Tutorial letter 201/1/2014

Production and Operations Management
MNO3701

Semester 1

Department of Business Management

IMPORTANT INFORMATION:

This tutorial letter contains important information about your module.

BAR CODE

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1 INTRODUCTION

This tutorial letter contains the solutions to and feedback on Assignments 01 and 02 for the first semester. It also provides useful comments and gives you details of the format of the examination paper which you will be writing in May/June (1st semester).

2 SOLUTIONS TO AND FEEDBACK ON ASSIGNMENTS 01/2014

SEMESTER 1

ASSIGNMENT 01 COMPULSORY ASSIGNMENT

DUE DATE: 12/03/2014

UNIQUE NUMBER: 862895

This assignment for module MNO3701 consists of **twenty** multiple-choice questions (MCQs) for topic 1 (study units 1 and 2), topic 2 (study unit 3) and topic 3 (study units 4 and 5).

MULTIPLE-CHOICE QUESTIONS

You were asked to answer 20 multiple-choice questions. All the questions were of equal value and counted one mark. No negative marking was applied.

Question 1

Options (c) and (d) are incorrect; therefore alternative 5 is correct. Option (c) is incorrect because both transforming (facilities and staff) and transformed (materials, information and customers/clients) resources are inputs that are fed into the transformation process at the start and their relative position to the term “output resources” (incidentally a term that we made up) is irrelevant. Option (d) is incorrect because the factory plant is a transforming rather than a transformed resource. Options (a), (b) and (e) are all correct.

Question 2

Options (c), (d) and (e) are incorrect; therefore alternative 3 is correct. Option (c) is incorrect because the production/operations system hierarchy deals with the idea of many micro-operations which together make up or form a larger macro-operation. Option (d) is incorrect because the terms "internal customer" and "internal supplier" are used to describe micro-operations which take outputs from and give inputs to any other micro-operation, respectively. Option (e) is also incorrect because a build-up of stocks of input and output resources would be the result of buffering rather than the stocks being significantly reduced. Options (a) and (b) are both correct.

Question 3

Alternative 2 is correct. Thus alternatives 1, 3, 4 and 5 are all incorrect.

Alternative 1 is incorrect because while the first question contained in the statement is applicable (ie the question dealing with the role of or part that production/operations management is expected to play) the second question included in the statement is not really relevant. The second question that should be asked in order to understand the contribution of the production/operations function to the business involves determining the specific performance objectives against which the business can assess the operation's contribution to its strategic aspirations.

Alternative 3 is incorrect because stage 3 of Hayes and Wheelwright's four-stage model refers to an aspirations state of being "internally supportive" (captured by the phrase of "be clearly the best") and not "internally neutral" (captured by the phrase "stop making mistakes").

Alternative 4 is incorrect because the role of "effector" which refers to the production/operations function as implementer of the strategy (ie we could say it is the second most "active" role) clearly cannot be associated with the lowest or poorest level of the contribution of the production/operations function to the business (described in your prescribed book as "inward looking and at best reactive").

Alternative 5 is incorrect because the "best" position or role according to Hayes and Wheelwright's four-stage model is when the production/operations function of the business becomes "externally supportive" (ie the production/operations function becomes central in strategy making and provides the foundation for future competitive success). Note: the function could not become internally neutral **and** internally supportive because these refer to two completely different aspirations states.

Question 4

The correct answer is alternative 4 because the statement about flexibility as opposed to a speed advantage in the case of keeping delivery promises is incorrect. Such an advantage would be classified as a dependability advantage.

Question 5

Alternative 4 is correct because options (a) and (d) are correct. Options (b), (c) and (e) are thus incorrect. Option (b) is incorrect because the hierarchical position of the production/operations strategy relative to the corporate or business strategy (note: the corporate and business strategy are actually two separate, distinct strategies with their own, different points of focus) per se, is not directly determined by "how management view the potential of the production/operations function to contribute to the long-term success of the business". The hierarchical model is a convenient way of illustrating the role of the corporate, business and functional strategies, individually, but also the relationships or linkages between one another. Option (c) in incorrect because the content and not process aspects of the production/-operations strategy will determine the relative priority of the performance objectives of the business (note: the process aspects concern the way in which the content decisions are made). The remainder of the statement, namely the part referring to the specific decision areas will then, if this correction is made, be correct. Option (e) is incorrect because the production/operations activities (ie design, planning and control, and improvement) as influenced by the structural and infrastructural strategy areas, were switched around. The comparison between the "hardware" and "software" of a computer system and the operation's structural and infrastructural strategy areas, is however, correct.

Question 6

Alternative 2 is correct because options (b) and (c) concerning the case example of Rover are incorrect. Option (b) is incorrect because the most significant element of Rover's improvement strategy was not on the "narrow" (our choice of word) reorganisation of the company structure but rather on the "whole" (again our choice of word) reorientation towards its human resources. Furthermore, the introduction of "re-engineering principles" does not specifically feature as an element of the improvement strategy in the case example but rather the effort to understand how Japanese "lean" operations practices could be adapted to a Western environment. Options (a), (d) and (e) are all correct.

Question 7

Alternative 1 is correct because options (a), (b) and (c) are all correct. Option (d) is incorrect because the matters concerning the robustness of the product and attentiveness during manufacture/delivery rather refer to a producibility/operability guideline and not a quality guideline. Furthermore, while the phrase added when referring to the robustness of the product appears appropriate, the phrase “one could make the product or provide the service with one’s eyes closed” when referring to the avoidance of designs that require too much attentiveness, definitely goes too far, and is thus considered to be inappropriate. Option (e) is incorrect because while most of the key questions in assessing the feasibility of design are applicable, we should note that the question concerning an acceptable financial return per se should not feature at this point in time.

Question 8

The correct answer is alternative 2 because options (b), (c) and (d) are incorrect. Option (b) is incorrect because the primary purpose of the design activity is to satisfy the needs of customers/clients. Option (c) is incorrect because generally the overlap is greater for services than for products because in many cases the customer/client is part of the transformation process itself. Option (d) is incorrect. The design activity for high-volume, low-variety operations should emphasise the process design because the degree of product/service standardisation is high and the staff skills should rather be system oriented rather than task specific.

Question 9

Alternative 5 is correct because options (a), (d) and (e) are all correct. Option (b) is incorrect because the distinction between product/service technology and process technology is easier to make in the case of a Blu-Ray player (a manufactured product) than the amusement park (which is an example of a service operation). Option (c) is incorrect because while the rate of innovation is high during the introduction of new products and services, the emphasis should be on product rather than process technology.

Question 10

Alternative 3 is correct because options (b) and (e) are both incorrect. Option (b) is incorrect because the company did not win the award for installing the “greatest possible number” of robotic assembly tools (this is actually not said in the case exercise), but for its good performance in terms of flexibility, utilisation, lead times, overnight unmanned production, et cetera, through the use of the four computer-integrated FMS. This enabled it to become one of

the most advanced machine tooling operations in Europe, and as a result for the Japanese tool manufacturer to directly compete with European manufacturers. Option (e) is incorrect because the primary interaction between the technology and customers of Robeco is not direct. In other words, the staff or advisors interact directly with the company's computer system to access and provide various sources of financial information which are then passed on to the customer telephonically. The customer is thus the "navigator" of the technology. Nor is the interaction active - in other words the customer, is not the "driver" of the technology.

Question 11

Alternative 3 is correct. Options (b) and (d) are incorrect. Option (b) is incorrect because marketing is not one of the support functions; it is one of the three *core functions* of any organisation, along with the product/service development function and the operations function. Option (d) is incorrect because designing new furniture, although part of a manufacturing firm, is part of the product/service development core function.

Question 12

Alternative 5 is correct. Options (a) and (e) are incorrect. Option (a) is incorrect because the activity of operations refers to the management of processes in **any** of the organisation's functions. Option (e) is incorrect because the supply network is a collection of all operations and their internal processes. External customers are part of the supply network at a higher level in the supply network, while internal customers are part of the supply network at a lower level in the supply network.

Question 13

Alternative 4 is correct.

Question 14

Alternative 2 is correct.

Question 15

Alternative 5 is correct.

Question 16

Alternative 4 is correct. Option (a) is incorrect because the words ”content” and ”process” have been switched around. The content of the operations strategy involves the specific decisions that determine the operations role, objectives and activities. The process of operations strategy is the method used to make the specific content decisions. Option (c) is incorrect because emergent strategies, although defined correctly in this statement, arise from the “bottom-up perspective”. Option (d) is incorrect because it is a qualifying factor for which unsatisfactory performance may result in a customer deciding to purchase a product elsewhere.

Question 17

Alternative 5 is correct. Option (e) is incorrect because the decline phase is typically characterised by price competition. Cost therefore continues to dominate operations objectives.

Question 18

Alternative 2 is correct.

Question 19

Alternative 5 is correct. Options (a), (b) and (e) are incorrect. Option (a) is incorrect because a continuum exists from low volume-high variety through to high volume-low variety, on which we can position operations. Option (b) is incorrect because a specialist tool maker falls into the category of a jobbing process. Option (e) is incorrect because the three different types of services process, on a continuum of high-volume to low-volume operations include (in order), mass services, service shops and then professional services.

Question 20

Alternative 1 is correct. Option (b) is incorrect because even though operations managers need to articulate what the technology should be able to do and implement it in the operation, it would typically be the responsibility of an engineer to actually design the system. Option (c) is incorrect because a low automation operation with low scalability is typically classified as having low volume and high variety.

YOUR NUMBER OF CORRECT ANSWERS x 1 = MARK OUT OF 20

SEMESTER 1

ASSIGNMENT 02 COMPULSORY ASSIGNMENT

DUE DATE: 10/04/2014

UNIQUE NUMBER: 887631

This assignment for module MNO3701 consists of **twenty** multiple-choice questions (MCQs) for topic 4 (study units 6 and 7), topic 5 (study unit 8), topic 6 (study units 9 and 10) and topic 7 (study units 11 and 12), topic 8 (study units 13 and 14), topic 9 (study unit 15) and topic 10 (study unit 16).

Question 1

Alternative 2 is correct because options (c) and (d) are incorrect. Option (c) is incorrect because the constraints placed upon the planning and control task are not due to an infinite but rather a finite supply of resources which has to meet unlimited rather than a limited demand. Option (d) is incorrect because long-term planning (and not long-term control) has more potential to influence decisions and is thus more important than long-term control. Similarly, short-term control is more important than short-term planning. Alternatives (a),(b) and (e) are all correct.

Question 2

Options (c), (d) and (e) are incorrect; therefore alternative 4 is the correct choice. Option (c) is incorrect because in “make-to-stock” operations the throughput time, P, will always be greater (and not smaller) than the demand time, D. Option (d) is incorrect because the scheduling activity in the planning and control task in operations deals with setting up timetables showing at what time or on what dates jobs should start and when they should end. The sequencing activity must, however, determine which tasks must be performed before (or have priority over) others. Option (e) is incorrect because the hospital does not follow a “first-in-first-out” sequencing priority system at all. Instead, as patients arrive, medical staff quickly sort and classify them to determine into which category of urgency each patient fits. Then a suitable schedule for the various treatments (and patients) is worked out - in other words, very serious cases or illnesses are treated first.

Question 3

Alternative 5 is correct because options (b), (c) and (d) are correct. Option (a) is incorrect because material requirements planning systems are used in dependent rather than independent demand conditions. Option (e) is incorrect because the “internal working” or functioning of the MRP system is not described correctly. The master production schedule (not the MRP system) must be analysed to ensure that the weekly loadings on each work centre are realistic.

Question 4

Alternative 2 is correct. Should the quantity of sales orders in week 5 be 9 (thus an increase of 5 units), the quantity of the “available to promise” in the same week, week 5, will be 2 units (thus a decrease of 5 units). However, such an increase would have no effect on the quantity of the “available to promise” in week 7. This quantity remains 11 units.

Question 5

Alternative 3 is correct because options (a) and (c) are correct. Option (b) is incorrect because JIT production/service means producing/rendering products/services **exactly when** they are needed - not before so that they have to wait in inventory, nor after so that customers/ clients have to wait. Option (d) is incorrect because reducing the level of inventory would probably mean that production and operations management may deal with the opposite as stated in terms of work-in-progress (a decreased amount), scrap and rework (less). However, we should note that the all-embracing benefit of reducing the level of inventory, lies in the removal (or at least partial removal) of the "blanket of obscurity" which hides problems in the operation. Option (e) is also incorrect because while the first three points contained in the statement concerning the JIT philosophy are correct, the last (the one dealing with the focus on high capacity utilisation) is part of the "traditional approach" and is not a focal point of the JIT approach.

Question 6

Alternative 3 is correct because options (c) and (d) are incorrect. Option (c) is incorrect because instead the company reduced its batch sizes to even smaller batches following the introduction of JIT principles into its manufacturing processes. It therefore meant they enhanced its flexibility to meet market needs just-in-time. Option (d) is incorrect because the specific JIT planning and control techniques used for components and smaller subassemblies, were the "move" kanbans (also referred to as conveyance kanbans) and for the major subassemblies, assembly line broadcasting. Furthermore, JIT pull (not push) scheduling and *Jidoka* are viewed broadly as the

two pillars of TPS (Toyota's Production System) and would not be regarded as mere or specific JIT techniques.

Question 7

Alternative 1 is correct. Alternative 2 is incorrect because the operation's view of quality is not primarily manufacturing based but, in line with other viewpoints, possibly more customer/client oriented as implied by the phrase "consistent conformance to customers' expectations". Alternative 3 is incorrect because, firstly, it would not be fair to single out any one quality gap as the "most significant" since the existence of any one is likely to result in a mismatch between expectations and perceptions and results in poorly perceived quality. Secondly, production/operations management bears the most responsibility for quality gap 3, that is the quality specification-actual quality gap and the gap referred to in the statement, namely gap 1 which is the joint responsibility of marketing, production/operations management and product/-service development. Alternative 4 is incorrect because quality gap 4 to which the statement refers is the primary responsibility of the marketing function and does not lie with the production/operations function unless it is not providing the level of quality expected by the customer/client. Alternative 5 is regarded as incorrect because the statement "quality is like **beauty** - it lies in the eye of the beholder" is regarded as inappropriate because of the comparison with "beauty". While the phrase "quality is in the eye of the beholder and customer's perception of quality is all important" is used in your prescribed textbook, the operation's view of quality (ie "quality is consistent conformance to customers' expectations") implies that a clear specification, which is more quantitative, must be met.

Question 8

Alternative 4 is correct because options (b), (c) and (d) are incorrect. Option (b) is incorrect because it must first be decided how to measure a quality characteristic itself before the standard for it can be set. Option (c) is incorrect because we believe that quality in this regard should not be loosely defined by a slogan such as "making customers happy". Furthermore, the reference to and examples of the so-called "quality standards" in the statement are incorrect. These are rather quality characteristics (ie a description of the pies in terms of size, filling, appearance, smell, durability and an indication of its measurement such as large, minimum of 100 mg per pie, appetising, etc). A quality standard, however, should then be set for each quality characteristic. For example, having set the pie size at 100 mm long x 40 mm wide x 20 mm high - the quality standard (ie the level of quality that defines the boundaries between acceptable and unacceptable) could be such that out of very 100 pies made, at least 95 may

not deviate from the standard pie size by more than five percent. Option (d) is incorrect because type I errors occur when a decision is made to do something (take an action to prevent quality problems), but it is later found that such actions were not necessary or warranted. Type II errors occur when a decision is made not to do anything (no actions are taken to prevent quality problems), but it is later found that the situation did indeed warrant such actions. The descriptions of type I and II errors in the statement were thus switched around. Options (a) and (e) are correct.

Question 9

Options (a) and (c) are incorrect, therefore alternative 1 is correct. Option (a) is incorrect because project operations are usually low in volume (1 or a few units are usually produced, eg, building the space shuttle, constructing a hospital, retooling an assembly line at a motor vehicle manufacturer for a new model, etc) but high in variety (different types of projects are quite diverse as indicated in previous examples). Option (c) is incorrect because projects with high complexity (ie those of large magnitude, many groups involved or organisations to be coordinated, high diversity in skills needed to accomplish the work) need not necessarily be difficult to plan but could, however, require considerable effort and be problematic to control. Projects with high uncertainty (ie those whose final outcomes in terms of the dimensions of time, cost and technical performance are difficult to predict), however, must be planned particularly well. Thus options (b), (d) and (e) are correct.

Question 10

Options (a), (b) and (c) are correct, therefore alternative 5 is correct. Option (d) is incorrect because the project was considered to be most successful even though it overshot its budget by 10 percent. The most important objectives of the Giotto project were meeting the launch date (time objective) and fulfilling its technical tasks (quality objective). The cost objective, though not completely ignored, was of secondary importance because studying the comet was a "once in a lifetime" opportunity. Option (e) is also incorrect because PERT network analysis (and not CPM) is better suited to projects with high uncertainty (the method recognises that activity durations and costs in projects are not deterministic [fixed] and applies the probability theory to estimates). The CPM method is, however, more popular and frequently used. The last part of the statement about which method of drawing networks CPM (AoN) and PERT (AoA) respectively follow, is correct.

Question 11

Alternative 3 is correct because options (a), (b) and (d) are all correct. Option (c) is incorrect because the performance objectives listed are actually performance **measures** (ie they are the criteria against which measurement takes place) rather than performance standards (ie one or other performance level set for comparison purposes). Furthermore, we should note that the listed performance objectives in themselves, would not really be considered "practical" performance measures. They are composites of much smaller measures. As pointed out in your prescribed book, it is highly unlikely that one (or all five) such single, simple measure(s) would be used to judge the performance of the production/operations management system with a view to its improvement. Instead a "bundle" of partial measures for each of the main listed performance objectives would be used. Option (e) is also incorrect because of the distinct differences between a performance standard and a performance measure. The measure against which the performance of the operation is judged (ie, say, the partial measures of purchasing, marketing and production/operations efficiency, staff productivity, etc for the overarching performance objective of cost) describes "what is measured" and does not indicate on its own whether the performance was good, bad or indifferent in terms of a certain level or standard of performance.

Question 12

Alternative 2 is correct because options (b), (c) and (e) are incorrect. Options (a) and (d) are, however, correct. Option (b) is incorrect because benchmarking would be viewed as a "competitor performance standard" because one business' operation is compared with others. Furthermore, the objective of benchmarking is not really to determine or indicate "the position of the business in industry" but to judge how well an operation is doing, and in this process, by looking both internally and externally, better understand the connection between external market needs and internal production/operations processes. Option (c) is incorrect because Xerox saw the prerequisite for benchmarking success, not the objective of setting realistic standards of performance (usually the objective at strategic level), but rather the need to thoroughly understand its processes. Option (e) is incorrect because although their performance was rated as a point 2 (ie their performance is clearly to be considered better than their competitors), this aspect of the service was not regarded as a less important factor (ie one that was "hardly ever considered by customers") but ranked as number 1 (ie an order winning factor which provides a crucial advantage). Given the ranking of importance to customers and the performance of the company in this area, the priority for improving the technical solutions would

fall into the “appropriate” zone of the importance-performance matrix used in the prescribed book. This means that the operation’s performance is considered to be “acceptable” but it would not want to move below the lower boundary line of this zone and would over the long term want to move up towards the upper boundary line.

Question 13

Options (a), (b) and (c) are correct; therefore alternative 1 is correct choice. Option (d) is incorrect because Nissan’s adoption of *kaizen*, which conveys the idea that all improvement should be a continuous process, follows the continuous improvement approach rather than breakthrough improvement approach. Option (e) is incorrect because there would be no credible or defensible reason to “reverse” the concept behind the Deming wheel (ie PDCA cycle) thus to first act, then check, then do, and lastly plan. The PDCA cycle methodology is associated with the continuous improvement approach and its “reverse” cannot make it a breakthrough or BPR approach.

Question 14

Alternative 4 is correct because options (b), (c) and (e) are correct. Option (a) is incorrect because TQM cannot be equated to a continuous improvement technique. It is much more. Although one of the concerns of TQM is the development of a process of continuous improvement, it cannot be regarded as a mere technique. Note that the latter part of the statement about the use of cause-effect diagrams to diagnose quality-related problems, is true (ie these diagrams are particularly effective in helping find the root cause of problems). Option (d) is incorrect because while Crosby's contribution does include a focus on “zero defects”, which incidentally is an example of an absolute performance standard, and the focus of his work is on the costs of quality (ie the phrase referring to the price of nonconformance is relevant), the other phrase on the fitness for use and movement towards a user-based approach to quality is credited to Juran. Crosby’s work on quality is associated with the value-based approach to the definition of what quality entails, and this is why it is considered to be so important.

Question 15

Options (c), (d) and (e) are incorrect; therefore alternative 5 is correct. Options (a) and (b) are correct. Option (c) is incorrect because the second point listed (ie that the costs of quality, including the internal costs of failure be considered), although it is a specific concern of TQM, does not really feature in HP’s internal-customer concept. Option (d) is incorrect because while

the TQM model does change the way quality costs are viewed from an appraisal-driven (inspect-in) to design-in ("getting it right the first time") approach, it addresses the underestimation of the costs of failure (ie the costs associated with the disruption that errors cause, although difficult to measure, must be included) and notes that the increased cost of quality provision moving towards zero defects (ie the costs of appraisal and prevention) would not be as dramatic (ie cost curve would not be as steeply inclined) as portrayed by the traditional model of the "optimum-quality" theory. Option (e) is incorrect because nothing is said about TQM losing its effectiveness in the company but rather that the ISO 9002 was a "good minimum standard foundation" on which to build a total quality management programme. Furthermore, ISO 9002 deals with the quality systems model for quality assurance in production and installation only and not as ISO 9001 in addition to, design/development and servicing.

Question 16

Alternative 3 is correct because options (b), (c) and (e) are correct. Option (a) is incorrect because the chances for immediate success of any TQM improvement programme appear to be far less than one out of two or 50 percent. In all the quoted surveys listed in your prescribed book, the companies that reported meaningful success were only between 20 and 33 percent of those surveyed. Furthermore, critical factors that affect TQM implementation involve (1) the effective **introduction** and implementation and (2) the commitment and continuous support of top management. Option (d) is incorrect because TQM loses its effectiveness at the start of the "disillusionment" phase of the programme (ie at the end of the levelling-off phase) and should not be "rebolted" (ie TQM is not a "bolt-on" attachment to a business) or "kick-started" (which implies a hasty, stop-start type of introduction of TQM to a business). Furthermore, while it may be tempting to exploit the motivational "pull" of TQM, slogans and exhortations like the one quoted in the statement should be avoided.

Question 17

Options (b) and (e) are correct; therefore alternative 4 is correct. Option (a) is incorrect because NO business really should be indifferent to failure. While dependability is not only desirable but essential in some cases, the examples of the taxi transport service and hot water geyser at home included in the statement, do meet this definition. Here reference should rather be made to air transport in flight and hot water in emergency wards or operating theatres in hospitals. Option (c) is incorrect because failures in a particular product/service are not necessarily more serious than failures in the production/operations system. It is true that a customer/client is

more likely to immediately complain should a failure occur in the product/service because of his/her direct contact/interaction, we should note that all, with the possible exception of customer/client originated failures, are in effect production/operations system's failures. Businesses therefore need to distinguish between various types of failures and anticipate the possible impact of critical failures on the whole operation. Option (d) is incorrect because the three serious failures described in the case exercise were primarily human and technically dissimilar. No single technology failure could be blamed for the disasters and it thus appears that the accidents are not directly attributable to design failure in the chemical plant.

Question 18

Options (c) and (e) are incorrect; therefore alternative 5 is correct. Options (a), (b) and (d) are all correct. Option (c) is incorrect because the purpose of failure detection and analysis is much broader and is to ensure that failures are detected when they occur and through analysis, understand why they did occur. Whether the customer/client is "happy" with the product/service and finding out how it may be improved, are definitely worthwhile objectives per se, but are too "narrow" in scope with regard to the purpose of failure detection and analysis. Option (e) is incorrect because the methods listed are designed to try and prevent failures from occurring in the first place or improving on the reliability of the whole operation. Although it should be done in parallel with preventing failures from occurring, recovery from failure or failure planning (ie the POM activity of devising procedures which allow the operation to recover) is different from improving the operation's reliability.

Question 19

Alternative 2 is correct. Option (a) is incorrect because the type of failure in which real circumstances result in the failure of a design concept, is known as design failure. Option (d) is incorrect because the total reliability of a system containing five parts, each with an individual reliability of 0.99, would be 0.95. This answer is derived as follows: Rs = 0.99 x 0.99 x 0.99 x 0.99 x 0.99 = 0.95.

Question 20

Alternative 3 is correct. Option (c) is incorrect because working hours, although a subject to generally consider in job design cannot be considered to be an environmental consideration. Environmental considerations in job design, as per table 21.3 in the prescribed book, could be the transportation of staff to/from work and development in environmental education.

YOUR NUMBER OF CORRECT ANSWERS x 1 = MARK OUT OF 20

3 COMMENTS ON AND FORMAT OF THE EXAM PAPER

Please note that the examination will cover the whole syllabus (all parts, topics and study units) for the module MNO3701. We therefore urge you not to leave out or ignore any part or portion of the study material while doing your final examination preparation. The format of the examination paper that you will be required to write for the module is similar to the format that you have encountered in the assignments during the semester (that is a combination of both multiple-choice and essay-type questions will be used).

The examination paper is, however, worth 70 marks and will consist of two sections. Section A contains the multiple-choice questions (10 questions will be asked which will count 1 mark each out of the examination total of 70 marks or 14%). Section B contains the essay questions. There will be three questions, each of which will count 30 marks, the questions will have SEVERAL subsections as in the assignments, and you will have to select two (for 60 marks out of the examination total of 70 marks or 85%). The duration of the examination will be two hours. The final mark will consist of your examination mark (80%) and your assignment marks (20%).

4 CONCLUSION

We trust that you have enjoyed and found studying this module in Production and Operations Management valuable and that you are or will be able to apply most of the concepts, principles and techniques in your everyday work environment with great success. If this is the case, we encourage you to register for our honours paper in advanced production and operations management, namely, **AOM4801**. Good luck for the examinations!

Kind regards

R Dirkse van Schalkwyk

DEPARTMENT OF BUSINESS MANAGEMENT