



BIT 2111 Computer Aided Design JAN 2021

computer science (Jomo Kenyatta University of Agriculture and Technology)



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JOMOKENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
University Examinations 2020/2021

**YEAR III SEMESTER I EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN INFORMATION TECHNOLOGY**

BIT 2111: COMPUTER AIDED ART AND DESIGN

DATE: JANUARY, 2021

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and Any Other TWO Questions.

Question One

- a) Outline the features of AutoCAD 5 marks
- b) Explain the different ways of starting a drawing 4 marks
- c) Elaborate on the different parts of the AutoCAD window 5 marks
- d) Explain briefly the following commands 8 marks
 - i) QSELECT
 - ii) REDO
 - iii) WPOLYGON
 - iv) LAST
- e) Write down the purpose of the following commands 4 marks
 - i) MIRROR3D
 - ii) ALIGN
 - iii) ROTATE
 - iv) COPY
- f) Differentiate between the following terms 4 marks
 - i) Stretching
 - ii) Lengthening
 - iii) Chamfering
 - iv) Filletting

Question two

- a) State the commands that you will use to carry out the following tasks 4 marks
 - i) Creating 2D polylines
 - ii) Creating a quadratic or cubic spline curves
 - iii) Drawing semicircles and curves
 - iv) Constructing a closed polyline composed of wide arc segments
- b) Identify the features of blips 3 marks
- c) Define the term block and state two operations carried out on blocks 3 marks
- d) Outline the advantages of using blocks 4 marks
- e) Describe the concept of hatching 6 marks

Question Three

- a) Explain the usefulness of the following tools 6 marks
 - i) VPORTS
 - ii) DVIEW
 - iii) CHANGE
- b) Expound on the two main uses of meshes 4 marks
- c) Distinguish between a wireframe model and a surface 6 marks

- d) State the commands you would use to create the following 4 marks
- i) Solid cylinder with a circular base
 - ii) Solid sphere based on a center point
 - iii) Ring shaped solid similar to inner tube of a tire
 - iv) Solids by extruding selected objects

Question Four

- a) Expound on the following commands 8 marks
- i) UNION
 - ii) SUBTRACT
 - iii) INTERSECT
 - iv) SHADEMODE
- b) Outline the features of dimensioning provided by AutoCAD 5 marks
- c) State the commands used to carry out the following text operations 3 marks
- i) Modifying the characteristics of the font such as height and width factor
 - ii) Creating multiline text
 - iii) Specifying font height
- d) Explain the purpose of the following elements 4 marks
- i) Crosshairs
 - ii) Status bar
 - iii) UCS icon
 - iv) Metric

Question five

- a) Differentiate between the following commands 4 marks
- i) TRIM
 - ii) BREAK
 - iii) OOPS
 - iv) U
- b) Explain the different types of coordinate systems used by AutoCAD 6 marks
- c) Differentiate the following terms 6 marks
- i) REGEN and REDRAW
 - ii) MSPACE and PSPACE
 - iii) GRID and SNAP
- d) Discuss any four applications of CAD 4 marks