



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2020/2021
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
CONSTRUCTION MANAGEMENT

BCM 305: MAINTENANCE AND RENOVATION MANAGEMENT

DATE: WEDNESDAY 31ST MARCH 2021

TIME: 11.00 A.M - 1.00 P.M

INSTRUCTIONS:

ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS

QUESTION ONE 30 MARKS

- i. Outline FIVE major importance of building maintenance (5 marks)
- ii. Differentiate between planned preventive maintenance and planned corrective maintenance (4 marks)
- iii. Briefly describe why maintenance cost is usually more expensive than new works. (6 marks)
- iv. Discuss any FOUR different types of maintenance departments in an organization (4 marks)
- v. Describe briefly the phases of the maintenance department Scope (4 marks)
- vi. Outline any FOUR main advantages of direct labour maintenance in an organization (4 marks)
- vii. Outline briefly any THREE characteristics that describe a building stock (3 marks)

QUESTION TWO 20 MARKS

- i. Elain and Njeri construction students from Kenyatta University were requested to carry out a maintenance work for the Campus buildings in Ruiru. Discuss any of the Five criteria they will use in choosing either direct or outsources labour for maintenance works. (10 marks)

- ii. Maxwel and Tinah were requested by the Maintenance Department from Kenyatta University to give a key-note speech during the Inter-University Annual Exhibition Show on the design and construction failures for the University's building stock. Illustrate with the aid of a sketch how the bathtub curve can be statistically used in planning the maintenance processes that Maxwel and Tinah should consider in their speech. (10 marks)

QUESTION THREE 20 MARKS

- i. Alex and Musau are aspiring to start an investment on Real Estate after graduation. As a construction professional, they have approached you to give them a technical explanation on the reasons for the continuing growth of the maintenance and retrofitting sector. Discuss any Five points of your explanation. (10 marks)
- ii. Derick and Martin were contracted by the University to carry out the maintenance work for the University facilities in the financial year 2019/2020. They requested you to provide them with the building manual for every facility they were to maintain. Discuss any Five relationship between the maintenance work and the document. (10 marks)

QUESTION FOUR 20 MARKS

- i. Discuss the following in relation to the building life cycle costing. (6 marks)
- a) life cycle
 - b) obsolescence
 - c) utility value
- ii. Outline any Three stages or generations in which information technology is considered to develop in the field of maintenance management to enhance efficiency in service delivery. (6 marks)
- iii. Failure to meet an acceptable standard may be as a result of the normal agencies of deterioration, but equally may be attributable to technical or managerial shortcomings, and the work necessary to restore the standard in such circumstances is classed as remedial rather than routine. Discuss any Four factors contributing to a technical failure in building maintenance (8 marks)

QUESTION FIVE 20 MARKS

- i. Boniface a facility manager of XYZ Agency complained that the facility he was managing underperforming because of the negligence of Muchina, the lead project design team for XYZ Agency. Because of defamation and character assassination, Muchina sued Boniface in a court of law. Briefly discuss any Five possible points Boniface will ground his case on. (10 marks)
- ii. Maintenance cost is a constituent of different kinds of factors. Discuss any Four major factors contributing to the maintenance cost. (10 marks)