

**NATIONAL EXAMS DECEMBER 2012**

**98-IND-B4, Design of Information Systems**

3 hours duration

**NOTES:**

1. If doubt exists as to the interpretation of any question, the candidate is urged to submit with the answer paper a clear statement of any assumptions made.
2. No calculator permitted. This is a Closed-Book exam.
3. The exam is comprised of four parts. Answer any 20 from Part A (20 x 2 each = 40 marks), any 2 from each of Parts B & C (2 x 10 each = 20 marks per section), and Part D (2 x 10 = 20 marks). Only the first answers, as they appear in your answer book, will be marked. Clearly show, at the start of each answer, the section/number of each question you are answering.
4. Parts B, C & D can be answered in essay or essay plus point form format. Diagrams can be used, if appropriate. In all cases, clarity and organization of the answer is important.
5. Use the Examination Booklet(s) provided for your answers.

**Marking Scheme**

Part A: 20 x 2 per question = 40  
Part B: 2 x 10 per question = 20  
Part C: 2 x 10 per question = 20  
Part D: 2 x 10 per question = 20  
100

**PART A:** Select **twenty (20)** terms from the following list and briefly explain them in a sentence or two. Limit your answer to no more than 50 words. Simply expanding an acronym correctly is insufficient for full marks.

(20 x 2 marks each = 40 marks)

Ajax	IT Governance
API	Normalization
Authentication	NOS
B2B Website	OLAP
BPM	Phased Rollout
Cloud Computing	Portfolio analysis
Cooptation	PRM
CSF	RAD
Dashboard	RFID
Data Administration	RFP
Data Mining	SDK
Database Conceptual Schema	SQL
DoS Attack	Sociotechnical design
DSS	Spam
Entity	Tangible Benefits
ERP	TCP/IP
Expert System	XML
Information Rights	WAP
Intangible Benefits	Wiki

**PART B:** Select **two** (2) questions from the following list and answer them. You should provide a full page (or more) of explanation for each question.

(2 x 10 marks each = 20 marks)

- B1. Discuss technologies and tools for protecting information resources. Your answer should consider five of the following: controls; firewalls, intrusion detection systems, and antivirus software; securing wireless networks; encryption and public key infrastructure; ensuring system availability.
- B2. Define/explain IT infrastructure, from both a technology and a services perspective. List and describe typical components of IT infrastructure that firms need to manage.
- B3. Describe the evolving mobile platform, grid computing, and cloud computing. Provide examples of how organizations are using these to improve efficiency and effectiveness.
- B4. What are the major capabilities of a DBMS and why is a relational DBMS so powerful?
- B5. Explain data quality audits and data cleansing. Why are they so important? How are they typically accomplished?
- B6. Discuss the major technologies and standards for wireless networking, communications, and Internet access: Bluetooth, WiFi, WiMax, and 3G/4G networks. Describe the capabilities of each, and for which types of applications each is best suited.

**PART C:** Select **two** (2) questions from the following list and answer them. You should provide a full page (or more) of explanation for each question.

(2 x 10 marks each = 20 marks)

- C1. If you were setting up the Web site for an organization, what management, organization, and technology issues might you encounter? How would you address these issues?
- C2. Discuss the following major ethical, social, and political issues raised by information systems: information rights and obligations, property rights and obligations, accountability and control, system quality, and quality of life.
- C3. Compare/contrast the four basic types of information systems (TPS, MIS, DSS, ESS). Provide examples of each. What differences are there between inputs, outputs, uses and users?
- C4. Describe how an organization can complete a security risk assessment of their information systems. Identify the major categories of risks.
- C5. Describe how Porter's competitive forces model can help companies develop competitive strategies using information systems. Provide examples.
- C6. Compare/contrast the roles played by programmers, systems analysts, information systems managers, the chief information officer (CIO), and chief knowledge officer (CKO).

**PART D:** Answer question D1, plus one (1) additional from Part B or Part C (must be one you have not already answered).

(2 x 10 marks each = 20 marks)

D1. Identify at least five common IT Project management mistakes that can occur during project startup, project execution, and/or project wrap-up. Explain how best to deal with these, to ensure they don't impede project success.

Select one (1) additional question from Part B or Part C (must be one you have not already answered).