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முழுப் பதிப்புரிமையுடையது]  
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Department of Examinations, Sri Lanka

Open Competitive Examination for Recruitment to  
Class I - Grade III of Sri Lanka Information and  
Communication Technology Service - 2015 (2016)

Question No.	Marks
1(a)	
1(b)	
2	
3	
4	
Total	
Marking Examiner:	
Checked by:	

**(02) Knowledge on Information and Communication Technology**

Two hours

Answer all questions on this paper itself.

Index No. : .....

1. (a) Write short answers for question numbers (i) to (xv).

(i) Write **two** main security actions to protect information processing facilities.

(a) .....

(b) .....

(ii) 'URL' stands for

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(iii) Define briefly is 'electronic mail' (e-mail)?

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(iv) What is the purpose of installing an anti-virus software program on a Computer?

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(v) Define the act of hacking of a computer / computer system.

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(vi) Write **two** types of malicious code.

(a) .....

(b) .....

(vii) What is the role of Intrusion Prevention System (IPS)?

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(viii) State **one** main advantage of web 2.0 applications.

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(ix) Briefly define the term "Green Computing".

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(x) Define the term "information" using the term "data".

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(xi) What is the primary reason for government organizations to build "Knowledge Management Systems"?

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(xii) Write **two** advantages of using online services of government agencies for citizens.

(a) .....

(b) .....

(xiii) Physical security of a server room is very important when information security is concerned. Write **two** physical security measures to protect information systems.

(a) .....

(b) .....

(xiv) "Social media is a group of internet-based applications that allow the creation and exchange of user generated content" What is the technological foundation or platform used for the evolution of social media?

.....

(xv) Write **two** requirement gathering techniques which are being used in System Development Life Cycle (SDLC)

(a) .....

(b) .....

(01×15 = 15 Marks)

● (b) Write answers for questions (i) to (v).

(i) List **four** reasons for the failure of e-Government projects.

(a) .....

(b) .....

(c) .....

(d) .....

(ii) Write **four** services of the Internet.

(a) .....

(b) .....

(c) .....

(d) .....

(iii) What is a Hyperlink?

.....

(iv) State **three** advantages of using electronic-mail.

(a) .....

(b) .....

(c) .....

(v) State **four** ways of a computer being infected by computer viruses.

(a) .....

(b) .....

(c) .....

(d) .....

(02×5 = 10 Marks)

2. Wash Tech Ltd. is a leading washing machine manufacturing company. It was founded in 1985 with a small staff in one location. Today, the company has expanded to six locations with 3500 staff. As the company grows the management decided to invest in IT enabled human resource management, financial management and inventory management solutions to manage its staff inventory in all six locations.

(i) Briefly discuss **four** types of IS/IT solutions that can be used to enhance the efficiency of the above company.

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(ii) Describe your strategic procedure of IS/IT deployment at Wash Tech Ltd. for each following occasion, pertaining to its costs and benefits.

(a) In-house systems development

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(b) Systems development by an external institutions.

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- (c) Briefly describe **five** risks that could arise when systems are developed by an external institution as mentioned in (b) above.

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- (d) Briefly describe **four** ways that IS/IT could contribute its operational and development activities for the organization.

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(05×5 = 25 Marks)

3. Knowingly or unknowingly, a large majority of today's Internet users use "cloud computing" technology (Ex: web-based e-mail applications such as Gmail, Yahoo and MSN, as well as social networking sites and online storage and backup services)

- (i) Briefly describe the "Cloud computing" technology with **three** practical examples.

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- (ii) Briefly describe the benefits of cloud computing technology and how it could be effectively used for government organizations.

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(iii) Briefly discuss **three** key issues that could arise with cloud computing with practical examples.

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(iv) Briefly explain how the issues in (iii) above could be avoided.

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(v) What is “Interoperability”? Briefly describe what Interoperability provides and why it is important using examples.

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(05×5 = 25 Marks)

4. Eventhough “software piracy” has been made illegal in Sri Lanka, use of pirated software is still happening to some extent.

(i) Briefly explain “software piracy” and its ethical context with **two** examples.

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- (ii) "Some argue that enforcing software piracy laws would make people to use free-and open-source-software (FOSS)." Explain your stand point about this argument.

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- (iii) Briefly describe **four** fundamental freedoms of "FOSS".

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- (iv) e-Government refers to the use of information and communication technologies (Such as Wide Area Networks, the Internet and mobile computing) to improve the activities of public sector organizations.

Briefly describe different facets of 'e-govenrment' characterized by the intended uses.

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- (v) The world bank divides the process of achieving e-government success into three phases namely Publish, Interact and Transact. These phases are not dependent on each other and one phase could be begun before the completion of another.

Briefly discuss the "Transact phase" in detail with a practical example.

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(05×5 = 25 Marks)

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**(03) Aptitude on Information and Communication Technology  
Management**

Answer all questions on this paper itself.

Index No. : .....

Question No.	Marks
1 (a)	
1 (b)	
2	
3	
4	
Total	
Marking Examiner:	
Checked by:	

Two hours

**1. Answer all questions.**

- (a) (i) BPR is an acronym for .....
- (ii) UML is an acronym for .....
- (iii) OOP is an acronym for .....
- (iv) BYOD is an acronym for .....
- (v) SL-CERT is an acronym for .....

**● Provide suitable words to complete the following sentences:**

- (vi) A compiler is a program that translates ..... codes into ..... code.
- (vii) ..... is an important part of programing and is used to detect ..... errors that cannot be detected by the compiler.
- (viii) Two kinds of buttons that tend to occur in groups on web-based forms are ..... and .....
- (ix) The two phases of the software development life cycle that follow design phase are ..... and .....
- (x) Layer 3 and Layer 5 of the OSI Reference Model are ..... and ..... respectively.
- (xi) Write down two stages of the e-Government maturity model.
1. ....
2. ....
- (xii) What is the meaning of "1TB - SATA" indicated in a typical computer specification?
- .....



(xiii) Write down **three** features of a Social Networking Site.

- (1) .....
- (2) .....
- (3) .....

(xiv) Briefly describe the function of a Firewall.

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(xv) Briefly explain the difference between 'phishing' and 'pharming'.

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(1×15 = 15 marks)

(b)(xvi) Testing strategies are an important part of a software development process. Describe the term "dry run testing."

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(xvii) Explain what is done in black-box testing.

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(xviii) Discuss the security measures you would put in place to ensure the security of the server room.

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(xix) Mention the security measures you would put in place to ensure the security of a web site.

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(xx) Briefly explain the meaning of the following two technologies and provide examples for their application.

(a) Bluetooth : .....

(b) WiFi : .....

(2×5 = 10 marks)



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Open Competitive Examination for Recruitment to Class I - Grade III of Sri Lanka Information Communication Technology Service - 2015 (2016)  
(03) Aptitude on Information and Communication Technology Management

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2. Suppose you are the project manager of a new Information Technology project. Your organization requires you to organize this project according to project phases common to software development projects.

(i) What are the Project Phases in Software Development Life Cycle? Briefly explain them.

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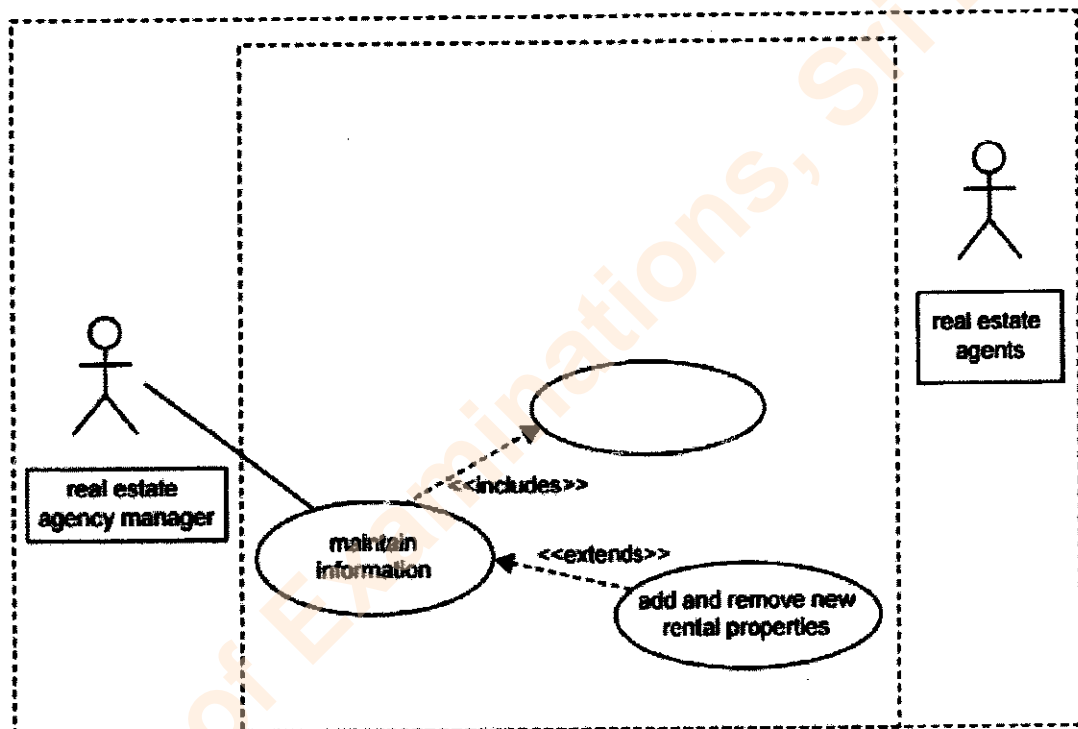
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(5 Marks)

- (ii) Your client in this project is a real-estate agency. They want to be able to use the software in order to maintain the information on the system as well as add and remove new rentals. Furthermore, all agents need to be able to add the details of new clients who take up a rental property. Every user must login their in order to use the software.

Complete the use case diagram below to show the stated requirements.



(5 Marks)

- (iii) What does it mean by "Enterprise Architecture Framework"? Describe **four** kinds of "architecture" that are commonly accepted as subsets of an overall enterprise architecture.

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[ See page four.

**(5 Marks)**

- (5 Marks)**

- (5 Marks)*

- (5 Marks)*

- (5 Marks)

(iii) Who is responsible in developing the Information Security Policy?

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(5 Marks)

(iv) Briefly explain "Acceptable use policy" which may include in an organizations information security policy.

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(5 Marks)

(v) "Physical security is a vital part of any security plan as well as fundamental to all security efforts." Explain briefly.

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(5 Marks)

4. It is necessary to develop a conceptual-level process diagram for the following scenarios of a public agency.

- \* In November of each year, the Coordination Unit at the Town Planning Authority drafts a schedule of meetings for the next calendar year.
- \* The schedule of meeting dates is sent to all the Committee Members by email, who then check their diaries and advise the Coordination Unit of any conflicts.
- \* The Coordination Unit updates the schedule calendar to resolve the conflicts as much as possible.
- \* The Coordination Unit creates meeting folders for each meeting and ensures all appropriate documents are uploaded to them, and then advise Committee Members a week before each meeting to read all related documents.
- \* The Committee Members hold their meeting, and the Coordination Unit then produces minutes including any Action Point for each Committee Members.

**Standard notation of Business Process Management (BPM) has to be used to draw your diagram**

(i) Draw a pool for the process on above scenario and name the process.

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(5 Marks)

- (ii) Determine “start” and “end” events for all identified processes.

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(5 Marks)

- (iii) Add black-box pools for external entities that interact with the process.

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(2 Marks)

- [illegible]

Department of Examinations, Sri Lanka

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