the company is advised to buy the new machine to manufacture components.

Question 4

(a) *A company, whose current sales are `15,00,000 per annum and average collection period is 30 days, wants to pursue a more liberal credit policy to improve the sales. The following data are available :*

Credit (period) policy	*Increase in collection period (Days)*	*Increase in Sales (`)*
A	*15*	*60,000*
B	*30*	*90,000*
C	*45*	*1,50,000*
D	*60*	*1,80,000*
E	*90*	*2,00,000*

The selling price per unit is `5. Average cost per unit is `4 and variable cost per unit is `2.75. The required rate of return on additional investment is 20%. Assume 360 days in a year and nil bad debts loss.

Which of the above policies would you recommend and why ? *(8 marks)*

(b) *The following data is available for Balram Industries :*

	`
Sales	*2,00,000*
Variable cost @ `30	*60,000*
Contribution	*1,40,000*
Fixed cost	*1,00,000*
EBIT	*40,000*
Interest	*5,000*
Profit before tax	*35,000*

Find out —

(i) Using the concept of financial leverage, by what percentage will the taxable income increase if EBIT increases by 6%.

(ii) *Using the concept of operating leverage, by what percentage will EBIT increase if there is 10% increase in sales.* *(8 marks)*

Answer 4(a)

Evaluation of different credit policies

Particulars	*Present policy*	*Policy A*	*Policy B*	*Policy C*	*Policy D*	*Policy E*
Credit period (days)	30	45	60	75	90	120
No. of units @ Rs. 5	3,00,000	3,12,000	3,18,000	3,30,000	3,36,000	3,40,000
Sales	15,00,000	15,60,000	15,90,000	16,50,000	16,80,000	17,00,000
Variable cost @ Rs. 2.75 per unit	8,25,000	8,58,000	8,74,500	9,07,500	9,24,000	9,35,000
Fixed cost	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000	3,75,000
Total cost	12,00,000	12,33,000	12,49,500	12,82,500	12,99,000	13,10,000
Profit (A)	3,00,000	3,27,000	3,40,500	3,67,500	3,81,000	3,90,000
Average debtors (at cost) W.N. 1	1,00,000	1,54,125	2,08,250	2,67,188	3,24,750	4,36,667
Cost of investment @ 20% (B)	20,000	30,825	41,650	53,438	64,950	87,333
Net profit (A – B)	2,80,000	2,96,175	2,98,850	3,14,062	3,16,050	3,02,667

Working Note (W.N.)

1. Average Debtors (at cost) has been estimated as follows:

   (Cost /360) x credit period

Recommendation : it is evident from the above calculations that the credit policy 'D' with credit period of 90 days is expected to increase the profit to Rs. 3,16,050 . Therefore it may be adopted.

Answer 4(b)

Degree of Operating Leverage (DOL) = Contribution/EBIT

= ₹ 1,40,000 / ₹40,000

= 3.50

Degree of Financial leverage (DFL) = EBIT/ PBT

= ₹40,000/ ₹35,000

= 1.1429

(i) If EBIT increases by 6%, the taxable income would increase by

$6 \times 1.1429 = 6.86\%$

(ii) If sales increase by 10%, the EBIT would increase by

$10 \times 3.5 = 35\%$

Question 5

(a) *Discuss the assumptions of capital asset pricing model (CAPM) along with limitations.* *(4 marks)*

(b) *Describe the steps involved in project planning process.* *(4 marks)*

(c) *How do firms manage economic risk due to fluctuations in forex market ?* *(4 marks)*

(d) *"A firm's stock price is not related to its mix of debt and equity financing." Do you agree with this statement ? Explain.* *(4 marks)*

Answer 5(a)

Capital asset pricing model (CAPM) helps to work out the required rate of return required by investor in the form of equity investment. It establishes a linear relationship between the required rate of return of a security and its beta (β).

CAPM model is based on certain assumptions:

1. *Market efficiency* : the capital market efficiency means that share prices reflect all available information.
2. *Risk aversion and mean variance optimization* : investors are risk averse. They evaluate a security's return and risk in terms of expected return and variance or standard deviation respectively. They prefer the highest expected return for a given level of risk. This implies that the investors are mean variance optimizers and they form efficient portfolios.
3. *Homogenous expectations* : all investors have the same expectations about expected returns and risks of securities.
4. *Single time period* : all investors' decisions are based on a single time period.
5. *Risk-free rate* : all investors can lend and borrow at a risk-free rate of interest.
6. There exist no taxes whether personal or corporate.
7. Transaction in securities is without any transaction cost.

CAPM suffers from following limitations:

1. It is based on unrealistic assumptions: CAPM is based on a number of assumptions that are far from reality. Therefore CAPM may not accurately explain the investment behavior of investors and beta may fail to capture the risk of investment.
2. It is difficult to test the validity of CAPM
3. Betas do not remain stable over time

Answer 5(b)

A project plan is a formal, approved document that is used to manage and control a project. The project plan forms the basis for all management efforts associated with the project. It is a document that is also expected to change over time.

Steps involved in project planning process are:

1. Define the technical approach used to solve the problem.
2. Define and sequence the tasks to be performed and identify all deliverables associated with the project.
3. Define the dependency relations between tasks.

4. Estimate the resources required to perform each task.
5. Schedule all tasks to be performed.
6. Define a budget for performing the tasks.
7. Define the organization used to execute the project.
8. Identify the known risks in executing the project.
9. Define the process used for ensuring quality.
10. Define the process used for specifying and controlling requirements.

Answer 5(c)

Economic risk refers to unfavorable economic conditions in buyer or seller's country which may affect both parties in fulfilling their obligations. On the buyer side, economic risk may result in buyer's insolvency or inability to accept the goods and services. On the other hand, the seller may experience difficulty in producing or shipping the goods.

Once a firm recognizes its risk, it can reduce it by using following tools:

— Forecasts
— Risk Estimation
— Benchmarking
— Hedging
— Netting
— Matching
— Leading and Lagging
— Stop loss
— Reporting and Review

Answer 5(d)

According to theory of modern financial management by Modigliani and Miller, the value of a firm depends solely on its future earnings stream, and hence its value is unaffected by its debt/equity mix. Modigliani and Miller concluded that a firm's value stems from its assets, regardless of how those assets are financed.

MM Hypothesis was based on restrictive set of assumptions, including perfect capital markets (which implies zero taxes). They used an arbitrage proof to demonstrate that capital structure is irrelevant. If debt financing resulted in a higher value for the firm than equity financing, then investors who owned shares in a leveraged (debt-financed) firm could increase their income by selling those shares and using the proceeds, plus borrowed funds, to buy shares in an unleveraged (all equity-financed) firm. The simultaneous selling of shares in the leveraged firm and buying of shares in the unleveraged firm would drive the prices of the stocks to the point where the values of the two firms would be identical. Thus, according to MM Hypothesis, a firm's stock price is not related to its mix of debt and equity financing.

However, according to Net income approach given by Durand, the capital structure decision is relevant to the valuation of the firm. As such a change in the capital structure causes an overall change in the cost of capital and also in the total value of the firm. A higher debt content in the capital structure means a high financial leverage and this results in decline in the overall or weighted average cost of capital. This results in increase in the value of the firm and also increase in the value of the equity shares. In an opposite situation, the reverse condition prevails. Assumptions of this approach are: 1. Corporate taxes do not exist 2. Debt content does not change the risk perception of the investors. 3. Cost of debt is less than cost of equity i.e., debt capitalization rate is less than the equity capitalization rate.

Question 6

Saswat Dairy Ltd. (SDL) is planning to buy dairy plant costing `400 lakh. Milk Board provides 10% subsidy on the capital cost. It can process milk to produce cheese with the capacity of 1,800 tonnes per annum. The selling price of cheese is taken as `50 per Kg. The management expects the life of the plant at 8 years and the depreciation shall be computed using straight line method. However, the plant can be sold at `50 lakh at the end of its useful life. The utilisation of plant is expected as below :

Years	*1*	*2*	*3*	*4 to 8*
Capacity Utilisation	*60%*	*70%*	*80%*	*90%*

The variable cost constituting primarily of the raw material (milk) is placed at 40% while the fixed expenses are `300 lakh per annum. The company pays tax @35%. The additional working capital required is `100 lakh.

Find the following —

(a) Cash flows of the project from Year 0 to Year 8

(b) NPV of the project

(c) IRR of the project

(d) Payback period; and

(e) Should the project be accepted based on NPV and IRR. *(16 marks)*

Answer 6

Working notes

1. *Initial outflow*

	Rs. (in lakh)
Initial Cost	400
Less : Subsidy received @10%	40
Cost of Purchase	360
Add : Working capital	100
Total Initial cash outflow	460

2. *Sales price per tonne*

Sales price per kg	Rs 50
1 tonne	1000 kg
Sales value of 1 tonne	Rs. 50, 000
	Or Rs. 0.5 lakh

3. *Depreciation*

	Rs. (in lakh)
Net Cost	360
Less : Scrap value	50
	310

Depreciation = 310/8 = 38.75 lakh

Note : It is assumed that Assessee is entitled to take depreciation only on cost incurred by it. Alternatively Depreciation may be calculated on total cost less scrap value.

(a) Cash Inflows of the project

Rs. (in lakh)

Years	*1*	*2*	*3*	*4 to 8*
Capacity utilization	60%	70%	80%	90%
Production –Tonne	1080	1260	1440	1620
Sales value @ 0.5 lakh per tonne	540	630	720	810
Less : Variable cost @ 40%	216	252	288	324
Less : Fixed cost	300	300	300	300
Less : Depreciation	38.75	38.75	38.75	38.75
PBT	-14.75	39.25	93.25	147.25
Less : Tax @ 35%	0	13.7375	32.6375	51.5375
PAT	-14.75	25.5125	60.6125	95.7125
Add : Depreciation	38.75	38.75	38.75	38.75
CFAT (PAT + Depreciation)	24	64.2625	99.3625	134.4625

Note: If bought forward loss of year one is assumed to be set off in year 2 then tax expenses will be [35% x (39.25-14.75)] i.e. 8.575. Accordingly cash inflow will be increased due to less tax expenses.

(b) Net Present value (NPV) of the project

Amount Rs. (in lakhs)

Year	*CFAT*	*Scrap value*	*Working Capital*	*Total*	*PV Factor @ 10%**	*Present value*
1	24			24	0.9091	21.82
2	64.2625			64.2625	0.8264	53.11
3	99.3625			99.3625	0.7513	74.65
4	134.4625			134.4625	0.6830	91.84
5	134.4625			134.4625	0.6209	83.49
6	134.4625			134.4625	0.5645	75.90
7	134.4625			134.4625	0.5132	69.00
8	134.4625	50	100	284.4625	0.4665	132.70
				PV of cash inflows		602.51
				Less : Initial cash outflow		(460.00)
				Net present value		142.51 lakh

**Note* : NPV is calculated on the basis of an assumption that cost of capital is 10%.

(c) IRR –Trial & Error Method

Amount Rs. (in lakh)

Year	*Cash Inflows*	*PV Factor @ 15%*	*Present Value*	*PV Factor @ 16%*	*Present Value*
1	24	0.8696	20.87	0.8621	20.69
2	64.2625	0.7561	48.59	0.7432	47.76
3	99.3625	0.6575	65.33	0.6407	63.66
4	134.4625	0.5718	76.88	0.5523	74.26
5	134.4625	0.4972	66.85	0.4761	64.02
6	134.4625	0.4323	58.13	0.4104	55.18
7	134.4625	0.3759	50.54	0.3538	47.57
8	284.4625	0.3269	92.99	0.3050	86.76
		PV of Inflow	480.18		459.90
		Outflow	460.00		460.00
		NPV	20.18		-0.1

IRR = $L + \frac{A}{A-B}(H - L)$

IRR = 15 + [20.18/ (20.18– (-0.1))] * 1

= 15.99% or 16%

At 16% present value of inflow is equal to outflow. Hence IRR is 16%.

(d) Pay Back Period

Rs. (in lakhs)

Year	*Cash inflows*	*Cumulative Cash inflows*
1	24	24
2	64.2625	88.2625
3	99.3625	187.625
4	134.4625	322.0875
5	134.4625	456.55
6	134.4625	591.0125
7	134.4625	725.475
8	284.4625	1009.9375

Payback period = $5 \text{ years} + \frac{(460 - 456.55)}{134.46}$

= 5.0256 years

(e) The Net Present Value : The NPV decision rule specifies that all independent projects with a positive NPV should be accepted. Therefore, if the project's NPV is Positive it should be accepted and if it is negative it should be rejected. In this case NPV is positive therefore project may be accepted.

Internal Rate of Return : The IRR (internal rate of return) rule is to accept a project if the IRR is higher than opportunity cost of capital. In the present case, the Project may be accepted till the time the cost of capital is less than 16%. In this case, as the cost of capital is less than 16%, therefore the project may be accepted.

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TABLE - 1 : **PRESENT VALUE OF RUPEE ONE**

RATE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
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	0.6133	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

TABLE - 2 : **PRESENT VALUE OF AN ANNUITY OF RUPEE ONE**

RATE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
5%	0.9524	1.8594	2.7232	3.5460	4.3295	5.0757	5.7864	6.4632	7.1078	7.7217	8.3064	8.8633	9.3936	9.8986	10.3797
6%	0.9434	1.8334	2.6730	3.4651	4.2124	4.9173	5.5824	6.2098	6.8017	7.3601	7.8869	8.3838	8.8527	9.2950	9.7122
7%	0.9346	1.8080	2.6243	3.3872	4.1002	4.7665	5.3893	5.9713	6.5152	7.0236	7.4987	7.9427	8.3577	8.7455	9.1079
8%	0.9259	1.7833	2.5771	3.3121	3.9927	4.6229	5.2064	5.7466	6.2469	6.7101	7.1390	7.5361	7.9038	8.2442	8.5595
9%	0.9174	1.7591	2.5313	3.2397	3.8897	4.4859	5.0330	5.5348	5.9952	6.4177	6.8052	7.1607	7.4869	7.7862	8.0607
10%	0.9091	1.7355	2.4869	3.1699	3.7908	4.3553	4.8684	5.3349	5.7590	6.1446	6.4951	6.8137	7.1034	7.3667	7.6061
11%	0.9009	1.7125	2.4437	3.1024	3.6959	4.2305	4.7122	5.1461	5.5370	5.8892	6.2065	6.4924	6.7499	6.9819	7.1909
12%	0.8929	1.6901	2.4018	3.0373	3.6048	4.1114	4.5638	4.9676	5.3282	5.6502	5.9377	6.1944	6.4235	6.6282	6.8109
13%	0.8850	1.6681	2.3612	2.9745	3.5172	3.9975	4.4226	4.7988	5.1317	5.4262	5.6869	5.9176	6.1218	6.3025	6.4624
14%	0.8772	1.6467	2.3216	2.9137	3.4331	3.8887	4.2883	4.6389	4.9464	5.2161	5.4527	5.6603	5.8424	6.0021	6.1422
15%	0.8696	1.6257	2.2832	2.8550	3.3522	3.7845	4.1604	4.4873	4.7716	5.0188	5.2337	5.4206	5.5831	5.7245	5.8474
16%	0.8621	1.6052	2.2459	2.7982	3.2743	3.6847	4.0386	4.3436	4.6065	4.8332	5.0286	5.1971	5.3423	5.4675	5.5755
17%	0.8547	1.5852	2.2096	2.7432	3.1993	3.5892	3.9224	4.2072	4.4506	4.6586	4.8364	4.9884	5.1183	5.2293	5.3242
18%	0.8475	1.5656	2.1743	2.6901	3.1272	3.4976	3.8115	4.0776	4.3030	4.4941	4.6560	4.7932	4.9095	5.0081	5.0916
19%	0.8403	1.5465	2.1399	2.6386	3.0576	3.4098	3.7057	3.9544	4.1633	4.3389	4.4865	4.6105	4.7147	4.8023	4.8759
20%	0.8333	1.5278	2.1065	2.5887	2.9906	3.3255	3.6046	3.8372	4.0310	4.1925	4.3271	4.4392	4.5327	4.6106	4.6755
21%	0.8264	1.5095	2.0739	2.5404	2.9260	3.2446	3.5079	3.7256	3.9054	4.0541	4.1769	4.2784	4.3624	4.4317	4.4890
22%	0.8197	1.4915	2.0422	2.4936	2.8636	3.1669	3.4155	3.6193	3.7863	3.9232	4.0354	4.1274	4.2028	4.2646	4.3152
23%	0.8130	1.4740	2.0114	2.4483	2.8035	3.0923	3.3270	3.5179	3.6731	3.7993	3.9018	3.9852	4.0530	4.1082	4.1530
24%	0.8065	1.4568	1.9813	2.4043	2.7454	3.0205	3.2423	3.4212	3.5655	3.6819	3.7757	3.8514	3.9124	3.9616	4.0013
25%	0.8000	1.4400	1.9520	2.3616	2.6893	2.9514	3.1611	3.3289	3.4631	3.5705	3.6564	3.7251	3.7801	3.8241	3.8593

ETHICS, GOVERNANCE AND SUSTAINABILITY

Time allowed : 3 hours *Maximum marks : 100*

NOTE : *Answer **ALL** Questions.*

PART - A

(a) Ebbers built WorldCom from a small telecommunications company into a global giant. It all started back in 1984, when he invested in a local long-distance phone company. Soon he was invited to manage it. He made it grow through a series of aggressive, even audacious mergers. Eventually, it became a publically traded corporation with annual revenues of $39 billion. As the company grew, so did Ebbers's wealth, but his extravagant spending forced him to use all of his WorldCom stock as collateral for bank loans to pay his debts. If its price fell too far, he would be bankrupt. About this time in 1990s, the dot-com investment bubble burst. WorldCom's revenue declined and expenses for its world-spanning fibre optic network rose more than anticipated. According to later investigations, in 2000, Ebbers gave the first in a string of instructions to his Chief Financial Officer to report false revenues and use accounting tricks to disguise rising expenses. The share prices held. However, internal auditors discovered the deceit and reported it to the Securities and Exchange Commission (SEC). The agency started an investigation. WorldCom's Board of directors forced Ebbers to resign. Soon the truth came out and WorldCom shares lost 90% of their value. In 2002, WorldCom set a record in failure, breaking Enron's previous total for the largest bankruptcy in American history. Although the company ultimately survived, 17,000 workers lost their jobs and investors lost billions.

The purpose of Corporate Governance is to improve governance in the corporate but the story of WorldCom presented above puts a question mark on the sanctity of Corporate Governance.

Analyse the failure of Corporate Governance and give recommendations to keep future company operations in order and avoid others from following the footsteps of Ebbers even though he was forced by the Board of directors to resign.

(10 marks)

(b) (i) Why should companies give importance to social and ethical accounting ?

(ii) Do you think that an organisation having centralised organisation structure can lead to unethical acts ? Why ?

(iii) State the reasons of devising an effective whistle blower mechanism and policy.

(iv) Justify the ICSI principles of Corporate Governance on 'sustainable development of all stakeholders', 'discharge of social responsibility' and 'effective management and distribution of wealth' which seem to be very important principles for corporate.

(v) *How is the Board size of companies determined ?* *(2 marks each)*

(c) *Being the Company Secretary of a large scale company, how will you prepare Board agenda and what are the steps you will follow for circulation of notice and agenda.* *(5 marks)*

Answer 1(a)

Worldcom failure is one of the largest bankruptcy cases in American history, breaking even Enron's record. Ebbers invested in a local long-distance phone company in 1984, which he was invited to manage later. He made it grow into a global giant through a series of mergers. Ebbers played a major role in the fraud. His extravagant spending forced him to take massive amount of bank loans by securing his Worldcom shares. When telecom industry was experiencing a down turn, at the same time Worldcom stock prices also started falling. In order to avoid margin call he needed company's stock to perform well. Ebbers used unethical means to keep the company's stock price up. The fraud was directed by Ebbers and it was implemented through his CFO by reporting false revenues and using accounting tricks to disguise rising expenses. It came out when internal auditors discovered the deficit and reported the same to SEC.

There were major corporate governance failures in Worldcom which, mainly, were:

— internal control failure

— ineffective board

— lack of transparency

Recommendations to keep future company operations in order and avoid others from following the footsteps of Ebbers

1. *An Active, Informed and Independent Board*

   A very high standard is required for the appointment of independent directors who should have adequate experience and qualification. With the exception of the CEO, majority of the members of the board must be fully independent.

2. *A Non-Executive Chairman of the Board of Directors*

   This recommendation requires every company to create the position of non-executive chairman of the board. The non-executive chairman shall have defined responsibilities relating to coordinating the board's work, chairing meetings, coordinating with committee chairs, organizing CEO and board performance reviews, and similar issues. The non executive chairman shall not be involved in the day to day management duties. The CEO remains fully responsible for all management decisions, subject to board oversight. The clear separation of the role of Chairman and CEO between two persons will maintain the balance of power and the CEO will be guided & reviewed by the Board.

3. *Independent Director*

   An independent director shall hold office for a term up to five years on the Board of a company, but shall be eligible for reappointment on passing of a special resolution by the company for another five years. This recommendation will ensure the independence of Independent Director.

4. *Active Board Committees*

   This recommendation prescribes that every company shall constitute an Audit Committee, Governance Committee, Nomination and Remuneration Committee and a Risk Management Committee. The CEO shall not serve as a member of any of these committees, so that each committee is composed entirely of independent directors.

5. *Auditor Independence*

   The statutory auditor shall be appointed for a maximum period of 10 years which will ensure the audit quality. An auditor shall provide to the company only such services as are approved by the Board of Directors or the audit committee, which shall not include non audit services. This recommendation will ensure the independence of statutory auditor.

6. *Compensation Limits*

   The Nomination and Remuneration Committee shall establish a maximum compensation level for any individual in any year without shareholder approval. A substantial part of the compensation shall not be linked to the share price, as this leads to the manipulation of the financial statements by the top management of the company to secure their own remuneration.

7. *Enhanced Transparency, Internal Controls and Finance Department*

   The recommendations suggest that the Company should intensify efforts to develop disclosure practices that will result in transparency of financial information beyond legal requirements.

Answer 1(b)(i)

Social and ethical accounting is a process that helps a company to address issues of accountability to stakeholders, and to improve performance in all spheres, i.e. social, environmental and economic. The process normally links a company's values to the development of policies and performance targets and to the assessment and communication of performance. Social and ethical accounting has no standardized model. There is no standardized balance sheet or unit of currency. The issues are defined by the company's values and aims, by the interests and expectations of its stakeholders, and by societal norms and regulations. With the focus on the concerns of society, the social and ethical accounting framework implicitly concerns itself with issues, such as economic performance, working conditions, environmental and animal protection, human rights, fair trade and ethical trade, human resource management and community development, and hence with the sustainability of a company's activities.

Answer 1(b)(ii)

In a centralized organization, decision making authority is concentrated in the hands of top-level managers, and little authority is delegated to lower levels. Responsibility, both internal and external, rests with top management. These organizations are usually extremely bureaucratic, and the division of labour is typically very well defined. Centralized organizations stress on formal rules, policies, and procedures, backed up with elaborate control systems.

Centralized organizational structures may lead to unethical acts because of the top-down approach and the distance between employee and decision maker. If the centralized organization is very bureaucratic, some employees may behave according to “the letter of the law” rather than the spirit.

Answer 1(b)(iii)

Whistle blower needs protection against retaliation/misbehaviour by superiors. The company should devise an effective whistle blower mechanism enabling stakeholders, including individual employees and their representative bodies, to freely communicate their concerns about illegal or unethical practices. An effective whistle blower policy shall protect “whistle blowers” from unfair termination and other unfair prejudicial employment practices. At the corporate level, companies can provide protection to whistle blowers by establishing a well documented “Whistle Blower Policy” and ensuring its effectiveness practically.

Clause 49 of the Listing Agreement prescribes as a mandatory requirement that companies shall establish a mechanism for employees to report to the management concerns about unethical behaviour, actual or suspected fraud or violation of the company’s code of conduct or ethics policy. The OECD Guide describes that an effective ‘whistle blower’ mechanism may be established by management as an internal control mechanism, assessed by internal auditors.

Answer 1(b)(iv)

Corporate Governance is the application of best management practices, compliance of law in true letter and spirit and adherence to ethical standards for effective management and distribution of wealth and discharge of social responsibility for sustainable development of all stakeholders.

'Sustainable development of all stakeholders' ensures growth of all individuals associated with or affected by the enterprise on sustainable basis. 'Discharge of social responsibility' ensures that enterprise is acceptable to the society in which it is functioning. 'Effective management and distribution of wealth' ensures that enterprise creates maximum wealth and judiciously uses the wealth so created for providing maximum benefits to all stakeholders and enhancing its wealth creation capabilities to maintain sustainability.

Answer 1(b)(v)

Board size is an important determinant of board effectiveness. The size should be large enough to secure sufficient expertise on the board, but not so large that productive discussion is impossible.

With regard to the Board size of companies, the applicable provisions are:

1. Section 149 of the Companies Act, 2013
2. Clause 49 II A,B of Listing Agreement

Section 149 (1) of the Companies Act, 2013 contains provisions regarding the composition of board of directors. It stipulates the minimum number of director as three in case of public company, two in case of private company and one in case of One Person Company. The maximum number of directors stipulated is 15. However, a company may appoint more than 15 directors after passing a special resolution in General Meeting.

Answer 1(c)

Preparation of Agenda

The board agenda determines the issues to be discussed. The items for agenda should be collected from heads of all the departments. A company secretary may segregate the ones that can be discussed and decided internally and the ones which need to be put up before the Board, in consultation with the Chairman and/or Managing Director and inputs from the CEO. Any director can request that the chairman include a matter on the board agenda. It is the chairman's obligation to offer directors the opportunity to suggest items, which cannot be reasonably denied. In the end, it is each director's responsibility to ensure that the right matters are tabled. It should be taken care of that agendas should strike a balance between reviews of past performance and forward-looking issues. Further, an agenda should show the amount of time allocated for each item, without unduly restricting discussion. Routine or administrative matters should not consume too much of board's time.

Steps for Circulation of Notice & Agenda

Notice

Even if meetings have been scheduled in advance, the members of the Board should be adequately and timely sent notice to enable them to plan accordingly.

Agenda

The agenda should be made available to the Board along with supporting papers at least seven days before the date of the meeting. The mode of circulation of agenda should ensure that all directors receive the agenda notes on time. All the material information should be sent to all Directors simultaneously and in a timely manner to enable them to prepare for the Board Meeting. This would enable the board and especially to non-executive independent directors to pre-emptly prepare for the discussions based on the papers. A system should exist for seeking and obtaining further information and clarifications on the agenda items before the meeting. Directors, including nominee directors, requiring any clarification before the meeting may be asked to contact the Secretary for additional inputs.

Board Briefing Papers

Board materials should be summarized and formatted so that board members can readily grasp and focus on the most significant issues in preparation for the board meeting. Board papers associated with a particular agenda item should be set out as an executive summary with further detail provided in annexes. Information should be distributed at least seven business days before the meeting. The papers should present the issue for discussion, offer solutions for how to effectively address the issue, and provide management's view on which action to take.

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

Question 2

Elucidate the following :

(a) Contents of a code of conduct

(b) Ethics in finance

(c) Internal control. *(5 marks each)*

OR (Alternate question to Q.No. 2)

Question 2A

(i) Discuss the role of qualified and independent audit committee in good governance.

(ii) Briefly explain OECD principles of Corporate Governance.

(iii) What do you understand by 'stakeholder analysis' ? *(5 marks each)*

Answer 2(a)

Code of conduct or what is popularly known as Code of Business Conduct contains standards of business conduct that must guide actions of the Board and senior management of the Company.

The code of conduct may include the following:

1. Company Values.
2. Avoidance of conflict of interests.
3. Accurate and timely disclosure in reports and documents that the company files before Government agencies, as well as in the company's other communications.
4. Compliance of applicable laws, rules and regulations including Insider Trading Regulations.
5. Maintaining confidentiality of the company affairs.
6. Standards of business conduct for the company's customers, communities, suppliers, shareholders, competitors, employees.
7. Prohibition of Directors and senior management from taking corporate opportunities for themselves or their families.
8. Review of the adequacy of the Code annually by the Board.
9. No authority to waive off the Code should be given to anyone in any circumstances.

The Code of Conduct for each Company summarizes its philosophy of doing business.

Answer 2(b)

Ethics in finance includes the ethical issues that companies and employees are confronted with in regard to finance. Finance is the most vulnerable ethical area in business organisations as has been confirmed by a spate of unethical business practices taking place in this area in different organisations across the world including India over the period. Unethical practices in finance, also termed as frauds and scandals, have been omnipresent everywhere in the globe, of course, in varying scales and degrees. But its ever increasing tendency has called for the increasing attention and concern in the recent times because of its varied types of impending effects on the economies.

The ethical issues in finance include:

— In accounting – window dressing, misleading financial analysis

— Related party transactions not at arm length

— Insider trading, securities fraud leading to manipulation of the financial markets

— Executive compensation

— Bribery, kickbacks, over billing of expenses and facilitation payments

— Fake reimbursements

Answer 2(c)

Internal control is defined as a process, effected by an organization's people and information technology (IT) systems, designed to help the organization accomplish specific goals or objectives. It is a means by which an organization's resources are directed, monitored, and measured. It plays an important role in preventing and detecting fraud and protecting the organization's resources, both physical and intangible. At the organizational level, internal control objectives relate to the reliability of financial reporting, timely feedback on the achievement of operational or strategic goals, and compliance with laws and regulations. At the specific transaction level, internal control refers to the actions taken to achieve a specific objective. Internal control procedures reduce process variation, leading to more predictable outcomes.

An effective internal control system balances the risk and control and helps a company in exploiting business opportunity fully. Internal controls are put in place to keep the company on course toward profitability goals and achievement of its mission, and to minimize surprises along the way. They enable management to deal with rapidly changing economic and competitive environments, shifting customer demands and priorities, and restructuring for future growth. Internal controls promote efficiency, reduce risk of asset loss, and help ensure the reliability of financial statements and compliance with laws and regulations.

Answer 2A(i)

The role of the Audit Committee shall include the following:

1. Oversight of the company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible;
2. Recommendation for appointment, remuneration and terms of appointment of auditors of the company;
3. Approval of payment to statutory auditors for any other services rendered by the statutory auditors;
4. Reviewing, with the management, the annual financial statements and auditor's report thereon before submission to the board for approval, with particular reference to:
   (a) Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (c) of sub-section 3 of section 134 of the Companies Act, 2013
   (b) Changes, if any, in accounting policies and practices and reasons for the same

(c) Major accounting entries involving estimates based on the exercise of judgment by management

(d) Significant adjustments made in the financial statements arising out of audit findings

(e) Compliance with listing and other legal requirements relating to financial statements

(f) Disclosure of any related party transactions

(g) Qualifications in the draft audit report

5. Reviewing, with the management, the quarterly financial statements before submission to the board for approval;

6. Reviewing, with the management, the statement of uses / application of funds raised through an issue (public issue, rights issue, preferential issue, etc.), the statement of funds utilized for purposes other than those stated in the offer document / prospectus / notice and the report submitted by the monitoring agency monitoring the utilisation of proceeds of a public or rights issue, and making appropriate recommendations to the Board to take up steps in this matter;

7. Review and monitor the auditor's independence and performance, and effectiveness of audit process;

8. Approval or any subsequent modification of transactions of the company with related parties;

9. Scrutiny of inter-corporate loans and investments;

10. Valuation of undertakings or assets of the company, wherever it is necessary;

11. Evaluation of internal financial controls and risk management systems;

12. Reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems;

13. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit;

14. Discussion with internal auditors of any significant findings and follow up there on;

15. Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the board;

16. Discussion with statutory auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern;

17. To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors;

18. To review the functioning of the Whistle Blower mechanism;

19. Approval of appointment of CFO (i.e., the whole-time Finance Director or any other person heading the finance function or discharging that function) after assessing the qualifications, experience and background, etc. of the candidate;

20. Carrying out any other function as is mentioned in the terms of reference of the Audit Committee.

Answer 2A(ii)

The OECD Principles of Corporate Governance set out a framework for good practice which was agreed by the governments of countries that are members of the OECD. They were designed to assist governments and regulatory bodies in both OECD countries and elsewhere in drawing up and enforcing effective rules, regulations and codes of corporate governance. They also provide guidance for stock-exchanges, investors, companies and others that have a role in the process of developing good corporate governance.

OECD Principles of Corporate Governance

1. Call on governments to have in place an effective institutional and legal framework to support good corporate governance practices.

2. Call for a corporate governance framework that protects and facilitates the exercise of shareholders' rights.

3. Strongly support the equal treatment of all shareholders, including minority and foreign shareholders.

4. Recognise the importance of the role of stakeholders in corporate governance.

5. Look at the importance of timely, accurate and transparent disclosure mechanisms

6. Deal with board structures, responsibilities and procedures.

Answer 2A(iii)

Stakeholder analysis is the identification of a project or activity's key stakeholders, an assessment of their interests, and the ways in which these interests affect project's riskiness and viability. It is linked to both institutional appraisal and social analysis: drawing on the information deriving from these approaches, but also contributing to the combining of such data in a single framework. Stakeholder analysis contributes to project design/activity design through the logical framework, and by helping to identify appropriate forms of stakeholder participation.

Doing a stakeholder analysis can:

— Draw out the interests of stakeholders in relation to the problems which the project is seeking to address (at the identification stage) or the purpose of the project (once it has started)

— Identify conflicts of interests between stakeholders

— Help to identify relations between stakeholders which can be built upon, and may enable establish synergies

— Help to assess the appropriate type of participation by different stakeholders.

The underlining factor in the stakeholder concept is that every activity of an organization should be based taking into account the interests of all the stakeholders. A holistic approach ensuring fairness to all the stakeholders is completely necessary for the sustainability of an enterprise.

Question 3

(a) *What are the causes of ethical dilemma and how will the senior management handle ethical dilemma ?*

(b) *How can an organisation facilitate visionary Board leadership ?*

(c) *Analyse the Corporate Governance framework in a public sector enterprise.*

(5 marks each)

Answer 3(a)

An ethical dilemma involves a situation that makes a person question what is the 'right' or 'wrong' thing to do. They make individuals think about their obligations, duties or responsibilities. These dilemmas can be highly complex and difficult to resolve. Easier dilemmas involve a 'right' versus 'wrong' answer; whereas, complex ethical dilemmas involve a decision between a right and another right choice. Ethical dilemmas are caused as there exist no sharp boundaries between ethical and non-ethical and, therefore, people often face ethical dilemmas wherein a clear cut choice becomes very difficult.

Steps to Resolving an Ethical Dilemma

1. Considering the options available
2. Considering Consequences
3. Analysing Actions
4. Decision making and commitment
5. Evaluating system

Answer 3(b)

According to Frank Martinelli an organisation can facilitate visionary board leadership by identifying the following barriers and removing them:

1. *Lack of Time Management* - Lack of time to attend meetings, read materials and maintain contact with each other in between meetings. The board members need to organize themselves for maximum effectiveness and avoid wasting time on trivial matters.

2. *Resistance to risk taking* - In order to be innovative and creative in its decision-making, boards must be willing to take chances, to try new things, to take risks. Success in new venture is never granted. Boards need to acknowledge the tension point and discuss it with funders and other key supporters. Board leadership must strike a balance between taking chances and maintaining the traditional stewardship role.

3. *Lack of Strategic Planning* - Strategic planning offers boards an opportunity to think about changes and trends that will have significant impact and develop strategies to respond to challenges. Some boards are not involved in strategic planning at all; others are involved in a superficial way. Therefore, the boards lose an important opportunity to hone/exercise visionary leadership skills.

4. *Complexity* - Board members frequently lack a deep understanding of critical changes, trends and developments that challenge fundamental assumptions about how it defines its work and what success looks like. This lack of knowledge results in a lack of confidence on the part of the board to act decisively and authoritatively.

5. *Micro Management* - It is necessary that the board focuses its attention on items of critical importance to the organization. If the board is tempted to micro manage or to meddle in lesser matters, an opportunity to provide visionary leadership is lost.

6. *Clinging to Tradition* – Boards often resist change in order to preserve tradition. However, changing environment requires the Boards to be open to change. Maira and Scott - Morgan in "The Accelerating Organisation" point out that continuous shedding of operating rules is necessary because of changing environmental conditions. But shedding becomes more complicated in systems involving human beings, because their sense of self-worth is attached to many old rules. This human tendency to hold on to the known prevents boards from considering and pursuing new opportunities which conflict with the old rules.

7. *Confused Roles* - Some boards assume that it is the job of the executive director to do the visionary thinking and that the board will sit and wait for direction and inspiration. This lack of clarity can result in boards that do not exercise visionary leadership because they do not think it is their job.

8. *Past Habit* - Time was when clients, members and consumers would just walk in the door on their own. Viewing things in this way, boards did not consider market place pressures, or for that matter a competitive marketplace. All that has changed, yet for many boards their leadership style has not kept pace with this new awareness.

Answer 3(c)

Department of Public Enterprises (DPE) is the nodal department for issuing the corporate governance guidelines for the Public Sector Enterprises for both at centre and state level. Since Government is the major shareholder in Public Sector Undertakings (PSUs)/Central Public Sector Enterprises (CPSEs), it is responsible to set the high standard of governance to be followed by these public sector enterprises. As the government's disinvestment strategy gathers momentum, there is a genuine need to improve the levels of transparency, and accountability within PSUs. Apart from the instructions of DPE, the CPSEs are governed by the Companies Act, 2013 and regulations of various authorities like Comptroller and Auditor General of India (C&AG), Central Vigilance Commission (CVC), Administrative Ministries, other nodal Ministries, etc. In case of Listed CPSEs the Listing Agreement would also be applicable in addition to other applicable laws and DPE Guidelines. For the purpose of DPE Guidelines on Corporate

Governance, CPSEs have been categorised into two groups, namely, (i) those listed on the Stock Exchanges; (ii) those not listed on the Stock Exchanges

CPSEs listed on Stock Exchanges: In so far as listed CPSEs are concerned, they have to follow the SEBI Guidelines on Corporate Governance. In addition, they shall follow those provisions in these Guidelines which do not exist in the SEBI Guidelines and also do not contradict any of the provisions of the SEBI Guidelines.

Unlisted CPSEs: Each CPSE should strive to institutionalize good Corporate Governance practices broadly in conformity with the SEBI Guidelines. The listing of the non-listed CPSEs on the stock exchanges may also be considered within a reasonable time frame to be set by the Administrative Ministry concerned in consultation with the CPSEs concerned. The non-listed CPSEs shall follow the Guidelines on Corporate Governance on a mandatory basis.

DPE guidelines on Corporate Governance provide following governance parameters:

— Board of Directors

— Audit Committee

— Remuneration Committee

— Subsidiary Companies

— Disclosures

— Report, Compliance and Schedule of Implementation

Question 4

(a) The risk evaluation process requires a mathematical approach and considerable data on the past losses. Comment.

(b) Why do companies set-up remuneration committee and what is its role in companies ?

(c) Discuss Clarkson principles of stakeholder management. *(5 marks each)*

Answer 4(a)

The risk measurement process requires a mathematical approach and considerable data on the past losses. The data available from the concern itself may not be adequate enough to lend itself amenable to analytical exercise. Hence, it becomes necessary to resort to data on industry basis, at national and sometimes even at international level.

Risk evaluation includes the determination of the:

— Probability or chances that losses will occur.

— Impact the losses would have upon the financial affairs of the firm should they occur.

— Ability to predict the losses that will actually occur during the budget period.

There are various statistical methods of quantifying risks. But the statistical methods are too technical and the risk manager then relies on his judgment. Risks are classified as modest, medium, severe etc. In either event, a 'risk matrix' can be prepared which essentially classifies the risks according to their frequency and severity.

Answer 4(b)

The Nomination and Remuneration Committee helps the Board of Directors in the preparations relating to the election of members of the Board of Directors, and in handling matters within its scope of responsibility that relate to the conditions of employment and remuneration of senior management, and to management's and personnel's remuneration and incentive schemes. The responsibilities of the Remuneration and Nomination Committee are defined in its policy document. Section 178 of the Companies Act, 2013 deals with the provisions related to Nomination and Remuneration Committee. Clause 49 of the Listing agreement also provides for mandatory constitution of Nomination and Remuneration Committee.

Under Clause 49 of the Listing Agreement, the following are the provisions with regard to Nomination and Remuneration Committee:

A. The company shall set up a nomination and remuneration committee which shall comprise at least three directors, all of whom shall be non-executive directors and at least half shall be independent. Chairman of the committee shall be an independent director.

B. The role of the committee shall, inter-alia, include the following:

   1. Formulation of the criteria for determining qualifications, positive attributes and independence of a director and recommend to the Board a policy, relating to the remuneration of the directors, key managerial personnel and other employees;

   2. Formulation of criteria for evaluation of Independent Directors and the Board;

   3. Devising a policy on Board diversity;

   4. Identifying persons who are qualified to become directors and who may be appointed in senior management in accordance with the criteria laid down, and recommend to the Board their appointment and removal. The company shall disclose the remuneration policy and the evaluation criteria in its Annual Report.

C. The Chairman of the nomination and remuneration committee could be present at the Annual General Meeting, to answer the shareholders' queries. However, it would be up to the Chairman to decide who should answer the queries.

Answer 4(c)

The Clarkson Principles, which emerged from a project undertaken by the Centre for Corporate Social Performance and Ethics, are as follows:

Principle 1 : Managers should acknowledge and actively monitor the concerns of all legitimate stakeholders, and should take their interests appropriately into account in decision-making and operations.

Principle 2 : Managers should listen to and openly communicate with stakeholders about their respective concerns and contributions, and about the risks that they assume because of their involvement with the corporation.

Principle 3 : Managers should adopt processes and modes of behavior that are sensitive to the concerns and capabilities of each stakeholder constituency.

Principle 4 : Managers should recognize the interdependence of efforts and rewards among stakeholders, and should attempt to achieve a fair distribution of the benefits and burdens of corporate activity among them, taking into account their respective risks and vulnerabilities.

Principle 5 : Managers should work cooperatively with other entities, both public and private, to insure that risks and harms arising from corporate activities are minimized and, where they cannot be avoided, appropriately compensated.

Principle 6 : Managers should avoid altogether activities that might jeopardize inalienable human rights (e.g., the right to life) or give rise to risks which, if clearly understood, would be patently unacceptable to relevant stakeholders.

Principle 7 : Managers should acknowledge the potential conflicts between (a) their own role as corporate stakeholders, and (b) their legal and moral responsibilities for the interests of all stakeholders, and should address such conflicts through open communication, appropriate reporting and incentive systems and, where necessary, third party review.

Companies are often times at crossroads to balance the interests of different stakeholders so that no particular stakeholder is either at an additional advantage or at disadvantage over the others. Corporate Boards and leadership must display an outstanding understanding of practical business ethics. They need not only do but also appear to do justice to diverse pulls and pressures from a complex array of stakeholders.

PART – B

Question 5

(a) What are the areas a company should focus upon so as to be a good corporate citizen ?

(b) Discuss the UN Global Compact, a strategic policy initiative in the areas of human rights, labour, environment and anti-corruption. How can companies align with these principles ?

(c) Explain the principle of absolute liability and departure from rule in the matter of Rylands v. Fletcher in dealing with companies handling hazardous chemicals.

(5 marks each)

Answer 5(a)

As a good corporate citizen, companies are required to focus on the following key aspects:

1. *Absolute Value Creation for the Society*

   Organisations should set its goal towards creation of absolute value to the society. Once it is ensured, a corporate never looks back and its sustainability in long run is built up.

2. *Ethical Corporate Practices*

   In the short run, enterprise can gain through non-ethical practices. However those cannot be sustained in long run. Society denies accepting such products or services. For example, in Drug and Pharmaceutical industry, many products are today obsolete due their side effects which such companies never disclosed to protect their sales volume. When they were banned by the WHO or other authorities, they had to stop their production.

3. *Worth of Earth through Environmental Protection*

   Resources which are not ubiquitous and have economic and social value should be preserved for long term use and be priced properly after considering environmental and social costs. For example, a power plant should build up its cost model efficiently after taking into account cost of its future raw material sourcing, R&D cost for alternate energy source, cost for proper pollution control measures and so on.

4. *Equitable Business Practices*

   Corporates should not divulge themselves in unfair means and it should create candid business practices, ensure healthy competition and fair trade practices.

5. *Corporate Social Responsibility*

   As a Corporate citizen, every corporate is duty bound to its society wherein they operate and serve. Although there is no hard and fast rules, CSR activities need to be clubbed and integrated into the business model of the Company.

6. *Innovate new technology/process/system to achieve eco-efficiency*

   Innovation is the key to success. Risks and crisis can be eliminated through innovation. Learning and Innovative enterprise gets a cutting edge over others. These innovative processes bring sustainability if developments are aimed at satisfying human needs and bring quality of life while progressively reducing ecological impact and resource intensity to a level at least in line with earth's estimated carrying capacity.

7. *Creating Market for All*

   Monopoly, unjustified subsidies, price not reflecting real economic, social environmental cost, etc. are hindrances to sustainability of a business. Simultaneously, a corporate is to build up its products and services in such a way so as to cater all segments of customers/consumers. Customer confidence is essence to corporate success.

8. *Switching over from Stakeholders Dialogue to holistic Partnership*

   A business enterprises can advance their activities very positively if it makes all of stakeholders partner in its progress. It not only builds confidence of various stakeholders, but also helps the management to steer the business under a very dynamic and flexible system. This approach offers business, government and other stakeholders of the society to build up alliance towards bringing common solutions to common concerns being faced by all.

9. *Compliance of Statutes*

   Compliance of statutes, rules and regulations, standards set by various bodies ensure clinical check up of a corporate and it confers societal license to the corporate to run and operate in the society.

Answer 5(b)

The UN Global Compact is a strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti- corruption. By doing so, business, as a primary driver of globalization, can help ensure that markets, commerce, technology and finance advance in ways that benefit economies and societies everywhere.

The UN Global Compact presents a unique and powerful platform for participants to advance their commitments to sustainability and corporate citizenship. With over 10,000 corporate participants and other stakeholders from over 130 countries, it is the largest voluntary corporate responsibility initiative in the world.

UN Global Compact incorporates a transparency and accountability policy known as the Communication on Progress (COP). COP is a report to inform the company's stakeholders about the company's progress in implementing the Global Compact's ten principles. The purpose of the COP is both to ensure and deepen the commitment of Global Compact participants and to safeguard the integrity of the initiative.

Joining the Global Compact is a widely visible commitment to the ten principles. A company that signs-on to the Global Compact specifically commits itself to:

— set in motion changes to business operations so that the Global Compact and its principles become part of management, strategy, culture, and day-to-day operations;

— publish in its annual report or similar public corporate report (e.g. sustainability report) a description of the ways in which it is supporting the Global Compact and its principles (Communication on Progress),

— publicly advocate the Global Compact and its principles via communications vehicles such as press releases, speeches, etc.

Answer 5(c)

Principle of Absolute Liability : The principle of absolute liability states that when an enterprise is engaged in hazardous or inherently dangerous industry and if any harm results on account of such activity then the enterprise is absolutely liable to compensate for such harm and that it should be no answer to the enterprise to say that it had taken all reasonable care and that the harm occurred without any negligence on its part. In such industries, the principle of safe design would be that one does not guard merely against the most predictable, routine type of accidents. Rather one tries to anticipate the worst that could happen, even if it is highly unlikely, and not only guard against it, but prepare to contain it and make sure that there is no way for that even to take place.

Absolute liability for the escape of impounded waters was first established in England during the mid-nineteenth century in the case of *Rylands* v. *Fletcher*, (1868) LR 3 330. The rule was first stated by Blackburn, J. (Court of Exchequer). The passage of Blackburn's opinion established broad liability for land owners whose land development activities result in the unexpected release of a large volume of water. The liability under this rule is strict and it is no defense to say that the thing escaped without that person's willful act, default or neglect or even that he had no knowledge of its existence.

Departure from rule : In *M.C. Mehta* v. *Union of India*, AIR 1987 SC 1086, the Supreme Court sought to make a departure from the accepted legal position in *Rylands* v. *Fletcher* stating that "an enterprise which is engaged in a hazardous or inherently dangerous activity that poses a potential threat to the health and safety of persons and owes an absolute and non-delegable duty to the community to ensure that no harm results to anyone". The principle of absolute liability is operative without any exceptions. It does not admit of the defenses of reasonable and due care, unlike strict liability. Thus, when an enterprise is engaged in hazardous activity and harm result, it is absolutely liable, effectively tightening up the law.

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

Question 6

(a) Mention any ten sustainability terminologies.

(b) What are the key drivers of sustainability reporting ?

(c) "Sustainability is an emerging mega trend and is a measure of good Corporate Governance." Explain. *(5 marks each)*

OR (Alternate question to Q. No. 6)

Question 6A

(i) Discuss briefly the salient features of the Corporate Manslaughter and Corporate Homicide Act, 2007 of the United Kingdom.

(ii) Write a note on United Nations Framework Convention on Climate Change.

(iii) Explain the concept of stakeholder inclusiveness. *(5 marks each)*

Answer 6(a)

There are various terminologies related to the sustainability. These are as follows:

1. Carbon footprint
2. Carbon offsetting
3. Carbon neutral
4. Ecological footprint
5. Greenwashing
6. Greenhouse effect
7. Global warming
8. Ethical consumerism
9. Clean Development Mechanism (CDM)
10. Environmental performance index
11. Energy Use Intensity (EUI)

12. Life cycle assessment

13. Energy star

14. Cradle to grave

15. Cradle to cradle

Answer 6(b)

Following are the key drivers of sustainability reporting:

1. *Regulations* : Governments at most levels have stepped up the pressure on corporations to ensure the impact of their operations on the environment. Legislation is becoming more innovative and is covering an ever wider range of activities. The most notable shift has been from voluntary to mandatory sustainability monitoring and reporting.

2. *Customers* : Public opinion and consumer preferences are a more abstract but powerful factor that exerts considerable influence on companies, particularly those that are consumer oriented. Customers significantly influence a company's reputation through their purchasing choices and brand.

3. *Loyalty* : This factor has led firms to provide much more information about the products they produce, the suppliers who produce them, and the product's environmental impact from creation to disposal.

4. *NGO's and the media* : Public reaction comes not just from customers but from advocates and the media, who shape public opinion. Advocacy organisations, if ignored or slighted, can damage brand value.

5. *Employees* : Those who work for a company bring particular pressure to bear on how employers behave; they, too, are concerned citizens beyond their corporate roles.

6. *Peer pressure from other companies* : Each company is part of an industry, with the peer pressures and alliances that go along with it. Matching industry standards for sustainability reporting can be a factor; particularly for those who operate in the same supply chain and have environmental or social standards they expect of their partners. There is a growing trend for large companies to request sustainability information from their suppliers as part of their evaluation criteria.

7. *Companies themselves* : Corporations, as public citizens, feel their own pressure to create a credible sustainability policy, with performance measures to back it up, but with an eye on the bottom line as well. Increasingly, stakeholders are demanding explicit sustainability reporting strategies and a proof of the results. So, too, are CEOs, who consider sound social and environmental policies a critical element of corporate success. Companies report that integrated reporting drives them to re-examine processes with an eye towards resource allocation, waste elimination and efficiency improvements.

8. *Investors* : Increasingly, investors want to know that companies they have targeted have responsible, sustainable, long-term business approaches. Institutional investors and stock exchange CEOs, for example, have moved to request

increased sustainability reporting from listed companies, and environmental, social and corporate governance indices have been established such as the Dow Jones Sustainability Index.

9. *The Carbon Disclosure Project* was developed in response to investor demand for a system for firms to measure and report greenhouse gas emissions and climate change strategies as a tool to set reduction targets and set individual goals.

Answer 6(c)

Sustainability is an emerging megatrend and is a measure of good corporate governance. Over the years, environmental issues have steadily encroached on businesses' capacity to create value for customers, shareholders, and other stakeholders. Globalized workforces and supply chains have created environmental pressures and attendant business liabilities. The rise of new world powers has intensified competition for natural resources and added a geopolitical dimension to sustainability. Externalities such as carbon dioxide emissions and water use are fast becoming material- meaning that investors consider them central to a firm's performance and stakeholders expect companies to share information about them. These forces are magnified by escalating public and government concern about climate change, industrial pollution, food safety, and natural resource depletion, among other issues. Governments are interceding with unprecedented levels of new regulation. Consumers in many countries are seeking out sustainable products and services or leaning on companies to improve the sustainability of traditional ones. Further fueling this megatrend, thousands of companies are placing strategic bets on innovation in energy efficiency, renewable power, resource productivity, and pollution control. Sustainability, in today's competitive globalised world, is one of the most commonly discussed terms as a part of viability and credibility of the organisations. Most executives know that how they respond to the challenge of sustainability will profoundly affect the competitiveness and perhaps even the survival of their organizations. The top management of an organisation can no longer afford to ignore sustainability as a central factor in their company's long-term competitiveness.

Answer 6A(i)

In the United Kingdom, the Corporate Manslaughter and Corporate Homicide Act introduced a new offence, across the UK, for prosecuting companies and other organisations where there has been a gross failing, throughout the organisation, in the management of health and safety with fatal consequences. The Corporate Manslaughter and Corporate Homicide Act 2007 is a landmark in law. For the first time, companies and organisations can be found guilty of corporate manslaughter as a result of serious management failures resulting in a gross breach of a duty of care. The Act, which came into force on 6 April 2008, clarifies the criminal liabilities of companies including large organisations where serious failures in the management of health and safety result in a fatality. Prosecutions will be of the corporate body and not individuals, but the liability of directors, board members or other individuals under health and safety law or general criminal law, will be unaffected. And the corporate body itself and individuals can still be prosecuted for separate health and safety offences. Companies and organisations should keep their health and safety management systems under review, in particular, the way in which their activities are managed and organised by senior management.

Answer 6A(ii)

The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an international environmental treaty produced at the United Nations Conference on Environment and Development (UNCED). The treaty is aimed at stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (due to human activity) interference with the climate system.

Signatories to the UNFCCC are divided into three groups:

i. Annex I countries (industrialized countries)

ii. Annex II countries (developed countries which pay for costs of developing countries)

iii. Developing countries

Annex I countries agree to reduce their emissions (particularly carbon dioxide) to target levels below their 1990 emissions levels. If they cannot do so, they must buy emission credits or invest in conservation.

Annex II countries, that have to provide financial resources for the developing countries, are a sub-group of the Annex I countries consisting of the OECD members.

Developing countries have no immediate restrictions under the UNFCCC. This serves three purposes:

— Avoids restrictions on growth because pollution is strongly linked to industrial growth, and developing economies can potentially grow very fast.

— It means that they cannot sell emissions credits to industrialized nations to permit those nations to overpollute.

— They get money and technologies from the developed countries in Annex II.

Developing countries may volunteer to become Annex I countries when they are sufficiently developed. Developing countries are not expected to implement their commitments under the Convention unless developed countries supply enough funding and technology, and this has lower priority than economic and social development and dealing with poverty.

Answer 6A(iii)

Stakeholder Inclusiveness means that the reporting organization should identify its stakeholders and explain in its report how it has responded to their reasonable expectations and interests. Since the stakeholders for an organization are scattered and there may be variation in their expectation and interest, stakeholder engagement processes can serve as tools for understanding the reasonable expectations and interests of stakeholders. Organizations typically initiate different types of stakeholder engagement as part of their regular activities, which can provide useful inputs for decisions on reporting. Stakeholder engagement is an alliance-building tool. Corporations practice stakeholder engagement in an effort to understand the needs of their stakeholders, create partnerships and to promote dialogue. Stakeholder engagement identifies stakeholders, assesses stakeholder needs, develops stakeholder relations plans and forms alliances with stakeholders. Stakeholder engagement leads to increased transparency, responsiveness, compliance, organizational learning, quality management, accountability and sustainability. Stakeholder engagement is a central feature of sustainability performance. The GRI guidance requires organisation to document the stakeholder engagement processes.

Stakeholder engagement is undertaken for numerous reasons which include:

— Improved corporate responsibility and financial performance across the globe.

— To avoid conflict through negotiation, mediation and collaborative learning.

— Development of a shared vision to direct future business decisions and operations.

— To innovate through collaboration.

Corporations are often confronted with the difficulty of balancing competing or opposing stakeholder needs or demands. The success of stakeholder engagement is initially dependent upon the quality of stakeholder analysis.