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UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR

END OF SEMESTER EXAMINATION
THIRD YEAR SEMESTER ONE EXAMINATION

FOR THE DEGREE OF
(INFORMATION TECHNOLOGY)

COURSE CODE: BIT 315

COURSE TITLE: KNOWLEDGE BASED SYSTEMS

DATE: 7/12/2023

TIME: 9.00A.M- 11.00A.M

INSTRUCTIONS

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [30 MARKS]

- a) Define the following terms as used in knowledge based systems
i) Knowledge ii) wisdom (3mks)
- b) Differentiate between Priori Knowledge and Posteriori Knowledge (3mks)
- c) i) Give any application of knowledge based systems (3mks)
ii) In an organization set up give three benefits of capturing codifying and harnessing of tacit knowledge (3mks)
- d) i) Describe three techniques organizations can convert tacit knowledge into explicit knowledge capture tacit knowledge (3mks)
ii) Outline three parameters that are measured during the review process of a knowledge based system after its implementation (3mks)
- e) i) Outline the steps that are undertaken in knowledge architecture during the development process (3mks)
ii) Explain three factor that affect knowledge management system deployment (3mks)
- f) i) Explain any three inhibitors of knowledge transfer (3mks)
ii) Describe any three roles the internet plays during the knowledge transfer process (3mks)

QUESTION TWO [20 MARKS]

- a) Give any two comparisons between a knowledge based system and a conventional system (4mks)
- b) Differentiate between machine learning and deep learning as applied in artificial intelligence (4mks)
- c) Explain any four challenges faced by Knowledge management systems (4mks)
- d) Using a diagram, describe the four modes of knowledge conversion process (8mks)

QUESTION THREE [20 MARKS]

- a) State any four types of knowledge (4mks)
- b) Briefly explain how the neural network technologies has positively benefited the field of knowledge management. (4mks)
- c) Outline any four pre-requisites for knowledge transfer (4mks)
- d) Explain briefly the knowledge management cycle using the Zack Model (8mks)

QUESTION FOUR [20 MARKS]

- a) Explain how the following tools promote knowledge transfer and sharing in the e-world
i) Intranet ii) Groupware iii) e-business iv) extranet (4mks)
- b) State the four components of a knowledge based system (4mks)
- c) When deploying a knowledge based system in an organization, it's bound to face resistance from users, briefly explain three ways of mitigating against resistance to change (6mks)

- d) Explain briefly three aspects that should be considered before deployment of a knowledge based system within an organization (6mks)

QUESTION FIVE [20 MARKS]

- a) Explain how the following codification tools are used during knowledge codification process
i) Case-Based Reasoning ii) Knowledge-Based Agents iii) frames (6mks)
- b) Using a diagram, Explain how an expert system works (6mks)
- c) Briefly describe any four techniques employed by knowledge engineers in capturing knowledge (8mks)