



KENYATTA UNIVERSITY

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN REAL ESTATE

BRE 209: BUILDING TECHNOLOGY II

1ST SEMESTER 2021/2022

TIME: 2 HOURS

INSTRUCTIONS: ANSWER QUESTION ONE COMPULSORY AND ANY OTHER

TWO QUESTIONS

QUESTION ONE (COMPULSORY) [30 Marks]

- a) State the overall purpose of Building Codes in the construction industry (1 Mark)
- b) State FOUR disadvantages of load bearing structures over framed structures (4 Marks)
- c) State FOUR purposes of dewatering during post construction stage (4 Marks)
- d) A variety of factors determine the complexity of building services to be installed in a building. State THREE such factors. (3 Marks)
- e) Distinguish between external and internal asphalt mastic tanking as a basement waterproofing technique (2 Marks)
- f) With the aid of a well labeled sketch, explain the FOUR elements of the fire triangle (8 Marks)
- g) State FIVE advantages of adopting off-site construction towards achieving the governments agenda 4 for provision of affordable housing (5 Marks)
- h) List THREE advantages of using the well point system in dewatering a construction site (3 Marks)

ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO

- a) Briefly outline FIVE factors that you would consider when selecting a wall finish material (10 Marks)
- b) Explain FIVE parameters to be considered when selecting an appropriate method for waterproofing basements (10 Marks)

QUESTION THREE

- a) Define the term 'retaining wall' as used in the construction industry. (1 Mark)
- b) Sketch and label the main components of a typical retaining wall (5 Marks)
- a) Explain THREE functional requirements of a roof on a building (6 Marks)
- b) Discuss FOUR types firefighting equipment suitable for extinguishing a fire in high rise building (8 Marks)

QUESTION FOUR

- (a) With the aid of well labelled sketches, explain any THREE types of joints used in construction of structures such as buildings. State ONE function of each joint.

(12 Marks)

QUESTION FIVE (20 Marks)

- (a) Explain FOUR factors that influenced Gothic architecture in terms of various architectural features. **(8 Marks)**
- (b) Discuss FOUR key main features of early East Africa Architecture. **(8 Marks)**
- (c) Briefly discuss the materials and technology used in the Roman Empire. **(4 Marks)**

QUESTION SIX (20 Marks)

- (a) Discuss the effects of industrial revolution under the following subheadings:

(16 Marks)

- (i) Economic effects
- (ii) Political effects
- (iii) Population effects
- (iv) Environmental effects.

- (b) Discuss the main features of Baroque architecture under the listed countries. **(4 Marks)**

- (i) French Baroque
- (ii) Russian Baroque