

PAN AFRICA CHRISTIAN UNIVERSITY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BIT 209

CAMPUS: ROYSAMBU

COURSE TITLE: HUMAN COMPUTER INTERACTIONS (SPECIAL)

EXAM DATE:

TIME:

INSTRUCTIONS

- This exam carry a total of SIX Questions of
- Section A Compulsory
- Section B Attempt any THREE Questions
- All questions carry [10 Marks] each.
- Read all questions carefully before attempting.

Section A (Compulsory)

Question 1:

A graphical system possesses a set of defining concepts. Included are sophisticated visual Presentation, pick-and click interaction, a restricted set of interface options, visualization, object orientation, extensive use of a person's recognition memory, and concurrent performance of functions.

Discuss FIVE main characteristics of GUI

[10 Marks]

Section B (Attempt THREE Questions)

Question 2:

- a) How has HCI transformed computing industry in your country. **[6 Marks]**
- b) HCI is a very dominant field that affects interaction in the study, planning, and design of how people and computers work together so that a person's needs are satisfied in the most effective way. With these in mind, system designers consider various factors in the process of designing hardware and software designs. Deduce the above statement.

[4 Marks]

QUESTION 3:

- a) You have graduated from your University and opt to team up with two colleagues to raise funds and register a software company to start operations of software development. Highlight in details on how you will structure your teams for maximum production and efficiency. **[5 Marks]**
- b) Articulate some of the FIVE major pitfalls and problems you are likely to encounter in your company established in (a) above. **[5 Marks]**

QUESTION 4:

A power plant was redesigned so that the old system consisting of a single large display screen which could be seen by all of a team of three operators was replaced by individual workstation screens for operators. This worked well until there was a problem which resulted in dangerous gases being released. The team of operators had great difficulty in finding the source of the problem and deciding what to do. Because they no longer have access to all the information, they have to spend time explicitly coordinating their understanding of the situation by talking to each other. Under the old system, the knowledge would be shared – one operator would know what was happening with another's area of the plant without explicit communication. Although the team's individual responsibilities would still have been clearly divided, the knowledge of the system would be shared.

How could the new system of individual workstations be modified to make better use of distributed cognition?

[10 Marks]

QUESTION 5:

- a) Information Technology and IOT belong to the technical field. It is crucial for the analyst to have an understanding of different types of technology and user needs with– what they are used for, how they work and how they are evolving. Discuss some FOUR business knowledge and skills you will advise for a system designer/Analyst. **[4 Marks]**
- b) Discuss any THREE major area most people have trouble with computer designs in your country region. **[6 Marks]**

Question 6:

Discuss FIVE obstacles and pitfalls of system development path in system designs. **[10 Marks]**

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