



Operational Level
E1 - Enterprise Operations
November 2012
Examiner's Answers

Note: Some of the answers that follow are fuller and more comprehensive than would be expected from a well-prepared candidate. They have been written in this way to aid teaching, study and revision for tutors and candidates alike.

These Examiner's answers should be reviewed alongside the question paper for this examination which is now available on the CIMA website at www.cimaglobal.com/e1papers

The Post Exam Guide for this examination, which includes the marking guide for each question, will be published on the CIMA website by early February at www.cimaglobal.com/e1PEGS

SECTION A

Answer to Question One

Rationale

Sub-questions 1.1. to 1.10 test candidates' knowledge of a wide variety of topics across all syllabus areas through the use of objective test questions (OTQs) in a conventional multiple choice format.

- 1.1 C
- 1.2 A
- 1.3 D
- 1.4 D
- 1.5 D
- 1.6 D
- 1.7 A
- 1.8 C
- 1.9 A
- 1.10 A

SECTION B

Answer to Question Two

Requirement (a)

Rationale
This question examines learning outcome C2(b) 'explain process design'.
Suggested approach
<ul style="list-style-type: none">• Describe process mapping• Identify five benefits• Briefly describe each in turn

Process mapping involves constructing a flowchart representation indicating processes that shows how a product or transaction is processed and the flows of information or products across supply chains and networks. Some benefits are given below:

Management understanding

Allows a better understanding of the basic processes that are undertaken, so providing management with a convenient overview demonstrating responsibilities and key stages in the supply chain.

Role understanding

Allows workers to understand what their job is and how their work fits into the whole process (and therefore the importance of undertaking their role effectively). Process mapping also allows consideration of role reallocation.

Standardisation

Highlights where opportunities exist to standardise processes and strengthen practices through simple depiction.

Highlights inefficiencies

Visually highlights areas where inefficiencies are present through analysis of queues, value and location, so pinpointing areas of waste. This provides an agenda to tackle duplication of effort, the requirement to complete unnecessary paperwork, and misdirected queries that hold up production, etc.

Supports corporate initiatives

Mapping can be used as a tool as part of a corporate initiative such as customer satisfaction improvement programmes, lean operations, business process re-engineering, etc.

(Other factors might also be included such as acting as a trigger for critical examination, corrective action, improved processes and organisational change, etc.)

Requirement (b)

Rationale
This question examines learning outcome E2(e) <i>'prepare an HR plan appropriate to a team'</i> .
Suggested approach
<ul style="list-style-type: none">• Identify five benefits• Briefly elaborate on each in turn

In order to determine an organisation's human resourcing need, certain factors need to be considered, some of which are given below:

Future Operations/demand

Future planned levels of organisational activity and operations. This might be by reference to other functional strategies and might be expressed as (for instance) output or sales projections.

IT and systems to be used to improve productivity

Likely future methods of operating and technology used, particularly where it reduces a need for staffing levels.

Corporate initiatives

The organisation's corporate strategy and its desire to (for instance) offshore and/or outsource, introduce quality control measures, employ more flexible employment models, etc.

Historic trends of capacity

Past levels of staff retention, employee turnover, leave of absence, overtime working, etc. Also projections of numbers of staff retiring based on age profiles of the existing workforce and historic trends.

Potential use of contractors, etc.

Current outsourcing options commercially available for some non-core activities and the likely reduction in staffing as a result.

Other factors might be reasonably identified such as demand for this skill compared to current capacity, HR developments in similar or competitor organisations, the likely effectiveness of HR and other measures e.g. to reduce staff turnover and to enhance productivity trends, etc., likely external influences such as government policies (e.g. legislation regarding employment law such as maximum hourly weekly working week, etc.).

Requirement (c)

Rationale
This question examines learning outcome B1(c) <i>'discuss the transformation of organisations through technology'</i> .
Suggested approach
<ul style="list-style-type: none">• Identify the reasons for the growth of business-to-consumer (B2C) trading• Briefly explain each in turn

There a number of reasons for the growth of business-to-consumer (B2C) trading (which has been mainly online trading) including:

Adoption

The adoption and uptake of the World Wide Web has led to a growth in potential for online trading and an exploitation of B2C trading.

Platform availability

The cost of personal and domestic computing has fallen dramatically since first being introduced and this has led to widespread ownership and a consequent ability to buy directly from businesses.

Payment security

The development of secure transaction and payments systems has given customers confidence to trade online.

Expanded marketplace

The development and popularity of search engines have offered new markets to businesses. Conversely a wider choice of suppliers has opened up to buyers beyond the regular high street retail outlets.

Reduced value chains and make cost savings

Sophisticated system developments have enabled streamlined value chains that have reduced the number of intermediaries and their associated costs. Savings can be passed on to customers reducing costs and so encouraging B2C trading.

Other factors might be reasonably identified such as global transport availability whereby low cost and fast air transport assisting B2C trading over a broader market place, etc.

Requirement (d)

Rationale

This question examines learning outcome B1(b) '*discuss the reasons for organisations' increased dependence on information systems*'.

Suggested approach

- Identify relevant systems and technologies
- Describe the ways in which the firm might use each

A furniture making firm could transform its manufacturing operations through the use IS and IT by adopting a number of different systems some of which are indicated below:

Computer aided design (CAD)

CAD can improve designs and so reduce the amount of raw materials used such as timber and reduce the number of hours involved in assembly.

Computer aided manufacturing (CAM)

CAM can reduce the number of human labour hours involved in manufacture, assembly and packing through efficient manufacturing processes. (The use of assembly robots could increase productivity further).

Material Requirement Planning (MRP) and Manufacturing Resource Planning (MRP II)

Computerised systems, such as MRP, for planning the requirement for raw materials, work-in-progress and finished items can lead to improved forecasting, flexibility and the avoidance of production bottlenecks. MRP II represents a more complete system including **all** resources of a manufacturing company to balance supply and demand.

Improved stock control

Sophisticated inventory systems and records can help safeguard against 'stock outs' and expensive delays in the supply of raw materials (as well as allowing for less stock holding and staff handling).

Electronic Data Interchange (EDI)

Management of supplier relations can be improved through the use of common systems and Electronic Data Interchange (EDI). The impact could be a speeding up of deliveries of timber and other raw materials so improving the potential of lead times and stock holding.

Other factors might be reasonably identified such as ERP, integration with HR and Marketing systems.

Requirement (e)

Rationale

This question examines learning outcome D2(b) *'apply tools for each area of the marketing mix'*.

Suggested approach

- Describe a variable pricing policy
- Provide several purposeful examples

Variable pricing involves adjusting prices to increase demand in off-peak periods in the hope of stimulating demand and generating revenue. It is based upon the idea of marginal costing recognising that fixed costs also have to be covered in off-peak times and any contribution is acceptable as long as variable costs are covered. (Potential variable pricing could also include charging a premium price during peak periods in order to discourage demand but this is not such a common practice).

Examples of variable pricing include:

- off peak rail travel
- matinee (afternoon) prices for movie theatres;
- out of holiday periods (off-season) rates for hotels;
- weekend rates for telephone services;
- mid-week rates for hotel bookings;
- out of season sporting equipment sales;
- bar 'happy hour' drinks pricing;
- airline bookings made very near the date and time of the flight.

Requirement (f)

Rationale

This question examines learning outcome B2(a) *'discuss ways for overcoming problems in information system implementation'*.

Suggested approach

- Identify plausible reasons
- Briefly explain each in turn

Various reasons might help explain why a department might continue to use manual records rather than a new computer system. Some are listed below:

Resistance to change

There may be individual, group or cultural resistance to the change brought about by the new computer system. The reasons for such resistance may be because of individuals' lack confidence to cope with the new system or a feeling that jobs are threatened by the new technology, etc.

Reliability of the new systems

The department might lack confidence in the new system and may continue to use manual records believing that these are more efficient or reliable. Fears of computer faults, internet failures and insufficient controls can undermine confidence in the new system.

Ineffective management

There may have been failings of management either in the department itself or in terms of project management that has led to inadequate, incomplete, or a total absence of communication of system benefits, training in the new system and support, etc.

Complexity of new system

The organisational system may be unduly complex for the department's requirements and the need to implement it may be seen as cumbersome and a distraction from 'business as normal'.

Efficiency of manual system

The existing system may be efficient and may deliver the department's needs so there is no incentive for changing to the new system.

SECTION C

Answer to Question Three

Rationale

Requirement (a) examines learning outcome A2(d) '*discuss the nature of regulation and its impact on the firm*'. Requirement (b) examines learning outcome D1(d) '*explain the social context of marketing behaviour*'. Requirement (c) examines learning outcome A2(a) '*explain the principles and purpose of corporate social responsibility and principles of good corporate governance in an international context*'.

Suggested approach

(a)

- Identify and explain the key government decisions to be made
- Identify the main options available both direct and indirect
- Discuss each factor in turn with reference to the scenario

(b)

- Identify relevant marketing techniques and thinking
- Describe each in turn in terms of the scenario

(c)

- Describe Corporate Social Responsibility (CSR) and ethical issues in marketing
- Briefly discuss the activities of the companies operating within Changeland within this context

Requirement (a)

When establishing a suitable tax regime there is, in the first place, a need to decide upon certain broad policy decisions.

Overall tax requirement

Fiscal policy relates to the level of taxation and spending that a government decides upon. What is known from the scenario is that Changeland's newly elected Government has pledged to improve housing, healthcare and levels of education so these represent significant commitments to spending. These commitments need to be costed in order to determine the overall level of taxation and revenue that must be raised.

Overall taxation policies

Once the revenue requirement is calculated, overall taxation policies need to be determined. The Government has promised a 'fair' system of taxation, but fairness is inevitably based upon subjective judgements. There are a number of actors that the government needs to consider when deciding upon an overall taxation policy.

One is the **balance of tax liability between individuals and businesses**. The Government will also wish to encourage certain industries (e.g. based upon the scenario housing, healthcare and education). For these particular industries it may introduce **tax breaks and concessions** to encourage continued investment. In terms of personal taxation the Government must consider a number of issues including the **income below which no tax is paid** by individuals, (so recognising the need to protect the low waged).

Direct and indirect taxation

The previous military dictatorship is said to have used 'corrupt means' of raising Government revenue. The newly elected Government has promised a fair system of taxation, and clearly revenue needs to be raised to deliver improved housing, healthcare and education. The two main alternatives for the Government involve levying a tax directly on income and indirect taxation levied on expenditure. The

balance of revenues raised between these alternatives is a matter of political judgement. Too much income tax might act as a disincentive to work or make profits. Additionally, it is relatively expensive for the Government to collect tax by this means.

Indirect taxation means that effectively the cost of an item is inflated to take account of the tax applied. Normally this takes the form of a percentage of revenue collected. The tax element is paid to the Government by the sellers of those products. A problem with this form of tax (also known as consumption tax) is that it is regressive. The tax makes living costs more expensive. Those with the lowest incomes will be most affected by the burden of taxation as they have no option but to spend a large proportion of their income on living costs. (The cost of trading will also be more expensive for businesses as they need to administer the system of revenue collection and then payment to the Government). Indirect tax may also help drive up inflation in the country.

Once these decisions are made, the choice of which specific forms of taxation to be applied will need to be determined. A number of distinct options exist:

Direct: individual income tax

A further political consideration for the Government is that if it does choose to use direct taxation there needs to be a 'fair' balance between individuals and businesses. The most common form of direct personal taxation is income tax, where normally the employer deducts a percentage of earned income from wages and salaries and pays it over to the Government. By raising too great a sum, the incentive to work might be lost, too little a sum and revenue would need to be raised from other sources.

Direct: business tax

The Government will have to be careful that it does not discourage enterprise and consequent employment opportunities by charging too great a level of corporation tax. Obviously businesses will consider local conditions more favourably if there is a low level of corporate tax. If businesses feel taxes are too high they may decide to relocate to a country with lower tax regimes.

Direct: other forms of tax

Beyond income tax and corporate (business) tax other forms of direct taxation might be considered by the Government. For instance, a tax on individual unearned income such as a tax on dividends gained from share holding, bank interest or on inheritance, etc. The Government will need to assess the feasibility of these taxes including their fairness and potential for raising revenue.

Indirect: general

In terms of a general tax on the purchase of goods and services, the most straightforward method would be to levy a flat rate percentage on goods and services (within the UK this is known as value added tax (VAT)). One of the advantages of this type of tax is that revenues are collected from fewer sources (there are fewer vendors in most economies than there are earners). The Government may consider it unfair to apply this general tax where it impacts adversely on vulnerable groups (such as the poor, sick or elderly) and may decide to exclude the tax on (for instance) rent, electricity and food, etc.

Indirect: specific

Indirect taxation on certain specific items is, in the case of Changeland, a distinct option. The Government is concerned by the impact and uptake of certain products. At the same time it has pledged to improve housing, healthcare and levels of education. A heavy tax on these "undesirable" items might be seen as a way of progressing Government policy, discouraging excess consumption and raising revenue which can be redirected towards the priority areas the Government has pledged to improve.

Import duties levied on foreign goods or services

Since the revolution, several large multinational companies have aggressively introduced their products into Changeland. This implies that their activities have either been restricted or banned in the past. It is unclear whether the Government favours free trade with no import barriers or whether it wishes to engage in protectionism (trying to protect the local market by restricting imports). Traditionally, protectionism meant the imposition of taxation on imported goods, much the same as a purchase tax. This would have the effect of making such goods more expensive than locally

produced goods, may discourage their purchase. Alternatively, where these more expensive imported goods continue to be purchased the tax would continue as a source of revenue.

Other factors might be reasonably identified such as cost of administration and policing, a scheme of penalties will also be needed for tax evasion and these will need to be publicised, etc.

Requirement (b)

Indisputably, marketing techniques and thinking can influence individual buying habits and consumption patterns. These techniques are used extensively within the private sector but increasingly their use is being seen as having value in the public sector. Marketing could be used by Changeland's Government to try to shape consumers' buying behaviour in a way that it sees as more desirable.

Concentrate on customer benefits

The same principles adopted by private sector companies of understanding the consumer and strategically building relationships based on emotional as well as rational benefits can be applied by the Government. Social marketing focuses on human behaviour in order to understand the reasons for lifestyle decisions such as behaviour that affects an individual's health.

Customer orientation

The Government could develop a strong customer orientation with importance attached to understanding the customer, the things that shape attitudes and beliefs, along with the social context in which they live and work. It may be that the population has, in the past, been denied these products completely and this might be impacting upon current consumption patterns. Alternatively consumers may believe that their excessive consumption will not harm either themselves or society as a whole. This is something that the Government must challenge with detail of days lost through excess consumption, etc.

Using a mix of approaches

A fundamental marketing technique is known as the 'marketing mix', a term used to explain the range of marketing decisions and elements that must be mixed to achieve maximum impact. The apportionment of effort, the precise combination, and the integration of all of the elements to achieve organisational objectives represent an organisation's own marketing programme or 'mix'. Using this thinking the Government should achieve a mix of different methods to achieve particular behavioural goals.

Engage in social marketing

The new Government can use social marketing to help achieve its policies. Social marketing involves the application of commercial marketing techniques and thinking to the solution of non-commercial social and health problems, such as high levels of both tobacco and alcohol consumption. According to Lazer and Kelly, social marketing is also concerned with the analysis of the social consequences of marketing policies, decisions and activities. Social marketing recognises that although businesses may bring many benefits to both the economy and society generally, it can also have a harmful impact on both individual and society. Tobacco, for instance, has been proven to damage the health of long term users and passive smoking can affect others health. Social marketing's potential is to provide realistic appraisals and identify workable solutions.

Promotion of merit goods

Merit goods are commodities that an individual or society think they should have on the basis that it is 'good' for them. Merit goods are often provided by a government 'free at the point of use' and then financed through general taxation (e.g. in the UK access to health care through the National Health Service). Changeland's Government has pledged to improve housing, healthcare and levels of education (it is unclear whether these will be provided directly by the Government or whether private sector providers will be encouraged and subsidised). Once in place, marketing communication and promotional techniques can encourage the uptake of healthcare and preventative medicine. Through the systematic application of these marketing concepts and techniques the population will become more health conscious and better educated and so will be able to contribute more to Changeland's economy, so benefiting society more widely.

Discouragement of demerit goods

Demerit goods are the opposite of merit goods and negative consequences for society as a whole can arise from their consumption. It is human behaviour that causes many of society's problems (e.g. road traffic accidents, unwanted pregnancies, etc.). Advertising campaigns sponsored by the Government may help achieve specific behavioural goals.

Adoption of the 'competition' concept

The Government might adopt the 'competition' concept, namely understanding factors that impact on people and that compete for their attention and time. This might involve an investment in opportunities to engage in recreational sport to enhance health.

Interventions into the marketing mix of producers of harmful goods

Kotler defines the marketing mix as: '... the set of controllable variables and their levels that the firm uses to influence the target market.' It appears that producers of potentially harmful goods have been successful in getting an effective blend and have started building sales as a result. The dimensions of the basic marketing mix are more commonly known as the Four Ps: Product, Price, Promotion and Place (or distribution). The Government, whilst not wishing to ban sales, might, by understanding the marketing mix, intervene into some or all of these variables to curtail consumption.

- **Adjusting the product mix.** The product mix includes in its features, quality, design, brand name, packaging and range. One intervention might be to the packaging by requiring sales of undesirable products in plain rather than attractive packaging or alternatively requiring products to carry government health warnings.
- **Adjusting the price mix.** The price mix includes price levels and discounts, etc. The Government could either impose heavy taxes on these products or specify a minimum sales price.
- **Adjusting the promotion mix.** Promotion includes advertising, publicity and sales promotion. One possibility for the Government is banning the advertising of these undesirable products completely in Changeland.
- **Adjusting the place mix.** Place includes distribution channels, coverage, locations of sales outlets, etc. The Government could make the undesirable products less easily available by for instance banning sales in supermarkets and refusing planning permission for the siting of distribution centres.

Segmentation to target efforts more effectively

Market segmentation recognises that every market consists of potential buyers with different needs and different buying behaviour. Segmentation may, therefore, involve subdividing a market into distinct subgroups of customers, where any subgroup can be selected as a target market to be met with a distinct marketing mix of efforts. It would be wasteful to spend effort and resource on addressing policies on the entire population when a segment (e.g. the young) has the highest consumption patterns. From this thinking, the Government might determine a range of solutions such as promoting policies through the media accessed most by the market segmentation.

Requirement (c)

About corporate social responsibility

The basis of social responsibility is based upon the premise that an organisation enjoys certain benefits from society and in return should engage in practices that supports rather than exploits that society. Corporate Social Responsibility (CSR) has been defined as 'the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large'. Put simply, CSR means that businesses should continue to create wealth but should also recognise an obligation to other stakeholders.

Impact on stakeholders

For those dealing in products, stakeholder responsibility includes the manufacture, transportation and consumption in terms of their impact on the environment, health and safety of those products. In this case the stakeholder groups that seem to be implicated include consumers and those particularly affected by consumers, including the Government, society as a whole and the environment generally.

This is particularly relevant to the actions of companies selling potentially harmful with potentially negative impacts on a number of stakeholder groups:

- consumers,
- those affected by consumers.
- the Government.
- society as a whole, and
- the environment.

Some of the several large multinational companies that have begun to import goods to Changeland have used “aggressive” marketing techniques.

Ethical and unethical practices

Certain questions arise in relation to ethics in marketing that companies might do well to consider including:

- to whom do we sell?
- are our products of an appropriate standard, safe and produced to acceptable environmental standards?
- how do we advertise: is it fair, balanced and truthful?
- is our pricing or promotion exploitive of any vulnerable group in society, etc.?

If young people are particularly targeted and these are seen as a vulnerable group, then this could be considered unethical. Similarly if the nature of advertising is unfair (e.g. it contains subliminal messages or gives unrealistic illusions) or makes false claims (e.g. about the product’s health or other benefits) then this too may be considered unethical. Finally, the penetration pricing methods could be considered unethical if prices are artificially low in order to induce addiction before prices are subsequently raised.

Answer to Question Four

Rationale

Requirement (a) examines learning outcome E2(d) 'discuss the importance of the line manager in the implementation of HR practices'. Requirement (b) examines learning outcome C2(c) 'apply tools and concepts of lean management'. Requirement (c) examines learning outcome E2(b) 'discuss the HR activities associated with the motivation of employees'.

Suggested approach

(a)

- Identify respective roles
- Discuss each with respect to HR Dept and Line manager

(b)

- Explain lean management
- Explain contribution of modular teams

(c)

- Explain Maslow's hierarchy of needs **or** Herzberg's dual factor theory
- Relate to CM8's modular teams

Requirement (a)

Specific human resource practices vary depending upon the size and culture of the organisation and the availability of specialist HR staff. CM8 now has a corporate Human Resource Department and the level of central charges suggests that it might be significant. The move away from the previous hiring and firing policies might be seen as a sign of organisational growth and maturity.

General approach

Clearly both the department itself and line managers have a part to play in the management of people in CM8. In terms of respective roles there will be a slightly different emphasis as follows.

- *Human Resource department:* Human Resource Management (HRM) involves 'a strategic approach to the acquisition, motivation, development and management of the organisation's human resources'. In terms of its general approach, the department will be strategic, longer term and corporate by nature based on the perspective of the needs of CM8 as a whole.
- *Line manager:* in terms of general approach, line managers will be more operational and immediately focused on a specific area of responsibility locally (in the case of X, the factory where he has been appointed Operations Manager).

Strategic role. CM8 has apparently developed an HR strategy. Respective roles in the strategic management of the workforce are indicated below:

- *Human Resource department:* the main roles include leading the development of a robust strategy and ensuring that HR activities are aligned to CM8's corporate strategy, organisational aims and philosophy.
- *Line manager:* in order to gain ownership and buy-in, as well as enhancing the detail of the strategy, line managers, such as X, should participate in the development process. The line managers' main strategic focus however will be more about the operational implementation of the strategy at a local level.

Roles in the HR cycle. The activities, processes and systems of human resourcing are somewhat cyclical involving recruitment, selection, induction, on-going HR processes of appraisal and training and termination (whether promotion, resignation, retirement or redundancy, etc.) Respective roles are indicated below:

- *Human Resource department:* the department will want to ensure that there are standardised documents (e.g. job descriptions, person specifications, etc.) and clear processes in order that there is adherence to legal requirements and fair and consistent HR practices throughout SM8.

- *Line manager:* line managers will be expected to follow established procedures, adhere to systems and provide vital feedback to the HR department on corporate practices.

Expertise. Both the Human Resource department and line managers, such as X, can offer specific expertise in the management of CM8's workforce. Respective roles are suggested below:

- *Human Resource department:* the department should be a source of specialist advice and knowledge (e.g. employment law, health and safety requirements, etc.) The department is also well placed to suggest new corporate initiatives and approaches based on best practices gained by using contacts and professional associations to find out what happens elsewhere. The department should possess detailed expertise in specialist areas such as industrial relations and are likely to offer payroll services. The department should make available its expertise to factories and departments in CM8 to help them operate effectively.
- *Line manager:* individual managers have primarily been employed because of their specialist expertise (in X's case his knowledge of engineering and operations) rather than their HR expertise. Line managers can advise on what does and does not work in practice, show discernment and adapt basic systems accordingly at a local level.

Motivational roles. Crucial to the successful management of CM8's workforce is motivation. Motivation influences both employee productivity and quality of work. Inevitably most organisations link reward and remuneration strategies to motivation. Respective roles are suggested below:

- *Human Resource department:* the role of developing organisation-wide corporate policies, including reward strategies, remuneration packages and offering corporate opportunities for worker participation and contribution.
- *Line manager:* locally the manager has a role to play in progressing these corporate measures, implementing agreed practices and looking for ways of providing non-financial rewards to deserving subordinates.

Maintaining the psychological contract. The psychological contract represents the perceptions of both employee and employer of their mutual obligations towards each other. Both the department and the manager will have a role to play in preserving a healthy psychological contract.

- *Human Resource department:* the department will want to ensure that the organisation keeps its side of the 'contract' by, for instance, making payments on time, providing promotion opportunities, treating workers with dignity and respect, etc.
- *Line manager:* line managers, such as X, are closer to workers and may need to remind individuals of their obligations as well as providing feedback on performance, showing respect and attempting to make the working environment pleasant and safe.

Supporting respective HR activities. Relationships should be good between the Human Resource department and line managers.

- *Human Resource department:* a key role of the department should be to help and support line managers in carrying out their role correctly and effectively. The department should be accessible to managers and should encourage communication and dissemination of good HR practice within the organisation.
- *Line manager:* the line manager has a role to play in ensuring adherence to corporate policies, systems and practices and cooperating with the HR department.

Maintaining and developing CM8's human resource asset. The move to a new way of working within CM8 must have presented challenges not least ensuring that the workforce is suitably skilled, capable and confident.

- *Human Resource department:* the department can offer cohesive, structured training and development activities. In particular the department should put in place measures to remedy skill gaps identified by managers such as X.
- *Line manager:* the line manager has a key role to play when providing feedback on the adequacy of corporate provision of training and development and providing opportunities for on-the-job training.

Performance management. A system of performance management is crucial to an organisation such as CM8.

- *Human Resource department:* the department should formulate key performance indicators (KPIs) and other rubrics. Regular review and reporting mechanisms should also be formalised by the department. A common system of staff performance appraisal should be established by the department.
- *Line manager:* line managers will be expected to meet factory productivity targets, set targets for subordinates and adhere to corporate systems and practices.

Developing positive employee relations

The lean philosophy that CM8 is practicing is founded on a positive organisational culture and both parties have a role to play in cultivating and maintaining such a culture amongst the workforce.

- *Human Resource department:* the department can develop employee relations strategies which deliver participation and improved industrial relations as well as encouraging a positive open and collaborative atmosphere.
- *Line manager:* line managers can look for practical ways of empowering staff as well as publicly celebrating successes and achievements in making progress locally towards achieving CM8's goals.

Requirement (b)

Lean management

Henry Ford's mass production and assembly line methods early in the twentieth century transformed the way goods were made. An alternative way of making things was more recently pioneered by the Japanese involving bringing together the activities of managers, employees and suppliers into a tightly integrated system capable of responding quickly to changing customer demands. The resulting lean production methods ('lean') involve a consolidation of improvement systems into a single coherent process for continuous improvement. Waste is any activity that absorbs resources but creates no value and lean focuses on waste elimination in areas such as:

- product defects that lead to scrap or reworking;
- over-production of goods that are not currently needed;
- stocks of goods awaiting further processing so that cash is tied up in work-in-progress (WIP);
- over processing without adding value;
- unnecessary movement of people and equipment;
- unnecessary handling or transportation of goods;
- idle time such as employees waiting for process equipment to finish its work, etc.

Flexibility and commitment

The main characteristics of lean are underpinned by flexible workforce practices and high-commitment human resource policies. Lean also requires a commitment to continuous improvement in inventory management, capacity management and performance enhancement methods, etc. CM8 moved from mass production techniques ten years ago to lean operations and cellular manufacturing with a number of key features including the use of multi-skilled workers in semi-autonomous work teams. Under cellular manufacturing methods, teams form a cell that jointly make a substantial proportion of the finished product rather than singly assemble one component of it and so can exercise flexibility and put in place lean principles. Teams in effect stress working on more than one task, employee involvement and adopting a quality circle type approach. The fact that cell workers in CM8 are multi-skilled means that the team can rebalance activities in order to meet production requirements.

Modular teams as a core lean activity

It has been suggested that there are six core methods of achieving lean, namely JIT (just-in-time stock holding and production), kaizen (continuous improvement), 5-S technique, total productive maintenance on machines, six sigma technique and, finally, cellular manufacturing. These cellular work units are arranged in a sequence to support a smooth flow of materials and components through the production process with minimal transport or delay, so eliminating waste and contributing to lean operations.

Value adding management

As the teams are semi- autonomous, CM8's managers will not have as great a burden of supervision and direction, freeing them to engage in other value adding activities. Self-managed teams involve employees being grouped into teams and given certain guidelines to follow, as well as goals to accomplish, and then left alone to accomplish those goals. Cellular manufacturing reduces set-up costs and gives the teams the tools to operate multiple processes whilst being responsible for their own quality improvements, waste reduction, and basic machine maintenance. Collectively, teams can reduce lead times, resulting in the ability to manufacture high quality products at a low cost and on time. This is obviously more flexible and responsive than the previous traditional mass production methods that were adopted. In effect, teams are managing complete processes whilst taking charge of defects, scheduling, equipment maintenance and other manufacturing issues.

A focus for waste reduction and elimination

Lean focuses on a removal of all forms of waste from the system, whether parts, people or processes. The workforce is 'closest to the action' and hence in the best position to identify areas of where improvements can be made. As teams have the necessary autonomy they can do something about waste when it occurs. The goal of lean manufacturing through minimising waste is to achieve maximum efficiency of resources. Lean considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful, and therefore a target for elimination. Working from the perspective of the customer who consumes a product or service, 'value' is defined as any action or process that a customer would be willing to pay for. The lean philosophy is centred on preserving value with less work. Workers on the production line are in the best position to determine for themselves which processes do not produce value and therefore need to be eliminated.

Increase in problem solving capability of CM8

Cross-functional teamwork involves active communication and problem solving by working together in the same physical location on common problems. If, for instance, material flow can be significantly improved through team collaboration and enhanced problem solving, this will ultimately lead to a reduction in cumulative lead times and improved work flow, and can produce improved production scheduling.

Flexible manufacturing through economies of scope

CM8's factories are organised into semi-autonomous work teams to manufacture complete products or complex components. This gives potential for flexible manufacturing to take place. This is based upon the idea of economies of scope which is creating the conditions where it is cheaper to produce multiple products together than to produce them separately. This allows flexible manufacturing to take place - a stark contrast to the inflexibility of traditional mass production assembly lines with their emphasis on 'economies of scale'. This leads to small batch production in response to customer demands meaning flexible and responsive processes and the manufacture of a larger variety of products at lower cost and higher quality.

Positive employee attitudes towards the company's lean commitment

Long ago the Hawthorne studies famously underlined the emotional benefits of team work. At CM8 workers are multi-skilled and are formed into semi-autonomous work teams to manufacture complete products or complex components. Autonomy is a very important part of job enrichment because it gives employees power and a feeling of self worth and pride in the work they accomplish. The fact that teams see complete products or complex components means that individuals connect with the products and company aims more closely.

Improved efficiency

Working together, and having tools and machines located conveniently can improve efficiency. Efficiency is the opposite of waste and hence at the heart of CM8's philosophy. Modular teams can help speed up work processes by enabling the employee to make decisions without having to wait for line management approval. In addition, effective team working can encourage team productivity and greater worker participation through peer pressure.

Communication with suppliers and customers

Demand pull is key to lean. This means that the cell needs to minimise barriers in communication with suppliers and customers and appreciate the relationship of processes both upstream and

downstream. The customer voice should in any case drive lean and so the cell along with marketing professions gain an understanding of customer needs and demands.

Requirement (c)

The study of motivation is complex, not least because it involves behaviours, individuals and internal processes. As a consequence, there are several different, sometimes competing, theories associated with motivation. So-called 'content theories' of motivation is a group of theories that attempts to describe and categorise the needs that influence behaviour. Amongst these theories are, famously, Abraham Maslow's Hierarchy of Needs and Frederick Herzberg's Dual Factor theory.

Maslow's Hierarchy of Needs

Maslow's theory is based on the notion that an individual is 'a perpetually wanting animal' and only relatively unsatisfied needs are capable of motivating behaviour. Under this theory, five levels of need can be arranged into a hierarchy. This means that at any one time, the lowest level of relatively unsatisfied need will be the one that motivates current behaviour, and as long as it is unsatisfied it will motivate. The individual will act primarily in order to satisfy that need, before moving on to the next level of need and so on. This hierarchy is traditionally depicted with stratified categories of need arranged into a pyramid where, at the base, the lowest level is physiological need then safety and security, belongingness, esteem and at the peak, self-actualisation.

Physiological needs include the literal requirements for human survival such as air, water, and food clothing and shelter. Safety and security needs include personal security, financial security, health and well-being. Many of these lower level needs can be satisfied through employment. At the other end of the scale self-actualisation relates to a person's realisation of their full potential whatever that might be (e.g. an ideal parent, a successful sportsperson, an accomplished artist, etc.) and may not be satisfied through work alone.

Semi-autonomous work teams are most relevant in terms of the intermediary level needs identified by Maslow of **belongingness needs** and **esteem needs**. CM8's use of semi-autonomous work teams offer an opportunity for belongingness needs to be achieved. Belongingness needs include family and more relevantly friendships. Humans need to feel a sense of belonging and acceptance. Semi-autonomous work teams are likely to help satisfy these needs as they involve a number of people working as a team to achieve a common goal. The next level of needs involve a need to have self-esteem and command respect, to be accepted and valued by others. Status, recognition, prestige, attention, competence and a degree of independence and freedom are all potentially attainable through successful semi-autonomous work teams.

Herzberg's Dual Factor theory.

Herzberg's motivation-hygiene (dual factor) theory is based on the idea that the opposite of job satisfaction is a lack of job satisfaction, not job dissatisfaction. Similarly, the opposite of job dissatisfaction is an absence of dissatisfaction. It is not simply that satisfaction and dissatisfaction are different but, in Herzberg's view, that they are affected and caused by different factors. Factors associated with job satisfaction are called 'motivators' and factors that cause dissatisfaction are called 'hygiene factors'. According to Herzberg, motivators only work if hygiene factors are present.

CM8's work teams make use of both job enlargement (horizontally expanding roles with tasks at a similar level of difficulty) and job enrichment (adding tasks that might normally be carried out by someone on a superior grade). The effect is to produce multi-skilled workers with additional control, responsibility and experience. The team is allowed the freedom to plan and make decisions for itself. Herzberg suggested that the main motivators include recognition, achievement, the possibility of growth, responsibility and work itself. **All these motivators should be enhanced** through the job enlargement and job enrichment possibilities within the work teams.

Hygiene factors can be categorised as status, pay, interpersonal relations, company policies, etc., job security and working conditions. Semi-autonomous work teams cannot in themselves impact on most hygiene factors but can play a role in respect of encouraging interpersonal relations.