



**BOWIE STATE UNIVERSITY COMPREHENSIVE
EXAMINATION FOR MANAGEMENT
INFORMATION SYSTEMS
24/25 February 2011**

Instructions:

The Comprehensive Examination for Management Information Systems is a three hour examination. You are required to answer **three questions**. You must respond to one question from Part A (the technical portion of the curriculum) and one question from part B (the management-related portion of the curriculum). Finally, respond to a third question from either part A or part B.

Grading the comprehensive exam requires up to six weeks. No results will be released until all examinations, in all degree programs, have been graded. Answers to each question are graded "blind" by three faculty members with expertise in the subject matter.

Answers are graded as either "pass" or "fail." "Pass" indicates a minimum grade of B. In the event of a "fail" on the exam written comments from the graders explaining why the student's response was insufficient and what would be required for a passing grade will be supplied to the student. A student must pass two of three questions to receive a grade of "pass" for the comprehensive examination.

A set of URL's previously provided describe the general scenario. These URL's serve as a general context for this comprehensive examination. Students should generally use this context in responding to the questions on the examination.

General Scenario:

The following email was recently received:

“Email Marketing !

We offer you e-mail addresses databases for advertisement mailing; we sell databases also carry out mailing and hosting for the advertising projects.

Products

[World Email Lists](#) . Their validity and originality are verified. Details please go to our website

[Country or area total emails](#)

America

175 Million Email Address

Europe	156 Million Email Address
Asia	168 Million Email Address
China(PRC)	80 Million Email Address
HongKong	3.25 Million Email Address
TaiWan	2.25 Million Email Address
Japan	27 Million Email Address
Australia	6 Million Email Address
Canda	10 Million Email Address
Russia	38 Million Email Address
England	3.2 Million Email Address
German	20 Million Email Address
France	38 Million Email Address
India	12 Million Email Address
other Country or Area	

Category Name	total emails total price
Apparel, Fashion, Textiles and Leather	4,654,565
Automobile & Transportation	6,547,845
Business Services	6,366,344
Chemicals	3,445,565
Computer & Telecommunications	654,655
Construction & Real Estate	3,443,544
Consumer Electronics	1,333,443
Energy, Minerals & Metals	6,765,683
Environment	656,533
Food & Agriculture	1,235,354
Gems & Jewellery	565,438
Health & Beauty	804,654
Home Supplies	323,232
Industrial Supplies	415,668
Office Supplies	1,559,892
Packaging & Paper	5,675,648
Printing & Publishing	6,563,445
Security & Protection	5,653,494
Sports & Entertainment	3,488,455
Toys, Gifts and Handicrafts	2,135,654

-
- All of Country email lists + email sender express +add url express + etrae express

Send Your Ad to Millions

5 million bulk email only for \$80 order

50 million bulk email only for \$200 order

100 million bulk email only for \$300 order

200 million bulk email only for \$500 order

Imagine emailing 500,000 recipients and 1 out of every 1000 orders your product, that's 500 new orders!

- We go all-out to make sure our customers are completely satisfied
- If any emails fail to make delivery, we replace them free of charge
- 100% Spam free, rest assured you will not be accused of spamming
- Almost all of our emails are sent to valid email addresses
- No software required, we do all the mailing from our own server
- Don't be fooled in signing up with similar sites offering services that cannot compare to ours
- Get the most bang for your buck with bulk email advantage!”

As you write your answers please remember that you are to demonstrate that you can APPLY the knowledge gained in your graduate courses within the context of the topic of email marketing.

Comprehensive Examination Questions:

PART A

(Answer at least one question from part A)

1. To be able to send the numbers of emails advertised above requires significant data storage.
 - (a) Discuss two data storage technologies that could reasonably be used, being sure to compare and contrast them in terms of this specific application.
 - (b) Discuss briefly how data compression is done. Give an advantage and a disadvantage of using it for this application.
 - (c) Propose and justify a reasonable file system for storage of this data. (Remember that this is not the database question!)
2. There are at least four different programming language paradigms.
 - (a) Select two of them to discuss with respect to appropriateness for use in the development of the email marketing application. Name a representative language for each paradigm, and then discuss advantages and disadvantages of that language or the paradigm in general for this application.
 - (b) Now, given that your company has significant knowledge of how to do mass emailing, it has decided it will also develop and market antispam software. There will presumably be many similar or related activities in both systems. For each of the two languages/paradigms you discussed in part (a), discuss its suitability and support for reuse of parts of the email marketing application in the new anti-spam system.
3. Obviously, this company sends out a significant amount of email traffic.
 - (a) Suppose your organization has contracted to have 200 million bulk emails

sent. The message contains 1,000 characters. Make and document reasonable assumptions about what else goes with the messages (including size assumptions), and determine how long it will take them to send the messages out over a 100 Mbps DSL line.

- (b) Describe three methods for detection/correction of transmission errors. Explain for each whether it detects only, or also corrects, and how effective it is (in terms of what kinds of errors it handles).
- (c) Select three of the seven OSI layers, and explain what is happening to messages at each of them.

PART B

(Answer at least one question from part B)

- 4. This company obviously markets its services globally.
 - (a) Discuss significant issues with respect to the time, form, and content attributes of information quality.
 - (b) Discuss the various ethical and legal issues.
 - (c) Discuss how the global nature of the enterprise makes the endeavor more complicated than were this company doing business only in the US.
- 5. This company claims that its customers “will not be accused of spamming.” For each phase of the SDLC, explain what must be done to make sure this is the case. Remember, of course, that new laws are enacted frequently.
- 6. This company obviously has databases, both for their own use and to sell to their customers.
 - (a) Discuss three ways in which the two sets of databases would be related, and three ways in which they would be different.
 - (b) Being sure to avoid “drowning in detail” (in other words – do this with just a few representative fields, not the full-blown set of information), draw an ERD for a relational database that would support the mailouts they advertise being able to do.