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FINAL EXAMS

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PGD IN PROCUREMENT AND SUPPLY CHAIN MANAGEMENT- FINAL EXAMINATION

Instructions

Answer question one and from the remaining three choose two

This is an examination, back up your comments by scholarly evidence

**QUESTION ONE**  
**a) Differentiate between purchasing and procurement(4 marks)**

Purchasing is the organized acquisition of goods and services on behalf of the buying entity. Purchasing activities are needed to ensure that needed items are obtained in a timely manner and at a reasonable [cost](https://www.accountingtools.com/articles/2017/5/4/cost).

Procurement is the act of obtaining goods or services, typically for business purposes. Procurement is most commonly associated with businesses because companies need to solicit services or purchase goods, usually on a relatively large scale.

Procurement generally refers to the final act of purchasing but it can also include the procurement process overall which can be critically important for companies leading up to their final [purchasing](https://www.investopedia.com/articles/investing/010914/importance-purchasing-managers-index-pmi.asp) decision. Companies can be on both sides of the procurement process as buyers or sellers though here we mainly focus on the side of the soliciting company.

Many people use the terms purchasing and procurement interchangeably, but despite their similarities, they do have different meanings. Let’s clarify any confusion on the difference between procurement and purchasing.

Procurement involves the process of selecting vendors, establishing payment terms, strategic vetting, selection, the negotiation of contracts and actual purchasing of goods. Procurement is concerned with acquiring (procuring) all of the goods, services, and work that is vital to an organization. Procurement is, essentially, the overarching or umbrella term within which purchasing can be found.

Steps in the Procurement Process

The process of purchasing these good and services is known as the [Procure-To-Pay Cycle](http://blog.procurify.com/2013/04/03/the-complete-procure-to-pay-cycle/). The entire Procure-To-Pay Cycle can be an involved process with numerous steps:

* Identification of Requirement
* Authorization of Purchase Request
* Approval of Purchase Request
* Procurement
* Identification of Suppliers
* Inquiries Receipt of the Quotation
* Negotiation
* Selection of the Vendor
* Purchase Order Acknowledgement
* Advance Shipment Notice
* Goods Receipt
* Invoice Recording
* 3 Way Match
* Payment to Supplier

Although this list is extensive, the nature of your specific business will determine the extent of the Procure-To-Pay cycle you use. For example, if your work in a large, multinational corporation, you may have to undergo a more involved “Identification of Requirement” phase. On the other hand, if you work in a small firm, that stage may be quick and simple. Understand the scope of your business and tailor as needed.

Using purchase orders (especially those generated by an [e-procurement](http://blog.procurify.com/2015/05/12/7-benefits-of-e-procurement/) solution such as [Procure](http://www.procurify.com/?utm_campaign=difference-procurement-purchasing)) is critical, regardless of the size of your organization. Don’t simply use your credits card(s) and save the receipts. Don’t rely on emails which are hard to track.

The Purchasing Process

Purchasing is a subset of procurement. Purchasing generally refers simply to buying goods or services. Purchasing often includes receiving and payment as well.

Within the overarching Procure-To-Pay Cycle, the steps specifically related to purchasing are:

* Purchase Order Acknowledgement
* Advance Shipment Notice
* Goods Receipt
* Invoice Recording
* 3 Way Match
* Payment to Supplier

Because purchasing is a process within the overarching procurement process, both procurement and purchasing are often used interchangeably. In the business world, the practice of using similar terminology in either conversation or printed materials is routine, although it is often confusing and should be avoided.

Procurement deals with the sourcing activities, negotiation and strategic selection of goods and services that are usually of importance to an organization. Purchasing is the process of how goods and services are ordered. Purchasing can usually be described as the transactional function of procurement for goods or services.  
**b) Explain ways in which procurement can ensure an organization obtains value for money (3 marks)**

Ideally, we might aim to achieve both of these objectives (improved output at reduced cost). by means such as the following.

* Efficient management of procurement activities to reduce transaction cost that will enable cost reduction
* Effective inventory management, to minimise acquiring and holding costs this also will help in cost reduction
* Effective contracts negotiation and management in order to reduce the cost of inputs
* Effective communication with user departments to enhance specifications, so that business needs are fulfilled more efficiently and at lower cost
* Selecting and managing suppliers, in order to improve the quality of inputs, with consequent improvement in the quality of outputs
* Working with key supply chain partners to eliminate wastes (non-value adding activities) wherever they are found in the supply process: an approach sometimes referred to as 'lean' supply.

**c) Differentiate between private and public procurement (2 marks)**

Private procurement is typically in FP (for-profit) organizations, while public procurement functions to support NFP’s (not-for-profit).

The divide of the sectors alone is enough to begin drawing conclusions about the motivation for procurement.

Private procurement has a centralized focus on driving revenue. This typically results in less sustainable methods of procurement; considering there is less need for a focus on social responsibility.

Within the public sector however, there is expectations that procurement will “address several issues beyond simple value for money or basic supply” ([Smith 2017](http://spendmatters.com/uk/differences-public-private-sector-procurement/)). Public procurement typically has a larger focus on adding social value to a supply chain.

Private companies procure in an effort to increase shareholder returns. There is a larger pressure on procurement professionals in the private sector to procure with a financially driven mind-set; increasing margins, driving profitability and enhancing competitiveness.

A large reasoning behind differing motivations comes from differing levels of required transparency.

Public sector procurement is required to be conducted in more transparent contexts. This comes in the form of regulations and legislation requiring public entities to report back to the government (and the people) with how money is being spent.

Private sector procurement can cover up their spend in many instances, and has a lesser presence of regulatory reporting. With this being said, private procurement has become an area for building more sustainable and responsible brand associations. Whether responsible business practices are being mandated and followed-up on, however, is harder to gauge in the private sector ([ufsca.edu](https://onlinempadegree.usfca.edu/news-resources/news/5-key-differences-between-organizations-in-the-public-and-private-sectors/)).

Public sector and private sector procurement organizations are designed to acquire goods and services. The main difference between these two types of organizations is the purpose for acquiring those goods and services. One is focused primarily on a social benefit, the other is profit centric.

Private sector procurement activities are for supporting the principal business objective of a company, which is to make a profit. This does not rule out the fact that private entities may also seek social benefit; however, it is not their primary business objective. In the public sector, the two main reasons for acquiring goods and services are: (i) for supporting government operations, and (ii) to provide public services.

Source of funding is another fundamental difference between private sector and public sector procurement. While private sector procurement is funded by owners or shareholders of the company, funds used in public procurement are primarily from taxes and/or grants and loans obtained by the government on behalf of the country.

Concerning governing rules, private sector procurement complies primarily with contract or commercial law with respect to the formation of contracts, but their methods of procurement are governed by company policy.

The entire public sector procurement process, however, is governed by the public procurement legal and institutional frameworks (procurement rules), and practitioners are obliged to adhere to them.

Private sector procurement is also governed by company policy. Such policies are not necessarily dictated by law, but by the objectives of the company.

A private company can engage in a contract with another private company or individual, and the procurement method is dictated entirely by the internal policies of the company.

Public sector procurement is governed by the public procurement rules. In most countries, there is a law that governs the procurement of goods, services and works with public funds. These rules set the basis for managing procurement and the various methods permitted under different circumstances.

Public procurement must also adhere to certain principles. The process should be open to public scrutiny, depending on the procurement method used, and any confidentiality agreement stemming from the particular procurement method used.

Sometimes, the procurement law is comprehensive, with high level of detail; sometimes it covers only the fundamentals, leaving the details for further development in procurement regulations, guidelines and manuals (institutional frameworks), which should expand on but not contravene the public procurement law.

With respect to oversight, the private sector procurement process is mostly closed to public scrutiny, Shareholders may, however, require reviews of the procurement process.

Public sector procurement, in contrast, is open to public scrutiny, and public procurement practitioners are accountable for their actions, and need to ensure public procurement is managed in accordance with the objectives, principles and procedures defined in the public procurement rules.

Public procurement management, requirement identification and budget allocation, procurement planning and strategy development, procurement method selection, solicitation documents preparation and advertisement, bid and proposal submission, evaluation and selection, and contract award to closeout, are all addressed in the procurement rules. Public procurement practitioners are not at liberty to use a procurement method not stipulated in the procurement rules or not identified for a specific type of procurement requirement.

Any deviation from public procurement rules requires justification and clearance from a designated approving authority, sometimes a Tender Board, before the action is carried out.

Under private sector procurement, procurement practitioners answer only to management, and are responsible for their actions; public sector procurement practitioners are public servants and are accountable for what they do or fail to do when managing public funds.

The ultimate aim of public sector procurement is to provide public services and support government operations at all levels within a country.

**d) Explain why it is important to have a purchasing process in an organization (4 marks)**

Historically, purchasing has played a key role in “getting the lowest possible price.” This was often at the expense of a positive relationship with the supplier and usually a trade-off with quality.

However, over time, the role of purchasing evolved into a cost-saving function in which supplier relationships and contracts were developed with cost-savings in mind.

These cost-savings often came through process improvements, product improvements, or supplier development efforts.

Today, purchasing is recognized as having an overwhelming impact on the bottom line of the organization.

It has a direct impact on the two forces that drive the bottom line: sales and costs. Purchasing is becoming a core competency of the firm, finding and developing suppliers and bringing in expertise that is highly valued by the organization.

Purchasing is generally responsible for spending more than 50 percent of all the revenues the firm receives as income from sales.

More money is often spent for purchases of materials and services than for any other expense, and the spend in services is rapidly increasing.

In 1998, for example, suppliers were involved in the product development process and actually helped by providing inputs into the design of the Honda Accord. These inputs were both material in nature and process-oriented.

The request for quote process (RFQ) is reduced significantly in this industry because suppliers are more aware of what is required, long before it is needed.

As you will begin to understand from the information presented in this book, the supply base is a source of innovative opportunities and the supply manager is trained to be aware of these supply market opportunities.

Having the appropriate supply base and relationships with the suppliers is like having thousands of additional people thinking of the next great idea or innovation.

There is a famous and highly publicized quote about suppliers and the supply base by Dave Nelson, who was an award-winning purchaser who worked at Honda, John Deere, and Delphi—he is considered a “guru” of supply chain.

Nelson said, “If you develop the right relationship with your supply base, you can have 10,000 additional brains thinking about ways to improve your product and generate cost-savings.”

There is a lot of power resting in the hands of supply managers, if they can harness the strength and the capabilities of the supply base.  
**e) Explain how warehousing enables an organization to reduce its material buying costs  
(2 marks)**

Many companies plan for and track workforce schedules and actuals through spread sheets, a manual process prone to errors.

This process does not generate an accurate, real-time view of tasks in the warehouse or allow management to identify inefficiencies.

**Communicate effectively and often;** clearly communicating to workers your organizational goals, key performance indicators, (KPIs), and the processes to achieve them is one key to effective warehousing operations.

**Standardize your processes** by reducing potential variation in areas such as unloading, accounts payable, shift scheduling, and facilities management. Standardization saves time and money and reduces errors. Remember: There is always a better way to do anything.

**Measure what matters** for [continuous improvement](http://cerasis.com/2015/11/12/data-in-logistics/) in your processes. If an outcome is not important to customers and shareholders, don’t waste time measuring it. One 3PL-managed distribution center for a major U.S. manufacturer adopted a work measurement program to gauge and report warehouse performance at the employee level.

**Determine what drives processes to ensure the proper causal connection between outcomes and enablers.** [Key performance indicators](http://cerasis.com/2015/10/23/3pl-kpis/) reflect the past; standardization and error proofing are the answer to productivity now.

**Use the five step approach** to understanding the “why” of your operations, not just the “how.” This approach: Define, Measure, Analyse, Improve, and Control reduces costly process variations. The backbone of Lean Six Sigma methodology, DMAIC ensures sustained, defect-free performance and highly competitive costs.

**Involve, align and empower your associates.** Listen to the Voice of the Employee (VoE): The people who do the work every day are process experts who know how to reduce or eliminate waste. Aligning your managers and staff to a company culture committed to inquiry, responsibility, partnership, and customer satisfaction can significantly impact warehouse productivity.

**Educate your leadership** to ask the right questions, gather necessary information, make decisions, and take appropriate corrective action. This is vital to improving processes, products, and services. Leadership should visit the shop floor often, and work together with their people to improve processes and solve problems.

**Create a strong training program** that incorporates cross-training. Break a job down and present the operation to new associates. Allow them to test their performance before releasing them to the process. Try having your employees “shadow” tenured employees to gain valuable hands-on experience.

**Incorporate the use of work output analysis** to achieve a steady fulfilment flow with standardized work instructions. By specifying the maximum cycle time allowed to produce a product to meet demand.

**Look at variation** to increase productivity. This is the heart of [Lean Six Sigma](http://cerasis.com/2013/10/21/what-is-lean-six-sigma/): reducing variation to make a process more stable and predictable. Find a significant measure that reflects your process, then reduce the variability of that process as much as possible.

**Have occasional team meetings** to review these goals and objectives. Let your employees speak freely. Successful organizations **take team building seriously.** Take your organization to a new level and improve productivity.

There is nothing wrong with **setting up internal competitive warehouse teams. Get everyone involved in warehouse cost savings.** Award the team that has the best idea: improved process or problem-solving. Meet monthly or quarterly to review these ideas, and award the winning team.

**Finding the right level of automation and systems;**ROI analysis could put automation into your planning for cost improvement. The wrong material handling equipment can be creating hidden lost time and inefficient product flow, impacting cost and customer service

Warehouse costs are a large percentage of overall logistics costs. Warehouse cost savings, like transportation costs savings, goes straight to the bottom line. We know there is a lot to focus on for better supply chain and logistics management and I hope this list empowers you to pursue the aggressive goals yourself and the organization have laid out.

**f) Discuss the working of bonded warehouses (3 marks)**

What is a bonded warehouse? The textbook definition is "a building or a custom-controlled warehouse where goods are kept for processing before delivery". These warehouses can be government-owned or privately owned by large enterprises. But what makes it different from a regular warehouse is that bonded goods are retained here until the customs duty is paid.

These bonded goods are only kept for a defined period of time, during which the duties and taxes should be paid in full. Otherwise, the shipment is confiscated and dealt with according to the laws of that country. Most of the time however, they dispose of these shipments.

**Benefits of using a bonded warehouse**

Companies use bonded warehouses to legally and safely deliver their products to customers. Bonded storage is a secure storage and is under customs laws. The bonded goods are well taken care of and documented. Exporters prefer bonded warehouse facility not just for security but for other benefits:

* No duty needs to be paid until the item is released for delivery to the buyer, giving full control of payment to the importer. And, if the goods go unsold, they can be exported without having to pay the duty at all, as VAT is only paid when you sell your products and not on re-exported goods from the bonded warehouse. Some businesses report saving 25% to 30% off taxes.
* Restricted items are allowed to be stored. These items can be safely stored in bonded storage until they need to be sent out.
* Facilities are equipped to handle different types of storage. Good bonded storage can store any kind of product for as long as needed. A good example would be for perishable food items - there are freezers, dry containers, and other temperature controlled rooms available.
* You receive a bond on your items. When you store bonded goods, the warehouse authority will give you a bond which ensures that you won’t face any monetary loss at the time of the release of the shipment after the payment of taxes, including VAT or GST.
* They offer additional logistics solutions. It's possible to have access to a complete logistics solution, as bonded warehouses are affiliated with freight forwarding companies who handle distribution, deliveries, and more.

**Alternatives to a bonded warehouse**

Although it is very safe and secure and has its own benefits, the bonded warehouses may have restrictions depending on the country it's located in.

For example, the country your warehouse is in may not have a reliable postal solution, or have access to established express couriers.

Also consider the current trade war between China and the US. With tariffs being imposed from both sides, those who manufacture and fulfil from China could be negatively impacted if they are importing their products directly to the US.

A good example of a free port is Hong Kong, which has many warehouse facilities and is considered one of the top shipping centres in the world. A fulfilment centre or warehouse in Hong Kong is good for you in the following scenarios:

* You want to save on duties and taxes. Hong Kong is very trade friendly in that there are no applicable import and sales taxes. Moreover, if you're shipping to the US, the Hong Kong Policy Act is your friend. According to this Act, the US cannot impose any tariffs on your products / shipments unless their value is over $800 USD.
* You want to ship globally with ease. If your manufacturer is based in Southern China, it makes sense to send your goods to Hong Kong for fulfilment. Why? Thanks to its location, 100 airlines service Hong Kong, with direct flights to 220 destinations (not to mention over 50 cities in Mainland China), allowing you to have access to more shipping solutions with faster delivery times.
* The warehouses are well established and connected. Overheads are less, allowing you to save more. Also, their shipping costs are lower compared to other overseas warehouses.

**g) Explain any four principles of materials handling (4 marks)**

Material handling is a systematic and scientific method of moving, packing and storing of material in appropriate and suitable location. It is critical for manufacturing organization to identify importance of material handling principle as the critical step in promoting the job improvement process. Manual material handling significantly increases health hazard for the workers in from lower back injuries.

**Principles of Material Handling**

Material handling principles are as follows:

* Orientation Principle:

It encourages study of all available system relationships before moving towards preliminary planning. The study includes looking at existing methods, problems, etc.

* Planning Principle:

It establishes a plan which includes basic requirements, desirable alternates and planning for contingency.

* Systems Principle:

It integrates handling and storage activities, which is cost effective into integrated system design.

* Standardization Principle:

It encourages standardization of handling methods and equipment.

Material handling operations are designed based upon principles as discussed above. Material handling equipment consists of cranes, conveyors and industrial trucks.  
**h) Explain how an Electronic Point of Sale System assists in inventory control (3 marks)**

Before we discuss specific POS systems that thrive in the area of inventory management, here are a few things you should be looking for:

* **Ease of Use:**Some inventory systems are incredibly in-depth, with the ability to store information on thousands of items. But that doesn’t do you a lot of good if the interface is clunky and you’re constantly struggling to remember how to get to exactly what you’re looking for. You could also burn valuable hours training every new employee on a difficult system. This carries over into the set-up process as well. Make sure that your system allows you to import items in bulk otherwise you’re in for hours of painstaking data entry.
* **Basic Features:**Seems obvious but it’s never a bad idea to do a quick run-through of what is actually included in a system’s inventory management and make sure that those features are offered with the plan you’ve selected and no in an advanced plan that are only available if you shell out more money. Most inventory systems feature things like real-time monitoring and low-stock alerts and, for the restaurant industry, raw ingredient tracking is virtually a must.
* **Easy Integration:**This is one of the benefits of an all-in-one system. If you’re using an outside inventory program, it may not sync up seamlessly with your POS or perhaps with your accounting software. Make sure that whatever inventory software you’re using will run smoothly with any potential add-ons that you may be using elsewhere with your POS system.
* **Multi-Store Functionality:**If your business is large enough to be operating out of more than one location, its common sense that you’ll want your inventory management to run fluidly between stores. Most good inventory software should have you covered here. Make sure that you can keep an eye on your inventory at all locations and check for features like the ability to set up transfers and delivery of stock from one location to the other.

**i) Discuss five importance of having a materials coding system in an organization (5 marks)**

Unique identification of the materials whether they are raw materials, work-in-process or finished goods is the first step towards a good materials management system

Without it, the control over inventory by rigorous exercises such as inventory techniques is not very effective.

Without it, confusion might prevail in the operational departments. Moreover, for a good quality control system a unique identification is a pre-requisite.

Many items in inventory such as pipes, rods, angles, electrical switches, cables, valves, similar equipment, spare parts and even nuts, bolts and such items in inventory are available under different names and codes thereby reducing the actual availability of the item for operational needs.

Prevention of duplication is one of the important benefits of a good materials coding system.

Needless to say, for proper stock taking a good identification is of immense help. Many cases have been observed in large corporations where the concerned people do not even know what materials have been lying in the inventory for a large duration of time.

These materials could easily be eliminated from the list, salvage value recovered and the storage space freed.

If followed it might produce results of proportions equivalent to that of a rigorous application of the inventory control principles with, perhaps much less effort.

What do we mean by coding? By this, we give a unique number to a particular item in the inventory.

For instance, 010237 might mean a specific item in inventory such as a particular kind of gasket, of a certain material, of a certain shape, and of certain dimensions.

Of course, each of these numbers or groups of numbers (within the total identification number) should convey some unique information.

For instance, the following numbers might be used to describe the first classification of materials in an inventory:

Codification as done above is called Codification by group classification where the identification is done by reserving a number of characters (spaces) for each ‘group’ of classification. In each group the relevant ‘details are sequentially numbered.

**QUESTION TWO**  
**a) The world has become a global village. Explain five challenges that a firm may face by being part of a global supply chain (5 marks)**

Along with the many benefits that come from sourcing outside the United States, such as low-cost manufacturing, several issues must be properly managed to ensure a successful supply chain. Finding a rock-bottom price in China or India is not the problem, but landing great costs while avoiding distance, timing, quality, and language problems can be challenging.

If you ignore or mishandle these risks, they can result in cost penalties and distracting inefficiencies. Identifying the risks up front, so you know what to look for, can be the key to success. The following six risks can easily have a negative impact on your business:

1. **Quality levels and defects.** Manufacturing processes aren't perfect, so the industry typically accepts a certain quality level for products. Complexity and variability are part of any production process, and unfamiliar sources might not adhere to accepted U.S. defect levels. Choosing a non-U.S.-based sourcing firm can open up questions and disputes about which party is liable for defect percentages that rise above normal.
2. **Time zones.** Some U.S. firms experience issues when dealing with companies on the other side of the country—and never mind the 13-hour time difference between the United States and Asia. Waking and working hours do not coincide, which can be a challenge when a pressing issue arises. Waiting one day to clarify a product question or process change can often simply be too long for companies that are trying to run nimble operations.
3. **Long-range logistics.** Purchasing items at a delivered price is easy, but the shipment can be delayed. Whether it is a factory hold-up or transit problem, ignoring the complexity of long-range logistics can be a risk.
4. **Accountability and compliance.** Companies should consider social compliance every time they look at global sourcing. They need to conduct due diligence about child labour practices, acceptable working conditions, forced labour, and fair compensation practices. Barring the hiring of local staff members, however, there isn't a sure-fire way to ensure social compliance from across the globe. Risk comes in the form of severe brand damage due to unfair or illegal practices that come to light.
5. **Delays.** To receive on-time product delivery, it is vital to have firm completion dates and shipping timeframes. An item that is globally sourced, however, is often just a piece of a bill of materials that must be on hand for product completion. Delays from a non-U.S. source can derail production and drive up related costs.
6. **Language barriers.** Global partners offer competitive pricing and efficiencies, but still often conduct day-to-day business in a different language. Managers will likely speak English, but their directions must be relayed to line staff, and your own words might be lost in translation. Errors are bound to happen when communications aren't translated and interpreted perfectly.

These six factors present mighty risks, but they are not insurmountable. Companies looking to take advantage of global sourcing opportunities can build their own teams located in the United States or abroad, or work with experienced partners to mitigate and remove these risks. The benefits of sourcing from outside the country can be great when handled properly.

**b) Discuss the three general aspects of a transport system (3 marks)**

Transport is the movement of people and/or goods from one geographical location to another. Such movement requires transport services, as companies need to be supplied with materials (or parts or semi-finished products) for production, people need to be carried to work, Transport is the movement of people and/or goods from one geographical location to another. Such movement requires transport services, as companies need to be supplied with materials (or parts or semi-finished products) for production, people need to be carried to work,

A conveyance system is defined as a transportation system which performs goods movement tasks through conveyance. Transport (conveyance) tasks, which are determined by customer needs, are characterized by the three major quantities (Piasecki 1973):

* Type and Volume of Cargoes to Be Carried,
* Cargo Movement Relation,
* Cargo Movement Deadline.

Passengers and freight are increasingly divergent activities as they reflect different transportation markets. In several modes and across many regions passenger and freight transport is being unbundled.

**a. Shipping**

It has already been mentioned that in the maritime sector passenger services have become separated from freight operations.

The exception being ferry services where the use of RORO ships on high frequency services adapt to the needs of both passenger and freight market segments.

Deep sea passenger travel is now dominated by cruise shipping which has no freight-handling capabilities, and bulk and general cargo ships rarely have an interest or the ability to transport passengers.

**b. Rail**

Most rail systems improved passenger and freight services. Where both segments are maintained the railways give priority to passengers, since rail persists as the dominant mode for inter-city transport in India, China and much of the developing world.

In Europe national rail systems have prioritized passenger service as a mean to expand regional mobility.

Significant investments have occurred in improving the comfort of trains and in passenger rail stations, but most notable have been the upgrading of track and equipment in order to achieve higher operational speeds.

Freight transport has tended to lose out because of the emphasis on passengers since such systems were optimized for passenger flows.

Because of their lower operational speeds, freight trains are frequently excluded from day-time slots, when passenger trains are most in demand.

Overnight journeys may not meet the needs of freight customers. This incompatibility is a factor in the loss of freight business by most rail systems still trying to operate both freight and passenger operations.

It is in North America where the separation between freight and passenger rail business is the most extensive.

The private railway companies could not compete against the automobile and airline industry for passenger traffic, and consequently withdrew from the passenger business in the 1970s.

They were left to operate a freight only system, which has generally been successful, especially with the introduction of intermodality.

The passenger business has been taken over by public agencies, AMTRAK in the US, and VIA Rail in Canada. Both are struggling to survive.

A major problem is that they have to lease track age from the freight railways, and thus slower freight trains have priority.

**c. Roads**

Freight and passenger vehicles still share the roads. The growth of freight traffic is increasing road congestion and in many cities concerns are being raised about the presence of trucks.

Already, restrictions are in place on truck dimensions and weights in certain parts of cities, and there are growing pressures to limiting truck access to non-daylight hours. Certain highways exclude truck traffic the parkways in the US for example.

These are examples of what is likely to become a growing trend; the need to separate truck from passenger vehicle traffic.

Facing chronic congestion around the access points to the port of Rotterdam and at the freight terminals at Schiphol airport, Dutch engineers have worked on feasibility studies of developing separate underground road networks for freight vehicles.

**d. Air transport**

Air transport is the mode where freight and passengers are the most integrated. First, they tend to share the same terminal facilities, although there is a specialization with some airports focusing on freight activity.

Yet, even here a divergence is being noted. The growth of all-freight airlines and the freight-only planes operated by some of the major carriers, such as Singapore Airlines, are heralding a trend.

The interests of the shippers, including the timing of the shipments and the destinations, are sometimes better served than in passenger aircraft.

The divergence between passengers and freight is also being accentuated by the growing importance of charter and “low-cost” carriers.

Their interest in freight is very limited, especially when their business is oriented towards tourism, since tourist destinations tend to be lean freight generating locations.

**c) The government of Kenya is currently keen to develop rail transport system in the country. Discuss the advantages and disadvantages of this mode of transport from a logistical point of view. (8 marks)**

1. Dependable:

The greatest advantage of the railway transport is that it is the most dependable mode of transport as it is the least affected by weather conditions such as rains, fog etc. compared to other modes of transport.

2. Better Organised:

The rail transport is better organised than any other form of transport. It has fixed routes and schedules. Its service is more certain, uniform and regular as compared to other modes of transport.

3. High Speed over Long Distances:

Its speed over long distances is more than any other mode of transport, except airways. Thus, it is the best choice for long distance traffic.

4. Suitable for Bulky and Heavy Goods:

Railway transport is economical, quicker and best suited for carrying heavy and bulky goods over long distances.

5. Cheaper Transport:

It is a cheaper mode of transport as compared to other modes of transport. Most of the working expenses of railways are in the nature of fixed costs. Every increase in the railway traffic is followed by a decrease in the average cost. Rail transport is economical in the use of labour also as one driver and one guard are sufficient to carry much more load than the motor transport.

6. Safety:

Railway is the safest form of transport. The chances of accidents and breakdowns of railways are minimum as compared to other modes of transport. Moreover, the traffic can be protected from the exposure to sun, rains, snow etc.

7. Larger Capacity:

The carrying capacity of the railways is extremely large. Moreover, its capacity is elastic which can easily be increased by adding more wagons.

8. Public Welfare:

It is the largest public undertaking in the country. Railways perform many public utility services. Their charges are based on ‘charge what the traffic can bear’ principle which helps the poor. In fact, it is national necessity.

9. Administrative Facilities of Government:

Railways provide administrative facilities to the Government. The defence forces and the public servants drive their mobility primarily from the railways.

10. Employment Opportunities:

The railways provide greater employment opportunities for both skilled and unskilled labour. Over 16 lakh persons are depending upon railways for their livelihood.

**Disadvantages:**

Although railway transport has many advantages, it suffers from certain serious limitations:

1. Huge Capital Outlay:

The railway requires is large investment of capital. The cost of construction, maintenance and overhead expenses are very high as compared to other modes of transport. Moreover, the investments are specific and immobile. In case the traffic is not sufficient, the investments may mean wastage of huge resources.

2. Lack of Flexibility:

Another disadvantage of railway transport is its inflexibility. Its routes and timings cannot be adjusted to individual requirements.

3. Lack of Door to Door Service:

Rail transport cannot provide door to door service as it is tied to a particular track. Intermediate loading or unloading involves greater cost, more wear and tear and wastage of time.

The time and cost of terminal operations are a great disadvantage of rail transport.

4. Monopoly:

As railways require huge capital outlay, they may give rise to monopolies and work against public interest at large. Even if controlled and managed by the government, lack of competition may breed inefficiency and high costs.

5. Unsuitable for Short Distance and Small Loads:

Railway transport is unsuitable and uneconomical for short distance and small traffic of goods.

6. Booking Formalities:

It involves much time and labour in booking and taking delivery of goods through railways as compared to motor transport.

7. No Rural Service:

Because of huge capital requirements and traffic, railways cannot be operated economically in rural areas. Thus, large rural areas have no railway service even today. This causes much inconvenience to the people living in rural areas.

8. Under-utilised Capacity:

The railway must have full load for its ideal and economic operation. As it has a very large carrying capacity, under-utilisation of its capacity, in most of the regions, is a great financial problem and loss to the economy.

9. Centralised Administration:

Being the public utility service railways have monopoly position and as such there is centralised administration. Local authorities fail to meet the personal requirements of the people as compared to roadways.

**d) Explain the advantages an organization would obtain by having its own "in-house" fleet rather than outsourcing transport service (4 marks)**

In-House Warehousing Benefits

When your business gains a significant number of customers, you might have to face the decision of whether to store and ship your products through your own warehouse or through a third-party warehouse fulfilment company.

There are pros and cons to each system, and they can make a significant impact on your business operations. Read on for a description of in-house versus outsourced warehouse management.

In-house warehousing

If you choose to continue managing your products in your own warehouse, you’ll be responsible for inventory, handling, storage, processes and tracking, among other duties. Keep these benefits and drawbacks of in-house warehousing in mind:

Control over your products: This is usually the biggest reason most businesses choose to manage their own inventory. You can personally make sure your products are taken care of, stored properly and handled carefully.

Save money: By deciding on in-house management, you’ll be saving the money you would’ve used to hire another warehousing company. Warehouse management software is also available to help you track inventory and customer orders, to ensure accuracy.

Be more in touch with customer needs: Having your products right in front of you allows you to ensure that inventory is stocked to meet customer demands and that items are being processed and shipped on time.

Provide necessary equipment: Because you’ll be working closely with your inventory, you can provide employees with the right handling equipment. For example, knowing the size and weight of boxes helps you know the correct forklifts and [fork extension](http://www.grainger.com/category/forklifts-and-forklift-attachments/material-handling/ecatalog/N-n41) sizes needed to safely move products around the warehouse.

One way to know the best choice for your company is to determine what your future business goals are. If you want to eventually be able to handle all products in-house, it’s best to start early while your business is still gaining momentum. On the other hand, if you want to alleviate the responsibilities of inventory management, outsourced warehousing makes sense for your needs.

**QUESTION FOUR**

**a) Explain five factors that affect an organization's decision on the number of stock holding points (5 marks)**

This is the system used to ensure that the business always has sufficient stock available to meet customer requirements.

Re-Order Levels

This is **the minimum amount of stock that a business will hold before it re-orders from its suppliers**. The re-order level will vary from business to business and from industry to industry.

For example*,* a supermarket is likely to have a higher re-order level than a car dealer, since in the time taken to receive its supplies; a supermarket is likely to sell far more stock than a car dealer.

Re-Order Quantities

The re-order quantity is **the amount of stock and raw materials that a business orders from its suppliers each time it reaches its re-order level**. This again will vary from business to business and from industry to industry.

For example*,* a business selling fast-moving consumer goods (e.g. chocolate bars or baked beans) is likely to order a far larger amount of stock from its suppliers than a manufacturer of goods with a slower stock turnover (e.g. televisions or washing machines).

**There are several factors which will influence the amount of stock which a business orders, including:**

1. Lead times.
2. The expected level of customer demand.
3. The costs of stockholding.
4. The type of stock, whether it is perishable or durable.

Buffer Stocks

This is the minimum stock level which will be held by a business to meet any unexpected occurrences.

For example, A sudden large order from a customer, deliveries of raw materials not arriving on time, or computer re-ordering systems breaking down.

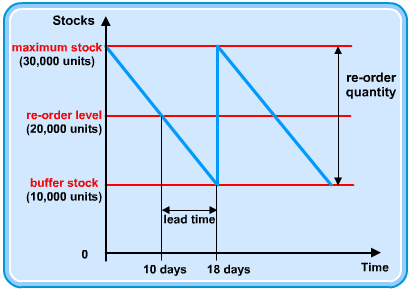
Lead Times

This is the amount of time that elapses between a business placing an order with a supplier for more stock or raw materials, and the delivery of the goods to the business.

The business will wish the lead-time to be as short as possible, so that it can meet its customer orders and minimise the time between paying for the stock and receiving the revenue from the customer.

However, this may not happen due to a number of factors, such as delays in the supplier receiving the order, or the breakdown of the suppliers' Lorries delivering the stock to the business.

**An effective stock control system, combining the above four elements, can be seen below:**



**From this diagram, it can be seen that:**

1. The re-order level (i.e. the amount of stock remaining when an order is placed) is 20,000 units.
2. The re-order quantity (i.e. the amount of stock ordered from a supplier) is 20,000 units.
3. The buffer stock (i.e. the minimum stock holding) is 10,000 units.
4. The lead-time (i.e. the time delay between placing an order for stock and receiving it) is 8 days.

Stock Rotation

Many businesses use a stock rotation system. This is the process of ensuring that the older batches of stock are used first rather than the newer batches, in order to avoid the possibility that the older stocks will become obsolete or go past their sell-by-date.

This is often referred to as a **First in First out (F.I.F.O)** system, to encourage the older batches of stock to be used first, therefore avoiding the possibility that the older stock will be left in a warehouse, possibly becoming unusable.

Link to Information Technology (C.A.D/C.A.M)

The production process and stock control systems in a business can be assisted by the use of **Information Technology (I.T)**.

Sophisticated software packages can enable a business to keep detailed and accurate records on its purchases of stock and its sales to customers, using such systems as **Electronic Point of Sale (E.P.O.S)**.

This records every transaction made by a business and can, therefore, enable it to monitor its stock levels and sales of products to a 100% level of accuracy. This system can automatically re-order stock when numbers fall to a certain level in the warehouse, as well as monitoring the quantity of each component that is used in the production process.

This enables a tight control to be kept on both costs and waste, as well as recording the amount of revenue received from customers and any outstanding customer debts.

**Computer Aided Design (C.A.D)** is the use of sophisticated computer software to design three-dimensional images of products quickly and relatively cheaply.

**Computer Aided Manufacturing (CAM)** is the use of computers and software for a wide variety of production tasks, including automated production lines and stock control systems.

**b) Discuss five factors affecting the kind of packaging that an organization opts for its  
products (5 marks)**

Product packaging is big business. The value of packaging produced in Australia is $10-$10.5 billion, with the food and beverage sector using 65-70% of all Australian-produced packaging.

Packaging is itself a product; it introduces your product, protects it, displays it, preserves it, and more. And just like your product, the packaging is an item that needs to be manufactured and assembled.

There are three categories of packaging:

* Primary: packaging the consumer takes home.
* Secondary: anything used to group items together such as boxes, trays, film wrap; in other words, the packaging around your packaging.
* Tertiary: packaging used for transporting and warehousing, such as cartons and pallets.

Choosing the right product packaging, therefore, can be crucial to your product’s success it ensures your product arrives safely onto store shelves and into customers’ shopping bags.

Here are 4 essential factors to consider when designing your product packaging

1. MANUFACTURING

Packaging materials are an important factor. Paper/board is the largest single packaging material used in Australia, with about 36% of the total Australian packaging market, followed by plastics (30%), metal (20%), glass (10%) and other materials (4%).

Choosing the right material depends on your product and processes. Your packaging choice needs to flexible enough to deal with product promotions, SKU changes, new products and variants. There have been many new developments in lighter weight, higher performing packaging materials, which can minimise the storage requirements and transport costs while maximising the product’s value and appeal. Assess any modifications needed to your production line process and equipment.

Top things to consider:

* Flexibility
* Stacking and transportation
* Capability and processes

1. BUSINESS

Sustainability is a growing concern for businesses today. Research shows [60% of packaging](http://www.thefactsabout.co.uk/packaging/content/41) is recovered and recycled. However, manufacturers need to achieve the right balance between environmental and commercial demands. If you are reducing packaging to meet environmental goals, what does this mean for product security? And conversely, if you need to invest in more packaging for product security, such as tamper evident devices, how will this impact your sustainability goals?

Another business consideration is cost. There are many ways to drive down packaging costs, but what will this mean for your brand image? Plastic bottles may be cheaper, but if you want the packaging to reflect the high quality of the product, glass may be the smarter option.

Top things to consider:

* Cost effective
* Sustainable
* Recyclable
* Flexible
* Legal

When packaging is designed and constructed properly, it enables products to move smoothly through the supply chain. Download this free whitepaper to find out how.

1. SUPPLY CHAIN

How your product will be safely stored and distributed is as important as the design of the product itself. That’s where your supply chain comes in.

First, consider the environment. In Australia, packaging needs to withstand crushing extremes of temperature, moisture and vibration, dust and other conditions.

Packaging also has a role to play in keeping the whole supply chain moving efficiently. In Australia, an estimated 50-60% of supermarket sales are perishable items, with [5-7% lost due to poor inventory management](http://www-03.ibm.com/systems/data/flash/retail/resources/foodwaste_planetretail.pdf). Packaging with the right labelling and coding enables the seamless movement of your product from your plant to the shelf. It also helps better and faster turnaround of stock, improved stock accuracy and improved tracking of product recalls and withdrawals – all of which reduces wastage.

As part of this, it’s important to be aware of the information requirements on the label at each packaging level. For example, what does the retailer require you to put on the [logistics label](http://www.matthews.com.au/solutions/traceability/shipper-coding-and-labelling/shipper-coding-and-labelling)? This can mean the difference between getting your product onto shelves and dealing with costly returns and reworks.

Top things to consider:

* Resiliency
* Compliance
* Shelf life
* Labelling & coding
* Retailer/customer needs
* Transportation requirements

1. BRAND AND MARKETING

We can’t underestimate the importance of “shelf appeal”. With a staggering 70% of all purchasing decisions made in-store, your packaging is often the first thing to attract buyers to your product on the shelf. It’s also a vehicle for information about your product, telling your prospective customer what the product is about.

If you need a reminder of how important packaging is, just look at the impact of plain packaging laws for cigarettes – this has resulted in the biggest smoking decline Australia has seen in 20 years.

However, [only one in five consumers](http://www.inc.com/joshua-conran/why-your-product-s-packaging-is-as-important-as-the-product-itself.html) is satisfied with packaging today. So it’s worth spending time and effort on getting this right. Consumers expect convenience, easy opening (but tamper proof), respect for the environment and attractive – yet still functional.

Product packaging is considered to be an important indicator of quality, and these days it needs to satisfy consumers throughout the product lifecycle to build brand loyalty and increase the likelihood of repeat purchase.

Top things to consider:

* Shelf readiness
* Design consistency
* Informative labelling/coding
* User friendliness
* Brand representation
* Customer needs

When you’re designing packaging, it’s not enough to look at it from one point of view. From a consumer perspective, consider how your packaging can add value to a product and deliver an experience. How will it help your brand connect with customers to build loyalty and sales?

With your business hat on, think about how well the packaging will drive your business goals. How can the packaging process be optimised? Don’t just look at packaging now; consider the future direction and trends.

There are continuous innovations in packaging that meet both sets of requirements. Plastic liquid pouches, for example, can increase shelf-life, reduce carbon footprint and are cheaper and easier to transport, while also being attractive and easy to use for the consumer. (Stay updated with the latest packaging trends and innovations on our [blog](https://blog.matthews.com.au/).)  
**c) With the aid of examples, differentiate between public procurement and private   
procurement**

As public servants, procurement practitioners, and others involved in the public procurement process, are accountable and exposed to sanctions as a remedy for any behaviour that contravenes the public procurement rules. You also have an obligation to report and/or answer to a designated oversight entity, and the public, on the consequences of your actions and decisions.

“I see the main difference being the recognised value and strategic benefits that procurement can bring to the organisation; in private, it is seen as integral to the organisation, however in public its merely routine /operational / transactional...almost a means to an end”

“Private sector is more flexible and open to innovations; they are profit and people driven. Public sector is highly regulated and sometime can be seen as inflexible.”

“Procurement in the public sector (local government) is mechanically driven to meet procedures/regulations and often interfered with politically. Risk of challenge is not seen as a serious concern.”

“Because of the Public Contracts Regulations most of the public sector is too risk averse to procure effectively”

“One significant difference is that the public sector seems frightened to talk to suppliers, relying too much on the use of formal processes & arm’s length negotiations.”

“Public sector procurement is too rules based (for very understandable reasons) to allow for much innovative procurement and to take advantage of shifts in the market.”

Others believe one of the main differences lies within the skills of each sector.

“The profession is under skilled and complacent. We need to recruit young professionals with university degrees, give them massive drinks from fire hoses in training, and manage their careers with balanced assignments in numerous ‘Specialties’.”

“The general perception is if you work in the public sector you are lazy with poor skills and wouldn't last five minutes in the private sector where the real work gets done.”

“For all the grandstanding announcements of this government's focus on driving up standards the standard of basic skills has deteriorated over the few years, an issue that is not truly addressed”

“The standard of central government procurement delivery skills is lower than any time I can remember over the past 25 years”

“Whilst the private sector inevitably has more commercial focus, the public sector often underestimates its own skills, particularly given the very different legislative environment that we work within.“

Some believe this is down to lack of communication and leadership skills.

“Procurement lacks leadership’s skills and teeth, is too easily told what to do and does not have sufficient support at Exec Director Level. In the commercial sector you have the full range of capability from well run, well resourced, appropriately governed procurement units running efficiently and effectively whilst maintaining a suitably risk controlled environment.”

“My department (Public sector) is so huge that communication from senior levels often seems diluted or ineffective and doesn't drive performance or change among the staff delivering procurement.”

Others believe it’s down to the Public sector having to take much more into account when going through the procurement process.

“Public sector procurers have to put up with more - adverse headlines, constant government interference, competing priorities (aggregation for savings v disaggregation for SME involvement), more legal uncertainty, the constant pressure of challenges etc.”

“Public sector procurement has to juggle so many more objectives, outcomes and stakeholders than the private sector than just looking to provide an improved service or margin. It is also still seen as a functional service and therefore under-resourced and not seen as a key player in delivering corporate objectives”

“Propriety, transparency and compliance place greater demands on public sector people and processes.”

Moving away from the more popular opinions, a few of our survey participants made some interesting opinions about what differences they think lie between the private and public sectors in procurement, including:

“The profession must be larger: Acquisition. Not just purchasing or procurement. CIPS must move up the food chain and produce acquisition professionals who can operate equally well in public or private sector. They really are not that different.”

“The differences are always down to the quality of procurement leadership and the level of top level support the function attracts”

“My concern is that we are experiencing too much central control at the moment and this could leave a a pool of talent on the fringes being neglected and and forgotten.”

“Biggest difference I have seen to date has been the value the organisations place on procurement - public sector pretty much still sees procurement as a means to place orders and have goods delivered - they do not understand the potential value add at this time and look to procurement to just make baseline savings”

What do you think are the differences, if any, between procurement in the private and public sectors? We’d love to hear your opinions!

**d) Stock control is one of the main sub-functions of the procurement and supply function.  
Highlight five activities involved in this sub-function (5 marks)**Although small-business inventories are less extensive than those of larger businesses, the inventory activities each performs are often quite similar.

Warehouse organization, receiving, storage and control activities are just as important in a small business as in a large corporation.

An activities list describing the wide variety of tasks inventory personnel routinely complete can be helpful in creating job descriptions, responsibilities assignments and annual performance reviews.

**Warehouse Organization**

A small-business warehouse might not be a warehouse at all, but rather a backroom or other location containing a variety of shelves, boxes and bins.

How the area is organized can have a significant impact on operational efficiency and employee productivity, making good organization and a warehouse floor plan two essential inventory activities.

Organization activities include procedures for identifying and labelling locations for storing specific items on a general floor plan, as well as identifying and labelling storage shelves and bins for specific inventory items.

**Receiving Activities**

Checking orders for completeness, signing delivery receipts and accepting inventory deliveries are all considered receiving activities. In total, receiving activities set the stage for effectively managing the flow of inventory items.

Order-checking activities verify the quality of items and ensure the items on the order are items the business received.

Signing transfers responsibility for the order to the business, at which point the order can be officially accepted and transferred from the delivery truck to the warehouse staging area.

**Storage Activities**

Inventory storage activities follow the inventory costing method -- most often either “last in, first out” or “first in, first out” chosen by the business owner.

While the needs of the business determine which costing method is used, activities for either include storing items in their proper location and turning them so their labels and expiration dates, if present, are visible and can be easily read.

Storage activities can also include adjusting or inspecting temperature settings in freezers or coolers for frozen or perishable items.

**Security Activities**

Security activities are essential to good inventory management and control. Security activities are mainly established to deter or detect inventory discrepancies due to employee or customer theft.

Because of this, the business owner or inventory manager is most often in charge of creating security policies and completing security activities.

Activities include an annual physical inventory count and random, partial inventory counts at various times throughout the year. Activities can also include reviewing video surveillance footage and checking sign-in and sign-out logs. Security activities can also include checking employees as they leave the building.

This activity, however, is most often only undertaken if or when the business feels it’s necessary, and a written security policy should include a clause requiring employees to submit to searches and another giving employees a specific right to refuse.

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