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Serial No.....

Institute of Certified Management Accountants of Sri Lanka
Operational Level
November 2016 Examination

Examination Date : 26th November 2016 **Number of Pages :** 06
Examination Time: 1.30 p.m. – 4.30 p.m. **Number of Questions:** 07

Instructions to Candidates

1. Time allowed is **three (3) hours**.
2. Total: **100 Marks**.
3. Answer **all** questions in Part I and **four (4)** questions from Part II selecting **two (2)** questions from each of the Sections **A** and **B**.
4. Section **A**: Operations Management and Section **B**: Information Systems Management.
5. The answers should be in **English Language**.

<u>Subject</u>	<u>Subject Code</u>
Operations and Information Systems Management	(OIM / OL 3 - 203)

PART I

Question No. 01 (20 Marks)

Answer all parts of the Question No.1. Select the most correct answer to each part of the question. Write the number of the part of the question and the selected answer by stating the relevant English letter, in your answer booklet. **E.g. (1) (relevant English letter), (2) (relevant English letter) etc...**

- (1) Which one of the following cannot be considered as an indirect responsibility of the operations manager?
 - (a) Informing other functions of the system about opportunities and constraints provided by the capabilities of the operations systems.
 - (b) Improving the performance of the operation.
 - (c) Discussing with other functions how operation's plans and their own plans could be modified for the benefit of both functions.
 - (d) Encouraging other functions to suggest ways in which the operations function could improve its service to the rest of the operations in the organization.
- (2) A strategy which is focused on retaining customers & winning them for a substantial period of time is known as:
 - (a) Meaningful differentiation
 - (b) Value chain analysis
 - (c) Strategic planning system
 - (d) Cost leadership
- (3) A process takes a longer period of time to produce involve a huge investment of fund and other resources is known as:
 - (a) Job shop process
 - (b) Mass production
 - (c) Project
 - (d) Batch production

- (4) The cost of down time of the process for inspection and repairs when there is a failure can be categorized as a:
- (a) Internal failure cost
 - (b) External failure cost
 - (c) Sunk cost
 - (d) Opportunity cost
- (5) Increase throughput while simultaneously reducing inventory and operating expenses is considered in a mission statement of:
- (a) Just in time systems (JIT)
 - (b) Supply Chain Management
 - (c) Total Quality management
 - (d) Strategic value analysis (SVA)
- (6) The organization uses information technology to connect people, assets and ideas is called:
- (a) virtual company
 - (b) adaptable company
 - (c) structural company
 - (d) Re-engineering company
- (7) Which one of the following cannot be considered as **a reason for people forming virtual companies to:**
- (a) link complimentary core competencies
 - (b) migrate from selling products to selling solutions
 - (c) integrate strategic information needs of top management
 - (d) increase facilities and market coverage
- (8) without any legitimate authority, someone can download, distribute of any copy content of electronically prepared document and other digital media is called:
- (a) privacy
 - (b) phishing
 - (c) Hacking
 - (d) virus
- (9) Which one of the following cannot **be recognized** as a system development model?
- (a) waterfall – a linear iterative frame work
 - (b) spiral – a combined linear frame work
 - (c) Rapid application development – frame work
 - (d) entity relationship diagram
- (10) _____ are knowledge based information system that use software and a knowledge base about specific, complex application area to users in many business & technical application.
- (a) Expert systems
 - (b) Artificial intelligence systems
 - (c) Executive information systems
 - (d) Management information systems

(10 × 2 Marks = Total 20 Marks)

End of Part I

PART II

Section A: Operations Management

Answer any two (2) questions

Question No. 02 (20 Marks)

Export Lanka Company was set up in Biyagama industrial processing zone two decades ago for the purpose of exporting men and women garments to European market and united South America (USA). Revenue of the company has steadily decreased over the recent period nearly 25% and the company find it difficult to meet its urgent payment. Shortage of skilled workers, high rate of defects of garments produced by some of sub-contractors, emerging competition supported by high technology and low cost of processing are key strategic issues faced by the company. In order to arrest this situation, it was decided to hire a consultant to submit report on how to improve performance objectives of the company.

You are required to:

- (a) Briefly explain **five (5) competitive** priorities (performance objectives) in relation to above scenario? **(10 Marks)**
- (b) The Consultant hired for this purpose suggested to use cause- effect diagram to analyse quality issues of garments.

Explain how this technique can be applied to quality issues faced by the above company?

(05 Marks)

- (c) Waste reduction plays critical role in improving productivity of an organization.

Explain **five (5) types** of acts which act as barriers of Production Company like export Lanka?

(05 Marks)

(Total 20 Marks)

Question No. 03 (20 Marks)

Mega Lanka Company has decided to invest in automobile manufacturing plant in Sri Lanka with an aim of re-exporting its outputs to Asian Countries. The company is seeking a suitable industrial zone for a new factory.

It has identified four factors as desirable for manufacturing facility. They are availability of infrastructure, skill labour tax concession and technology. These factors are ranked on their importance to the operation as noted below.

Factor	Ranking
Infrastructure	0.30
Skill labour	0.28
Tax concession	0.18
Technology	0.24
Total	1.00

There are four industrial zones available in Katunayaka, Biyagama, Koggala, and Hambanthota. The company is in the process of evaluating each industrial zone considering all beneficial factors. For this purpose, each location is assessed in the context of factors identified and following score is assigned. The score is given out of 20.

Score factors

Industrial zone	infrastructure	Skill labour	Tax concession	technology
Katunayake	10	06	04	12
Biyagama	06	04	06	08
Koggala	08	09	08	04
Hambantota	12	05	07	06

You are required to:

- (a) Using **factor ranking method** calculate the most suitable location? **(05 Marks)**
- (b) Mega Sri Lanka company is allowed to sell 10% of its outputs to local market as per BOI rules & regulation. The company has decided set up ten local sales agents' island wide to expand its market coverage.

Indicate three types of technologies and associated communication networks available to the company to give access its potential customers about their products? **(06 Marks)**

- (c) Write short notes selecting **three (3)** of the following.
- (i) External failure cost
 - (ii) Direct responsibilities of an operations manager
 - (iii) Transformed resources
 - (iv) Process layout
 - (v) Cross docking issues.

(3 × 3 Marks = Total 09 Marks)

(Total 20 Marks)

Question No. 04 (20 Marks)

Agra company – BOI approved one was awarded to construct 500 residential houses on home lands provided by central government in the north and east province under Indian credit line programme. According to the specification provided there are three types of houses to be constructed as noted below:

Type of house	Square feet
A	1,500
B	1,000
C	850

In order to utilize locally available input material such as bricks, sand, woods and labour force, government has given instructions to apply standard rates for different items with a view of enhancing living standards of local communities in the province. The company has demonstrated the quality specifications of input materials so as to ensure quality performance of the works. The company has decided to set up manufacturing plants or outsource manufacturing activities to outsiders to meet additional input material requirements.

You are required to:

- (a) Explain **five (5) factors** Agra Company should consider to produce input materials internally or buy from externally? **(10 Marks)**
- (b) According to your assessment what type of process technology can be used to build 500 houses? Briefly explain your answer? **(04 Marks)**
- (c) Suggest **three (3) ways** to maintain cost competitiveness while maintaining quality of construction? **(06 Marks)**

(Total 20 Marks)

End of Section A

Section B: Information Systems Management

Answer **any two (2) questions**

Question No. 05 (20 Marks)

Lanka Electricity Company has engaged in distribution of electricity in coastal regions of western province and a few major cities inside the country. It has 09 branch offices which are not inter-connected and maintained their own legacy systems. Although customer help desk is available at each branch office, sharing and accessing information have become critical issue. In order to overcome this situation newly recruited manager information Technology (IT) has decided to implement Enterprise Application Integration (EAI) in the company to integrate whole information system.

You are required to:

- (a) Explain clearly role of **EAI** and how it can develop efficiency in using information network? **(05 Marks)**
 - (b) Explain **four (4) objectives** of EAI? **(08 Marks)**
 - (c) Briefly describe strategic uses of IT in the areas of cost reduction of business operations with examples? **(07 Marks)**
- (Total 20 Marks)**

Question No. 06 (20 Marks)

Lanka Petroleum Storage Ltd (LPSL) has two terminals and nine island wide bulk depots to distribute petroleum products in Sri Lanka. The LPSL has 1,500 dealers and 900 industries who directly buy petroleum products from identified terminals and bulk depots. At present the LPSL internally developed IT system has not been interconnected with each other terminals and island wide bulk depots. As a results of this situation, many customer complaints have been received with regard to return of orders, settlement of trade debts, reconciliation of dealers transportation charges etc. The LPSL has also faced immense issues relating to accessing of stocks at different locations, reconciliation of cash and credit sales, cash management etc. In order to arrest this situation, Auditors of the company have mentioned in their management report that the company should implement internet **technologies and e- business, e-commerce applications** to overcome the problems faced by the company. Auditors had further indicated that internet related technologies would enable to gain competitive advantage.

You are required to:

- (a) Indicate **four (4)** areas the company can use internet technologies, e-commerce to achieve competitive advantage while overcoming problems noted above? **(08 Marks)**
- (b) Managing Director of the company indicated that change management process is highly required to achieve benefits of proposed system. Briefly explain **six (6)** steps that would involve in successful change management process? **(12 Marks)**
- (Total 20 Marks)**

Question No. 07 (20 Marks)

Write short notes selecting any **four (4)** of the following.

- (i) Knowledge Management System
- (ii) Hacking
- (iii) Encryption of data
- (iv) Components of an Information system
- (v) Role of information system
- (vi) Business /IT planning

(4 × 5 Marks = Total 20 Marks)

End of Section B

End of Part II

End of Question Paper
