INSTRUCTIONS: This paper consists of 3 sections. You need to select 2 questions from Section A and two questions from Section B. Each question carries 20 marks. Section C consists of 20 MC questions. Each question carries 4 marks. In each MC question, you have only to select one answer. Section C is also the bonus section of the paper. You should attempt at many as you can. The maximum score that you can get from Section C is 80. That is to say, student can get at most 160 marks in this paper. For those score higher than 100 will be added up to the Mid-term score.

SECTION A

Question 1

(a) What is the definition of information systems [5 marks].

(b) Using a business case as an example and with an aid of diagrams, describe the relationships amongst business processes, information systems and information technologies. [5 marks]

(c) With an aid of diagrams, explain the differences system structure, system , security control, data ownership, between conventional and contemporary types of information systems in accordance with their (i) system structures, (ii) system security control, (iii) data ownership and (iv) requirement gathering. [10 marks]

Question 2

(a) With an aid of diagrams, describe in detail the (i) the waterfall model [5 marks] and (ii) the spiral model [5 marks] that help system development. (In your answer, you are expected to add diagrams to help your descriptions. Besides, you should highly the advantages and disadvantages of applying such methodologies.)

(b) With reference to waterfall model, briefly describe the roles and responsibilities of the participants in a system development project, and in which phase(s) they have to take part in. [10 marks]

Question 3

(a) Describe how network technologies can facilitate the business activities of a company. [10 marks]

(b) Describe in your own words why a development team should acquire knowledge in the latest information technologies and should a development team have a throughout understanding in all these latest technologies? [10 marks]
SECTION B

Question 4
(a) Describe in details the roles and responsibilities of each participant in a system development project? [10 marks]
(b) Describe the similarities and differences amongst feasibility analysis, requirement analysis, system analysis. [10 marks]

Question 5
Select a website from Travelocity.COM, Global-Trade.COM, iSteelAsia.COM and Forbes.COM,
(a) describe the potential users of the website [5 marks],
(b) the underlying information technologies being used [5 marks],
(c) the services that the company provides, [5 marks] and
(d) discuss how the website helps to make money (or reduce operational cost) for the company. [5 marks]

Question 6
(a) The underlying principles governing component-based development are reusability and components. Describe what are they and how they make component-based development succeed. [10 marks]
(b) Could the idea of component-based development be merged with rapid application development approach and why? [10 marks]

SECTION C : Multiple Choice

Question 7
Which of the following is(are) the function of an information system?
(i) Collect information
(ii) Store information
(iii) Making decision for the board of directors
(iv) Provide suggestion for the board of directors
(a) (i) & (ii) only;
(b) (i), (ii) & (iii) only;
(c) (i), (ii) & (iv) only;
(d) (i), (ii), (iii), & (iv)
Question 8
Which of the following items is the most likely to be considered as an intangible benefit ?

(a) Increase in customer satisfactory level.
(b) Decrease in operational cost.
(c) Increase the sales revenue.
(d) Reduce the time for selling one product.

Question 9
Which of the following sequence is the best sequence describing the phases in system development ?

(a) Feasibility analysis, system implementation, user interface design, planning
(b) Project design, system implementation, system design, system analysis
(c) System analysis, system design, feasibility analysis, implementation
(d) Project planning, system analysis, system design, implementation

Question 10
Which of the following is(are) the work that needed to be handled in the planning phase ?

(i) Develop training plan
(ii) Develop support plan
(iii) Gather business requirement
(iv) Develop work plan

Answer:

(a) (i) & (iii) only
(b) (ii) & (iv) only
(c) (iii) only
(d) (iv) only

Question 11
Which of the following work is needed to be handled in the analysis phase ?

(a) Economic feasibility analysis
(b) Technical feasibility analysis
(c) Organizational feasibility analysis
(d) Process modeling
Question 12
Which of the following designs is(are) needed to be handled in the design phase?

(i) Architectural design
(ii) Fashion design
(iii) Interior design
(iv) Interface design

Answer:
(a) (i) & (ii) only
(b) (ii) & (iv) only
(c) (ii) & (iii) only
(d) (i) & (iv) only

Question 13
The task determining who uses system, what will it do, where and when will the system be used is to be done which phase?

(a) Analysis
(b) Design
(c) Implementation
(d) Planning

Question 14
Which of the following is likely to be a deliverable in the implementation phase?

(a) System request
(b) System proposal
(c) System specification
(d) System maintenance plan

Question 15
Which of the following development methodologies is suitable for large and yet risky system development?

(a) Waterfall
(b) Rapid application development
(c) Parallel phase
(d) Spiral model
**Question 16**
In which phase should the data modeling be done ?

(a) Planning  
(b) Analysis  
(c) Design  
(d) Implementation

**Question 17**
Which of the following items should be considered as a criteria for the selection of methodology ?

(i) Complexity of system  
(ii) Time schedule  
(iii) Clear user requirement  
(iv) Familiarity of system

*Answer:*  
(a) (iv) only  
(b) (iii) & (iv) only  
(c) (ii), (iii) & (iv) only  
(d) All of them

**Question 18**
Which of the following statement is the best definition for project management ?

(a) Project management is the process of planning and controlling the development of a system within a specified timeframe at a minimum cost with the right functionality.  
(b) Project management is the process of analysis and design the development of a system within a specified timeframe at a minimum cost with the right company strategy.  
(c) Project management is the process of analysis and implementing the development of a system within a specified timeframe at a minimum cost with the right functionality.  
(d) Project management is the process of reviewing and controlling the development of a system within a specified timeframe at a minimum cost with the right company strategy.

**Question 19**
Which of the following skills should not be considered as a general skill an analyst should have?  

(a) interpersonal skills  
(b) technical skills  
(c) managerial skills  
(d) Java skills
Question 20
In which phase, *programming, software testing, performance testing and training* would generally take place?
(a) Planning
(b) Analysis
(c) Design
(d) Implementation

Question 21
Which of the following would be an example of poor technical feasibility?
(a) the project will require new hardware that is an upgrade of existing computer systems
(b) the project will utilize a Unix platform although we do not have any existing Unix systems
(c) the project will cause us to add additional modules to our existing SAP system
(d) the project will pay for itself in 4 years.
(e) the project is compatible with existing systems

Question 22
Which of the following statement(s) is(are) correct in system development?
(a) Documentation should not be done since it costs too much time and effort.
(b) System review should only be done in the beginning phase and not in the progress of development.
(c) If follow any one of the methodologies, the system being developed will be *perfect*.
(d) The information provided in any *Systems Analysis & Design* course is simply for reference. Developer has the freedom to design his/her own methodology.

Question 23
Which of the following technique is unlikely for requirement gathering?
(a) JAD.
(b) Interview.
(c) Document analysis.
(d) Prototyping.

Question 24
Which of the following about *store* in a DFD is not true?
(a) A store is a database.
(b) A store is a file.
(c) A store is an entity.
(d) A store can be a database or a file.
Question 25
Which of the following statement about ERD is not true?

(a) ERD is a picture showing how data will actually be stored in databases or files.
(b) An entity must be multiple occurrences.
(c) Lines drawn between entities show relationships among the data.
(d) An entity is a person, place, event, or thing about which data is collected.

Question 26
Which of the following email address should the project reports specifically be sent to ?

(a) pfsum@yahoo.com.hk
(b) pfsum@hotmail.com
(c) pfsum@nchu.edu.tw
(d) All of the above.