

Fundamental IT Engineer Examination

(Mgt & Strategy Morning)
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Question Nos.51-80

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Q51. According to the 6th edition of the PMBOK Guide, which of the following is an activity for the planning process group in project resource management?

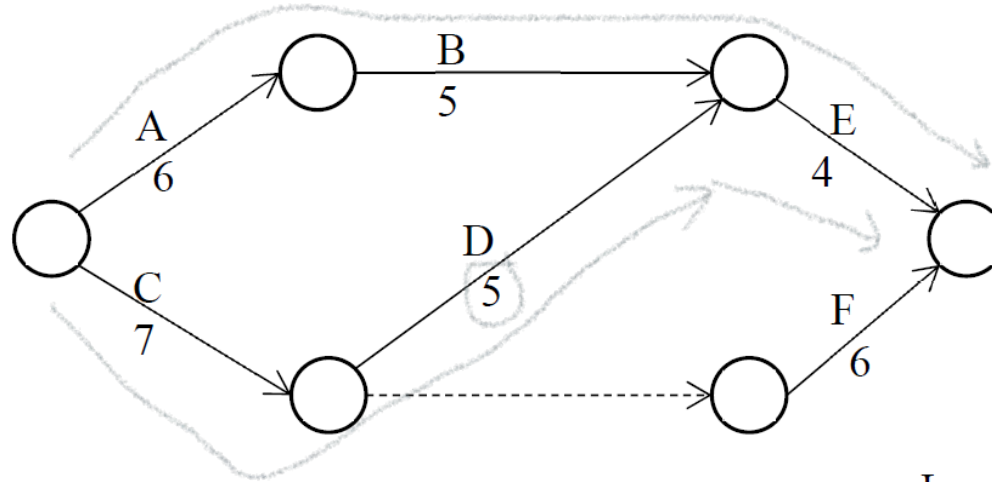
- a) Acquire resources
- b) Control resources
- c) Develop project team
- d) Estimate activity resources

Answer: d

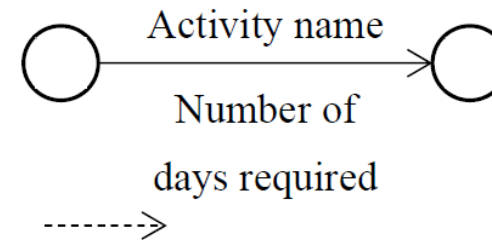
The following processes are implemented for setting up and controlling the schedule.

Process groups	Process to implement
Initiating	—
Planning	[Plan schedule management]
	[Define activities]
	Sequence activities
	[Estimate activity resources]
	Estimate activity durations
	Develop schedule
Implementing [Executing]	—
Controlling [Monitoring and controlling]	Control schedule
Closing	—

Q52. The activities and milestones of a project are shown in the arrow diagram below. Which of the following is an impact of reducing the duration of activity, D, by 3 days?



Legend:



- a) Project duration is not changed.
- b) Project duration is reduced by 1 day.
- c) Project duration is reduced by 2 days.
- d) Project duration is reduced by 3 days.

Answer: b

Q53. The functional size of a new system was estimated to be 500 function points (FP). Apart from development, the project requires 10 person-months in total for installation of the system and education of developers. Additionally, for project management, 10% of the total person-months of development, installation, and education is required. How many person-months are required in total for this project? Here, the productivity in development is 10 FPs per person-month.

a) 51

b) 60

c) 65

d) 66

Before project management Person-Month required = $(500/10 + 10) = 60$

For Project Management = $60 * 10\% = 6$

Total person-month required = $60 + 6 = 66$

Answer: d

Q54. Which of the following is used in quality management to help determine whether a process is stable by using plotted time-series data and limit lines?

- a) Brainstorming
- b) Cause-and-effect diagram
- c) Control chart
- d) Run chart

Answer: C

Q55. Which of the following is an appropriate definition of the total cost of ownership (TCO) in the context of system cost?

- a) It is the total amount of expenses at the time of system installation.
- b) It is the total amount of expenses related to the development of business systems.
- c) It is the total amount of expenses, including those from system installation through operation and maintenance/management.
- d) It is the total amount of operation expenses for systems related to communications and networking.

Answer: C

Q56. In IT service management, which of the following is an activity that is performed for management of incidents and service requests?

- a) Evaluating if customer satisfaction with the service desk meets the agreed service targets and performing a review for identifying improvement opportunities
- b) Examining measures wherein the amount of free space on a disk is near its threshold
- c) Investigating the impact of changes made to a program
- d) Receiving a failure report from a user and checking to see if it corresponds to a known error

Answer: d

Q57. Which of the following is the most appropriate description about the backup of data on a disk that is connected to a server?

- a) All data are backed up on the day the system commences full operations, and only frequently updated data are backed up thereafter to shorten the work time.
- b) Data distributed and stored in multiple files are backed up when a series of update processes to the files are completed.
- c) Data whose frequency of use are low after a certain period of time are deleted from the current disk, and the data that have been backed up are also deleted.
- d) Important data are backed up by overwriting data on the same media, so that the backup media are not mistaken.

Answer: b

Q58. Which of the following is the most appropriate description about a system auditor?

- a) The entire interview must be conducted by one (1) system auditor, because discrepancies may occur in the record if multiple auditors are involved.
- b) The system auditor must instruct the department being audited to implement improvement measures for deficiencies identified during the interview.
- c) The system auditor must make an effort to obtain documents and records that support the information obtained from the department being audited during the interview.
- d) The system auditor must select interviewees from administrators who have been an auditor within the department being audited.

Answer: C

Q59. Which of the following is the most appropriate measure that a management executive must take to secure the appearance of independence for an internal system auditor?

- a) Assigning the system auditor to the internal audit department
- b) Making it compulsory for the system auditor to undergo continuous learning of IT
- c) Setting up an auditing-skills training system for the system auditor
- d) Specifying and publishing the knowledge and experience necessary for the system auditor

Answer: a

Q60. When software asset management is audited, which of the following activities is the most appropriate?

- a) It is checked to see if compatibility with existing systems is evaluated at the time of installation.
- b) It is checked to see if evidence, such as a software-license certificate, is properly retained.
- c) It is checked to see if failures are localized via database partitioning or other methods.
- d) It is checked to see if the organizational and functional structure of the software provider is considered.

Answer: b

Q61. Which of the following is an explanation of an application architecture that constitutes enterprise architecture?

- a) It systematically describes the business processes or the information flows necessary for the business strategy.
- b) It systematically describes the contents of the data necessary for business operations, the relations or structures between the data, etc.
- c) It systematically describes the functions or system configurations that support business processes.
- d) It systematically describes the technical components necessary for the developments and operations of the information systems.

Answer: C

Q62. Which of the following is an on-demand service?

- a) A DVD movie purchased from an internet site
- b) A pocketbook printed by a publishing company using offset printing after deciding the number of copies
- c) A repeat broadcast drama that is delivered on the internet in response to the request of the user
- d) Internet news periodically delivered to a smart phone

Answer: C

On-demand services are **services that are provided to customers on an as-needed basis, often through an online platform.**

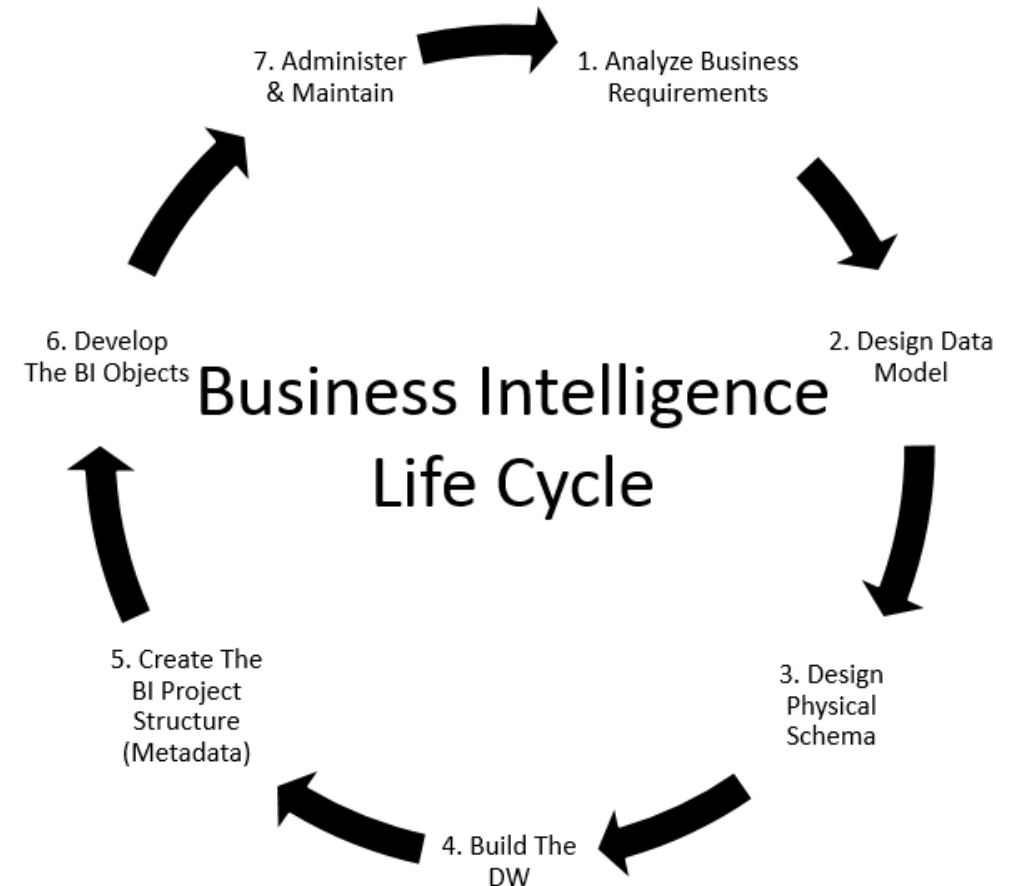
On-demand service, in the context of IT, is a prime facility and feature of cloud computing services, which allow users to provision raw cloud resources at run time, when and where needed.

Q63. Which of the following is the appropriate example of utilizing Business Intelligence (BI)?

- a) Analyzing a large volume of data stored on a business system to evaluate business performance and develop a business strategy
- b) Computerizing the daily routine works, such as decision requests, to ensure that such procedures are carried out without fail and to enable their swift completion
- c) Enabling employees to use computerized learning materials via a network and managing their learning and performance
- d) Obtaining publications, such as annual reports issued by competitors, to understand their business strategies and financial situations

Answer: a

- **Business intelligence (BI)** is software that ingests business data and presents it in user-friendly views such as reports, dashboards, charts and graphs.
- BI tools enable business users to access different types of data — historical and current, third-party and in-house, as well as semi-structured data and unstructured data like social media.
- Users can analyze this information to gain insights into how the business is performing.



Q64. When examples of utilizing big data are classified according to the feedback destination of the analysis and the reflection timing, which of the following utilization examples corresponds to D in the table below?

		Reflection timing of analysis	
		Once every fixed period	Immediately
Feedback destination of analysis	All customers	A	B
	Individual customer	C	D

- a) Based on the location data acquired from the smartphone of a customer registered as a member and the purchase history data of the customer, recommended products from nearby retailers are displayed on the smartphone.
- b) From the large volume of purchase data collected and accumulated by using member cards, the preferences of each customer are analyzed, and coupons for the next month are issued according to the purchase volume of the previous month.
- c) The current traffic status of each road is published on the website by collecting and analyzing data of the position, speed, and other parameters of moving cars.
- d) The ranking of the largest-selling products of each month is extracted from the POS data of the last few years from sister stores, and images of the products corresponding to the current month are displayed on monitors inside the store.

Answer: a

Q65. In computerization planning, which of the following is an activity that should be performed?

- a) Clarifying what roles are assigned to the business and information-system departments when the organizational structure of system development construction is planned and clarifying the basis of cost calculation for development, operation, and maintenance when considering the costs
- b) Determining interfaces, such as screens or forms, based on the requirements definition document and describing them in the design document
- c) Performing maintenance and management of the system so that it conforms to the business and the environment and analyzing details and clarifying the potential impacts of modification requests
- d) Performing system startup and shutdown, monitoring, and file maintenance in a planned manner and verifying that business is being carried out smoothly

Answer: a

Q66. According to the “competitive strategy” proposed by Philip Kotler, which of the following describes a company that has no high market share but utilizes quantitatively large management resources?

- a) Market challenger
- b) Market follower
- c) Market leader
- d) Market nicher

Answer: a

Relative management resources		Quantity	
		Large	Small
Quality	High	Leader	Nicher
	Low	Challenger	Follower

Leader

Leader holds the top share of the industry with management resources that have excellent quantity and quality

Challenger

Challenger holds the second- to fourth -largest share of the industry that is qualitatively inferior to the leader although the management resources are quantitatively excellent

Nicher

Since the management resources are qualitatively excellent, the nicher dominates a specific market (or product) but is quantitatively inferior to the leader.

Follower

Since the management resources have an inferior quantity and quality, the follower trails behind the leader

Q67. Which of the following is an appropriate explanation of telemarketing?

- a) Direct marketing that includes calling people at home and asking for donations, opinions, or purchases.
- b) Direct marketing that sells products and services and builds customer relationships over the internet.
- c) Direct marketing that sends offers, announcements, reminders, or other items to a person at a particular address.
- d) Direct marketing that sends sales alerts, links to website updates, appointments, or delivery reminders to large groups of people.

Answer: a

Telemarketing is **the direct marketing of goods or services to potential customers over the telephone, internet, or fax.** Telemarketing may either be carried out by telemarketers or increasingly by automated telephone calls or "robocalls."

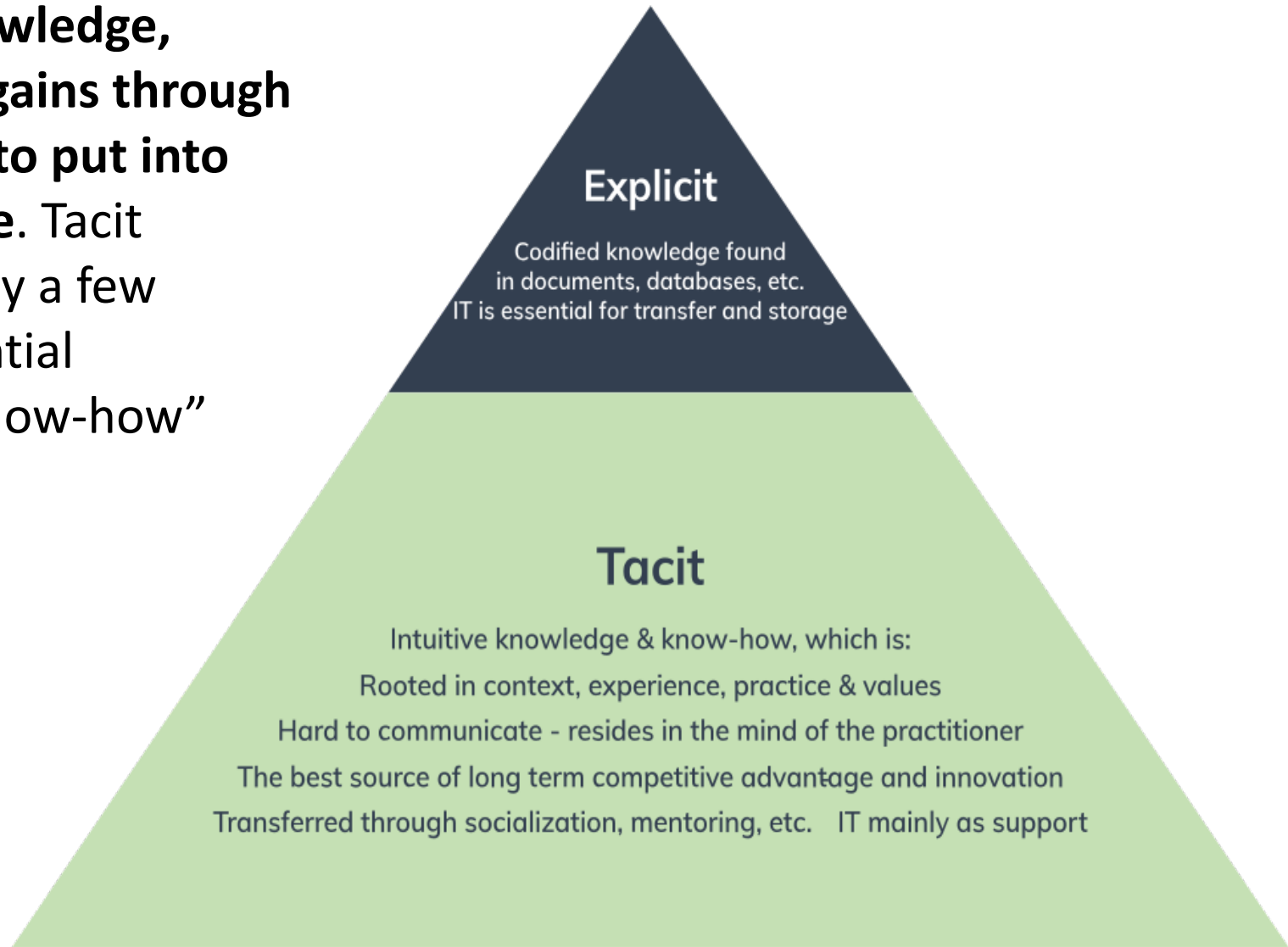


Q68. Which of the following is mostly tacit knowledge?

- a) A list of countries and their capitals
- b) An inventory of assets
- c) Contents of a washing machine manual
- d) How to ride a bicycle

Answer: d

Tacit knowledge refers to **the knowledge, skills, and abilities an individual gains through experience that is often difficult to put into words or otherwise communicate.** Tacit knowledge is sometimes known by a few alternate terms, such as: Experiential knowledge. Tribal knowledge. “Know-how” knowledge.



Q69. Which of the following is appropriate as a description of Customer Relationship Management (CRM) software?

- a) It mainly provides online tools for sales, customer service, and marketing.
- b) It mainly provides partner relationship management.
- c) It only supports direct-marketing campaigns.
- d) It provides information and tools to make call center, help desk, and customer support staff more efficient mainly by phone.

Answer: a

Customer relationship management (CRM)

- Customer relationship management (CRM) is the combination of practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle.
- The goal is to improve customer service relationships and assist in customer retention and drive sales growth.
- CRM systems compile customer data across different channels, or points of contact, between the customer and the company, which could include the company's website, telephone, live chat, direct mail, marketing materials and social networks.
- CRM systems can also give customer-facing staff members detailed information on customers' personal information, purchase history, buying preferences and concerns.

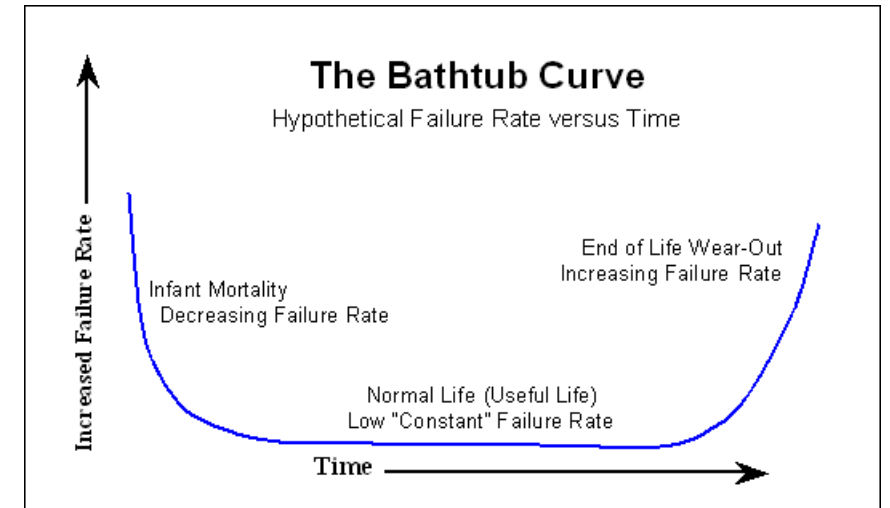
Q70. In a process that aims to produce ideal technology, technology follows an evolutionary process that progresses from the introduction stage, growth stage, maturity stage, decline stage. Then it transitions to the next technological phase. Which of the following is used to represent this technological evolution process?

- | | |
|-------------------|-----------------------|
| a) Bathtub curve | b) Demand curve |
| c) Learning curve | d) Technology S-curve |

Answer: d

Bathtub Curve

A bathtub curve is a **visual representation of the failure rate of a product or group of products over time**. By plotting the occurrences of failure over time, a bathtub curve maps out three periods that an asset experiences within its lifetime: Infant mortality period. Normal life period. End of life period.



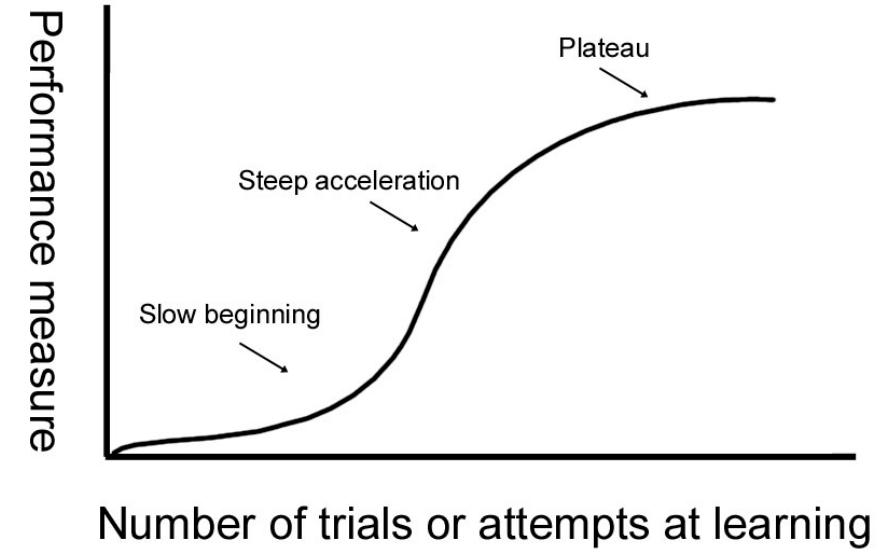
Demand Curve

A demand curve **represents the relationship between the price of a good or service and the quantity demanded for a given period of time**. Typically, as the price rises, the demand falls; as a result, the curve slopes down from left to right.



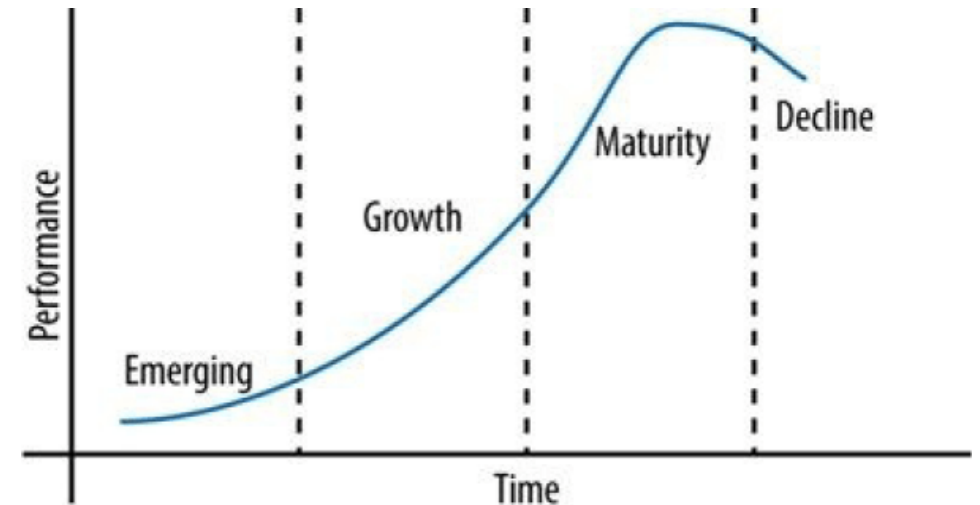
Learning Curve

A learning curve is a **mathematical concept that graphically depicts how a process is improved over time due to learning and increased proficiency**. The learning curve theory is that tasks will require less time and resources the more they are performed because of proficiencies gained as the process is learned.



S-Curve

The S-curve shows the innovation from its slow early beginnings as the technology or process is developed, to an acceleration phase (a steeper line) as it matures and, finally, to its stabilisation over time (the flattening curve), with corresponding increases in performance of the item or organisation using it.

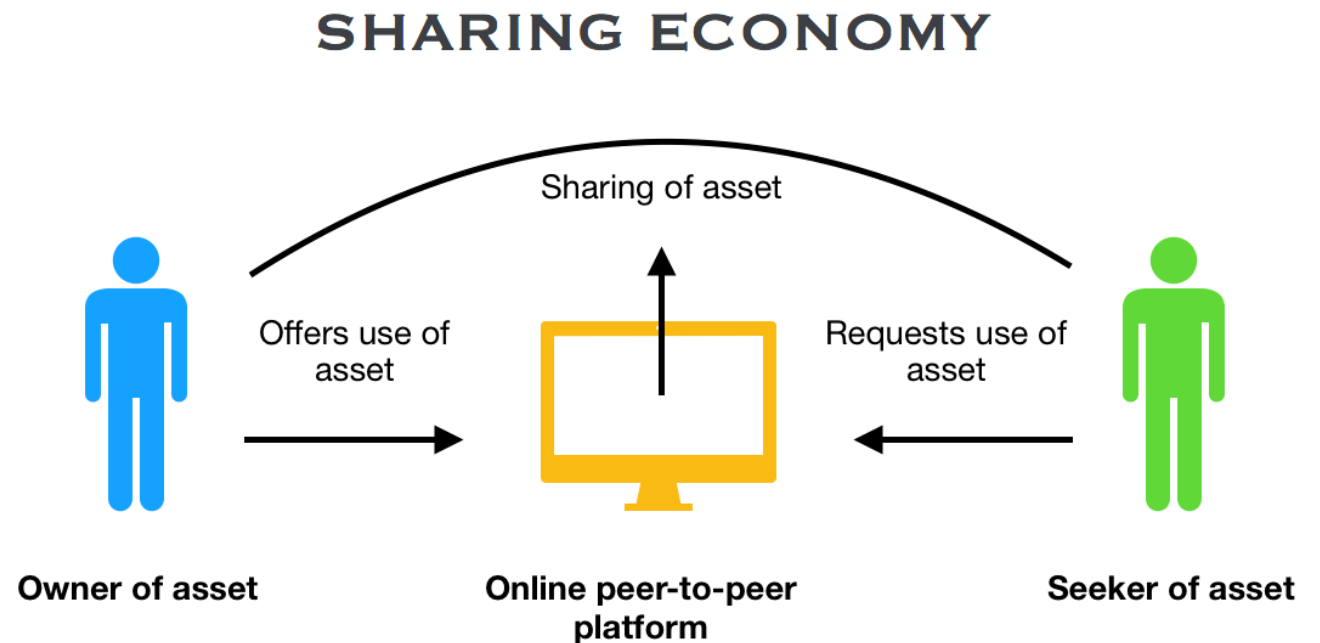


Q71. Which of the following is an explanation of a sharing economy?

- a) It is a concept by which efficient management and operation of renewable energy and urban infrastructure are performed by using IT, which leads to an improvement in the quality of people's lives and helps achieve continuous economic growth.
- b) It is a concept by which the productivity of an entire economy increases as a result of utilizing IT, and the demand-and-supply gap is eliminated via the progress of SCM, which leads to sustainable growth free from inflation.
- c) It is a mechanism by which over-the-counter and Internet sales are combined in a business transaction, and the strong points of both are utilized and linked to expand overall sales.
- d) It is a mechanism mainly between individuals by which the community function and other functions of social media are utilized to share, lend, or borrow the unemployed assets owned by individuals.

Answer: d

- The sharing economy involves short-term peer-to-peer transactions to share use of idle assets and services or to facilitate collaboration.
- The sharing economy often involves some type of online platform that connects buyers and seller.
- The sharing economy is rapidly growing and evolving but faces significant challenges in the form of regulatory uncertainty and concerns about abuses.



Q72. Which of the following is a characteristic of an IC tag (RFID)?

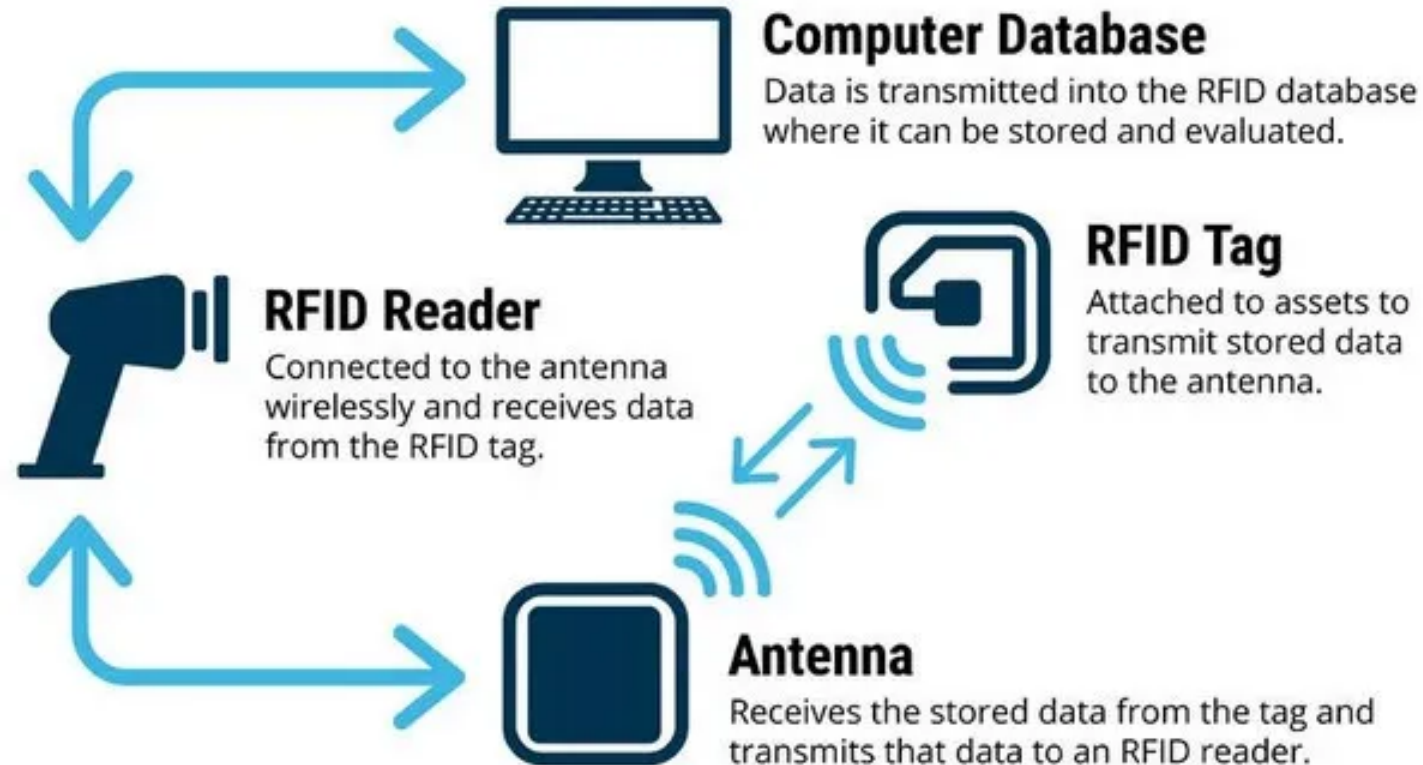
- a) It handles a large amount of information. Thus it uses an external storage device for storing information.
- b) It is stain-resistant, and recorded information can be read from the outside of a package.
- c) It is used by inserting the tag into a dedicated magnetic reader.
- d) It uses GPS to display location information or attribute information about the current location.

Answer: b

RFID (Radio Frequency Identification)

- This refers to a contactless automatic recognition technology that uses radio waves or electromagnetic waves.
- Information is exchanged without contact by using an IC chip equipped with an antenna called an IC tag.
- Since RFID is resistant to dust and can read the recorded information even from outside the package, it is applicable in **traceability systems** that trace the path from production to distribution of products, product management, and entry and exit control for a building.

Radio Frequency Identification (RFID) refers to a **wireless system comprised of two components: tags and readers**. The reader is a device that has one or more antennas that emit radio waves and receive signals back from the RFID tag.



Q73. Which of the following is an example of Consumer Generated Media (CGM)?

- a) A company website through which the company publishes information for individual investors about its management status, financial status, and performance trends
- b) A company website through which the company transmits information to general consumers about the characteristics and usage method of its products
- c) A website of a governmental organization through which the agency publishes information for general citizens about its policies and administrative services
- d) A website, such as a blog or SNS, on which an individual sends information to unspecified large number of people about the evaluation of products used by the individual

Answer: d

Consumer-generated media (CGM) refers to any written, audio or video content created by end users, using basic or semiprofessional tools.

CGM can include one-consumer-to-many applications such as photo sharing, publishing via blogs, podcasting, social network videoblogging and the like, as well as “auteurs” looking to get their content to an audience.

Q74. Which of the following is an appropriate computing concept that describes the idea of physical objects, such as devices, vehicles, and buildings, that are connected to the internet and are able to identify themselves to other devices?

- a) Computer networks
- b) Deep learning
- c) Internet of things
- d) Network topology

Answer: C

Q75. In a company, which of the following is the main role of the manufacturing department?

- a) Attracting, developing, and sustaining the labor force and maintaining employee records
- b) Managing financial assets and maintaining financial records
- c) Producing products and services
- d) Selling products and services

Answer: C

Q76. Which of the following is an officer whose primary responsibility is the security of a company's information and data?

- a) CCO b) CIO c) CISO d) COO

Answer: C

- The **CIO (Chief Information Officer)** is a particularly important executive officer because they are in charge of information strategy planning and execution, including company-wide information management and information systems control.
- The CIO is also responsible for promoting the effective use of information systems (or services).

CISO

Q77. Which of the following is a method of education and training in which trainees engage in simulated business activities, interact with other people to develop experiences, and try out different strategies?

- a) Case study b) Debate c) In-basket d) Roll-playing

Answer: d

These activities are education and training methods that can all be conducted by an individual or a group.

Case study

- Case study aims to analyze and systematize problems on the basis of the past examples.

Role-playing

- Role-playing is used to experience simulated business activities.

Debate

- Debate involves discussions between two groups: for and against.

In-basket

- In-basket involves processing number of issues that are put in the “in-basket” within a specific time period.

Q78. Which of the following is a method of inventory asset valuation to calculate the inventory unit price by the expression as shown below each time that a new inventory asset is received?

$$\frac{(\text{The costs of goods received} + \text{The costs of goods in stock})}{(\text{The quantity of goods received} + \text{The quantity of goods in stock})}$$

- a) Final acquisition cost method (Final purchase cost method)
- b) First-in first-out method
- c) Moving average method
- d) Periodic average method

Answer: C

Inventory valuation

First-in first-out method – In the first-in first-out method, the inventory unit price is calculated by treating products that are purchased first as sold first.

Periodic average method – In the periodic average method, the inventory unit price is determined by dividing the total purchase amount by the total quantity of items purchased.

Moving average method – In the moving average method, the following expression is used to calculate the inventory unit price every time a product is purchased.

$$\text{Inventory unit price} = \frac{\text{Inventory amount} + \text{Purchased amount}}{\text{Inventory quantity} + \text{Purchased quantity}}$$

Final acquisition cost method (Final purchase cost method) – In the final acquisition cost method, the unit price of the last product purchased is used as the inventory unit price.

Q79. Which of the following is the profit obtained by the expression shown below in the income statement, when the regulation of corporate accounting in Japan is applied?

$$\text{Operating profit} + (\text{Non-operating revenue} - \text{Non-operating expense})$$

- | | |
|-------------------------|------------------------------------|
| a) Current net profit | b) Current net profit before taxes |
| c) Extraordinary profit | d) Ordinary profit |

Answer: d

Classification (Account title)	Explanation
Sales (Operating income)	The amount of sales of products and/or services
Cost of sales (Cost)	The cost of raw materials, manufacturing costs, or purchase costs for products and/or services
Gross profit or gross loss	The profit (or loss) from only sales of products and/or services [Sales – Cost of sales]
Selling, general and administration expense	Sales expenses, such as advertising costs, and overall company administration costs
Operating profit or operating loss	Profit (or loss) that is obtained from the results of operating activities [Gross profit – Selling, general and administration expense]
Non-operating income	Income from non-operating activities, such as interest received or dividends
Non-operating expense	Any non-operating activity costs, such as interest expense.
Current profit or current loss	Profit (or loss) that is obtained from the results of corporate business activities [Operating profit + Non-operating income – Non-operating expenses]

Classification (Account title)	Explanation
Extraordinary profit	Profit from exceptional sources (e.g., sale of fixed assets) other than normal business activities
Extraordinary loss	Loss because of reasons (e.g. natural disasters) other than normal operating activities
Net profit before tax for current period or net loss before tax for current period	Profit (or loss) that is obtained as the final result of business activities [Current profit + Extraordinary profit – Extraordinary loss]
Corporate tax and other taxes	Total taxes, such as a corporate tax and a residential tax
Net profit for current period or net loss for current period	The amount of profit (or loss) that is left in-hand [Net profit before tax for current period – Corporate tax and other taxes]
Retained earnings carried forward to next period	Profit (i.e., earnings retained) after appropriation of profits (e.g., stockholder dividends, executive bonuses, earned surplus reserves, voluntary reserves) from the net profit for the current period

Q80. Which of the following is an organization that manages the standardization of technologies used on the Internet, and develops the technical specifications as an RFC?

a) ANSI

b) IEEE

c) IETF

d) NIST

Answer: C

International Standards

- IS (International Standards) are standards that are established by international standardization bodies that is represented by ISO (International Organization for Standardization).

Name of standard	Content of standard
ISO 9000	Standards concerning quality management systems
ISO 14000	Standards concerning environmental management systems
ISO/IEC 20000	Standards concerning service management systems
ISO/IEC 27000	Standards concerning information security management systems

Other standardization bodies

ITU (International Telecommunication Union) – This is an international standards body in the telecommunications sector

IEC (International Electrotechnical Commission) – This is an international standardization body in the electrical and electronics technology sector

IETF (Internet Engineering Task Force) – This is a voluntary association that promotes the standardization of Internet technology. IETF technical specifications are documented and published under the name RFC (Request For Comments).

ANSI (American National Standards Institute) – This is a U.S. body for standardization in the industrial sector

IEEE (Institute of Electrical and Electronic Engineers) – This is a body related to the electrical and electronics sector. It is essentially an academic body, but it also engages in standardization activities and has contributed to standardization in the telecommunications sector in particular.