ALICE CAMPUS

IFS121

EAST LONDON CAMPUS

IFS121E

EXAMINATIONS – SUPPLEMENTARY

January 2019

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Time: 2 Hours Marks: 100

Subject: Fundamentals of Information Systems

This paper consists of 12 pages including the cover page

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INSTRUCTIONS TO LEARNERS FOR THE QUESTION CHOICES

- This paper consists of three (3) sections.
- Section A is multiple choice, answer all questions on separate answer sheet provided. Place it inside the answer book when submitting.
- Section B has four (4) question, choose and answer two (2) out of the four.
- Section C has two (2) questions, choose and answer one (1) out of the two.
- Questions may be answered in any order, but you cannot mix sub-questions. For example, you cannot do Question B1(a) and Question B2(b) together to add up to 20 marks. If you choose Question B1 you have to answer both (a) and (b) in Question B1.
- **Answer each question on a new page** – head the page, e.g. Question B1, then answer (a) and (b) for Question B1. **Draw a line at the end of each question.**
- **Number all answers clearly**. An answer that does not have a visible question number will have a line drawn through it and not marked.
- Questions that have been marked "Cancelled" or have a line drawn through them in the answer book will not be marked. If more questions are answered than required, only the first required number of questions will be marked.

GENERAL INSTRUCTIONS

- The value of the mark for each question can be used as a *rough* guide for the amount of time allocated to answer the question, i.e. 100 marks in 120 minutes.
- At the end of the examination, place all answer books inside **Book 1** (the first book used).
- Label and number all books clearly. **Remember to fill in the covers of all books submitted.**

University of Fort Hare examination rules are in force for the duration of this examination.

Section A: Multiple Choice [40 MARKS]

Provide the best choice of answer for each question.

1. Which one of the systems listed below is typically used by operational level workers to support day-to-day business activities?
    a. Decision Support Systems
    b. Executive Support System
    c. Transaction Processing System
    d. Management Information System
2. Which one of the following is not a transaction processing system (TPS)?
    a. Order Processing System
    b. Purchasing System
    c. Accounting System
    d. Operating System
3. What is the difference between a Decision Support System (DSS) and a Management Information System (MIS)?
    a. A MIS is for operational level workers whereas a DSS is for top-level managers.
    b. A MIS is for small organizations whereas a DSS is for large organizations.
    c. A MIS is paper based and a DSS is computer based.
    d. A MIS helps to the organization to move in the right direction, whereas a DSS helps managers make the right decisions.
4. What is the series of activities through which raw material is processed into goods or services that can be sold at a higher price to customers called?
    a. Business co-operation
    b. Value chain
    c. Business transaction
    d. Business process reengineering
5. Which one of the following is not one of the organizational structures that are discussed in our syllabus?
    a. Technological organizational structure
    b. Virtual organizational structure
    c. Project organizational structure
    d. Functional organizational structure
6. Which one of the following is an advantage of outsourcing the development of a system?
    a. An organization can focus on its core business
    b. An organization does not have to be involved in the system development process
    c. An organization is guaranteed to save costs through outsourcing
    d. An organization can sue the software vendor and recoup their losses if employees reject the system.

7. Which one of the following is not an input device?

    a) Mouse
    b) Keyboard
    c) Microphone
    d) Printer

8. Which one of the following computer hardware components is found inside the system unit?

    a. Mouse
    b. Motherboard
    c. Monitor
    d. External hard drive

9. Which one of the following is an example of a coprocessor?

    a. Motherboard
    b. Hard Disc Drive
    c. Graphics Card
    d. Central Processing Unit

10. The CPU consists of 3 elements. Which one of these below is not one of the 3 elements of a CPU?

    a. Registry
    b. Random ccess Memory
    c. Arithmetic Logic Unit
    d. Control Unit

11. The acronym CD-ROM stands for:

    a. Compact Disc Read-Only Memory
    b. Compact Disc Recordable-Only Memory
    c. Compact Disc Rewritable Only Memory
    d. Compact Disc Random-Only Memory

12. Which one of the following is an example of a web browser?

    a. Google
    b. YouTube
    c. Microsoft Office
    d. Internet Explorer

13. Which one of the following is the most recent Microsoft Operating System?

    a. Windows 7
    b. Windows 8
    c. Windows 10
    d. Windows XP

14. Which one of these applications is designed to be used for word processing?

    a. Microsoft Word
    b. Microsoft Excel
    c. Microsoft PowerPoint
    d. Microsoft Access

15. In relational databases, a relation is:

    a. The type of relationship between two entities
    b. A table that contains data about an entity
    c. A foreign key
    d. A primary key

16. Which one of the attributes below is most likely used by the university as a primary key in its student database table?

    a. Your tax reference number
    b. Your student number
    c. Your name and surname
    d. Your passport number

17. Which one of the following fields is most likely to be used as a primary key in the database's table for a course in the university?

    a. The lecturer's ID number
    b. The lecturer's employee number
    c. The course code
    d. The course name

18. In relational databases an entity can be defined as:

    a. A database that contains the data that an organization needs
    b. A thing or person about which an organization stores data
    c. A primary key that is used as a foreign key in another table
    d. The Database Management System that the organization chooses to use

19. When using SQL, which one of the statements below is the correct syntax for creating a table called Student?

    a. Create Student
    b. Create Student table
    c. Create table Student
    d. Create table (Student)

20. Structured Query Language (SQL) is known as a:

    a. Data Definition Language (DDL) only
    b. Data Manipulation Language (DML) only
    c. Query Language only
    d. Both DDL and DML

21. Which one of the following transmission media types can be described as; "*many extremely thin strands of glass bound together in a sheathing*"?

    a. Twisted-pair wire
    b. Coaxial cable
    c. Fibre-optic cable
    d. Broadband over power lines

22. Which one of the following transmission types is not wireless?

    a. Bluetooth
    b. Wi-Fi
    c. Microwave
    d. Twisted-pair wire

[TURN OVER]

23. When you are on any UFH campus, you may connect your cell phone to the university Wi-Fi. In this instance, the university Wi-Fi can be categorised as:

    a. Your Personal Area Network
    b. Your Local Areas Network
    c. Your Metropolitan Area Network
    d. Your Wide Area Network

24. Suppose you connect your cell phone to the university Wi-Fi, but the University restricts you to only view resources that are stored on university servers, such as your academic details. This means that you are only connected to the university….:

    a. ARPARNET
    b. Internet
    c. Intranet
    d. Extranet

25. A person who breaks into computers using downloaded programs to automate unauthorised access is called:

    a. A hacker
    b. A cracker
    c. A script kiddie
    d. A cyber terrorist

26. A harmful programme that disguises itself as a useful application is known as a:

    a. Worm
    b. Trojan
    c. Virus
    d. Spyware

27. Although people frequently confuse a modem and router, they perform different functions. The difference between a modem and a router is that:

    a. A modem modulates and demodulates data while a router directs data
    b. A module directs data while a router modulates and demodulates data
    c. A modem decrypts data while a router encrypts it
    d. A router encrypts data while a modem decrypts it

28. Which one of the following is NOT one of the disadvantages of an enterprise resource planning system (ERP)?

    a. Difficulty implementing change
    b. Difficulty integrating with other systems
    c. Risk in using one vendor
    d. Risk in using multiple vendors

29. Small-and-Medium-Sized-Enterprises (SMEs) can reap business benefits from implementing open-source ERP systems. Which one of the following definitions correctly defines open-source software?

    a. It is software that is custom built for an organization
    b. It is software built by a vendor and sold to many businesses
    c. It is software whose code can be modified by anyone in order to customize it
    d. It is software that comes with a short-term license only

[TURN OVER]

30. One group of professionals who participate in a system development process are said to be the only one that sees the system in its totality. Which one among the following is that group of professionals?

    a. Software Programmers
    b. Systems Analysts
    c. Users
    d. Managers

31. In terms of systems design, disaster planning refers to:

    a. Acting promptly after a disaster has occurred
    b. Designing systems that will never face a disaster
    c. Anticipating and planning for disasters
    d. Causing disasters to competitors' systems in order to identify their weaknesses for purposes of benchmarking your own designs

32. During the primary investigation phase of the system development process, which one of the following questions should **NOT** be a concern?

    a. What should the colour schemes for the user interface be?
    b. What are the potential costs?
    c. What are the associated risks?
    d. What primary problems is the new software going to solve?

33. The development of system security and controls must be considered during:

    a. Logical design only
    b. Physical design only
    c. Both logical and physical design stages
    d. System implementation phase

34. The difference between a programmed and non-programmed decision is that:

    a. A programmed decision is made by programmers while a non-programmed decision is made by analysts
    b. A programmed decision is one that pertains to programming issues while a non-programmed decisions pertains to design issues
    c. A programmed decision is one that is made based on a rule or procedure, while a non-programmed decision is one that deals with unusual or exceptional situations
    d. A programmed decision means that a system can be programmed and implemented, while a non-programmed decision means that only the prototype can be made

35. The two traditional data processing methods are batch processing and online transaction processing (OLTP). Batch processing can be defined as:

    a. Business transactions that accumulated over a period of time and processed as a single unit
    b. Business transactions that are processed immediately without delay
    c. Business transactions that are processed in stages over a period of time
    d. Business transactions that are meant to be processed by a third party

36. In systems analysis and design, the term physical design refers to:

    a. What the system will do to solve problems
    b. How the system components will work together to accomplish as task
    c. The logic or rationale for creating the system
    d. A system that uses a graphical user interface

37. One of the important elements of a good interactive dialogue with a user interface is:

    a. Using strong IS jargon
    b. Respectful and professional messages
    c. Very slow response time
    d. Non-responsiveness to wrong input

38. In systems analysis and design, the term logical design is refers to:

    a. A system that uses a graphical user interface
    b. What the system will do to solve problems
    c. How the system components will work together to accomplish as task
    d. The logic or rationale for creating the system

39. Changes within organizations that result from IS implementation need to be managed in order to gain user acceptance. Which one of the following is **NOT** a correct approach to take when managing change?

    a. Involve users throughout the system development process
    b. Provide training for users when required
    c. Re-assure users that a new system will not create more unwanted work
    d. Simply remove the old system and let them figure out the new one

40. One of the ways of evaluating a system design is by conducting a cost-benefit analysis evaluation. Which one of the following statements expresses a disadvantage of this evaluation method?

    a. It adds too much work for accountants
    b. The benefits of some systems to an organization cannot be quantified in monetary terms
    c. Information Systems professionals do not know how to do a cost-benefit analysis evaluation
    d. Costs-benefit analysis is never accurate, therefore not useful

Section B: Theory [40 Marks]

There are **FOUR QUESTIONS** in this section. **ANSWER TWO.**

Question B1 [20 Marks]

a) Mr Widget recently read an article in his local community paper, which stated that there are many problems with using a database approach. He asks you to *list* the advantages of the database approach. (10)

b) List FOUR advantages and SIX disadvantages of an ERP system. (Clearly show which are advantages or disadvantages to score the marks). (10)

AND/OR

Question B2 [20 Marks]

a) Provide a description of an operating system and then *list* the activities (7) that it performs. (10)

b) Identify and describe the FIVE forms of testing done during the Systems Development Life Cycle (SDLC). (10)

AND/OR

Question B3 [20 Marks]

a) Mr Widget overheard someone speaking about an executive support system (ESS), and he wants you to explain it further to him. (10)

   i. List 5 characteristics of an ESS

   ii. List 5 capabilities of an ESS

b) Mr Widget asks you to compare and contrast proprietary and off-the-shelf software by providing the THREE advantages and TWO disadvantages of EACH approach. Note:

clearly show headings for the different types of software and whether you are discussing advantages or disadvantages to score the marks. (10)

AND/OR

Question B4 [20 Marks]

a) Identify any FIVE characteristics of valuable information and provide a matching definition for each of them. (10)

b) ABC Factory wants to start a new systems development project, but is concerned about the high rate of projects that fail. The company has asked that you list any FIVE project planning issues (factors) frequently contributing to project failure and their associated countermeasure. Reproduce the table below to structure your answer in your answer book. (10)

Factor	Countermeasure
...	...

Section C: Diagrams [20 MARKS]

There are TWO QUESTIONS IN THIS SECTION i.e. **Question C1 & Question C2. Answer ONE.**

Section C 1

a) ABC Factory has decided to introduce a new accounting system at their various factories to replace their old accounting system. The salesperson who sold the company the software told them that they would have to decide on an appropriate start-up (cutover) approach to use, but never mentioned them. The manager asks you to explain the various start-up approaches. Draw and describe the FOUR start-up approaches by clearly showing the positioning of the new and old systems. (10)

b) Mr Widget is going to be installing a point-of-sale (POS) system at his stationery store and asks that you explain the data processing activities common to Transaction Processing Systems, using a diagram. (10)

OR

Question C2

a) Mr Widget has recently heard about something called a value chain and the fact that it has many different types of systems that operate at the different stages. He asks that you draw an applied view of a value chain of a manufacturing company which includes the different stages and the systems at each stage (if there is one). He does not expect a detailed picture, so just a block with the stage and system names will be fine. Don't forget to show the two different types of management that occur in a value chain. (10)

b) Mr Widget recently watched a very interesting documentary on TV about the problem-solving needed when loading a container ship, and now he would like you to draw a suitable figure and briefly describe how decision making relates to problem solving. (10)

[END OF QUESTION PAPER]

Surname and initials: _____ Student no.: _____

QUESTION 1: Multiple Choice ANSWER SHEET [40 Marks]

Instructions:

- Write your surname, initials and student number in the spaces above.
- Clearly mark your answers with a dark cross (X).
- At the end of the examination, tear this sheet off from the question paper and place it firmly into your answer book.

	a	b	c	d	e	Marks	Score
1						1	
2						1	
3						1	
4						1	
5						1	
6						1	
7						1	
8						1	
9						1	
10						1	
11						1	
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26							

	a	b	c	d	e	Marks	Score
27						1	
28						1	
29						1	
30						1	
31						1	
32						1	
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