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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2016/2017 ACADEMIC YEAR
SECOND YEAR, SECOND SEMESTER EXAMINATION
FOR THE DEGREE OF BACHELOR OF SCIENCE
(COMPUTER SCIENCE)**

Date: 12th August, 2016.
Time: 8.30am –11.00am

KCS 205 - SYSTEMS ANALYSIS AND DESIGN

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Distinguish the following;
- i) Deterministic and probabilistic systems. (3 Marks)
 - ii) Open loop and closed loop systems. (3 Marks)
- b) Describe any SIX situations that may necessitate the need for a new information system during SDLC. (6 Marks)
- c) Explain three levels of quality assurance. (3 Marks)
- d) During the preliminary investigation, certain objectives need to be observed; Outline them (5 Marks)
- e) Describe the steps involved when selecting hardware and/ or software for an information system. (5 Marks)
- f) Explain five areas that will be considered in a feasibility study report. (5 Marks)

QUESTION TWO (20 MARKS)

- a) Explain any five criteria for selecting good software. (5 Marks)
- b) Explain five special system tests that need to be done during system testing . (5 Marks)
- c) State five tools that are used in structured analysis stating the benefits and limitations of each. (10 Marks)

QUESTION THREE (20 MARKS)

- a) Describe four strategies used to implement/changeover a new system in an Organization. (8 Marks)
- b) Explain six reasons for having documentation of systems projects. (6 Marks)
- c) It is possible for systems analyst involved in the production of new or upgraded computer systems to encounter resentment and opposition from existing employees. This may take many forms; from outright opposition to active hostility towards the new system during fact finding interviews;
 - i) Explain **three** reasons for resistance to change towards the systems analyst. (3 Marks)
 - ii) Describe the measures that can be taken by the systems analyst to alleviate this resistance. (3 Marks)

QUESTION FOUR (20 MARKS)

- a) Explain three approaches to reliability. (3 Marks)
- b) Explain two differences between cardinality and modality as used in ERDs, giving an example in each case. (4 Marks)
- c) List and explain any three design constraints. (3 Marks)
- d) State and explain three measures of performance in Soft Systems Methodology SSM). (3 Marks)
- e) With the aid of a diagram, describe the Check land's seven stage Soft Systems Methodology. (7 Marks)

QUESTION FIVE (20 MARKS)

- a) Define Systems re-engineering (2 Marks)
- b) Explain three characteristics of system re-engineering (6 Marks)
- c) Describe in-house personnel training (5 Marks)
- d) Describe the steps of an information system plan (7 Marks)