

DURATION: - 2½ hrs

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MARKS:- 75

Note: - (1) All questions are compulsory.

(2) Figures to the right indicate full marks

(3) Answer to each question must be on a new page

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| Q.1) | Attempt any 3 out of 6 | 20M |
| a) | List and explain Input devices used in GIS. | CO1-U |
| b) | Differentiate between active and passive graphics. | CO1-A |
| c) | Write a short note on Cathod Ray Tube (CRT) | CO1-U |
| d) | Write a short note on architecture of Raster Scan System. | CO1-U |
| e) | What is Clipping? Explain in detail. | CO1-U |
| f) | Write a short note on Polygon Clipping. | CO1-U |
| Q.2) | Attempt any 3 out of 6 | 20M |
| a) | What is transformation? Explain its Types. | CO2-U |
| b) | Explain 2D transformation in details. | CO2-U |
| c) | Explain the concept of transformation of points. | CO2-U |
| d) | Explain conventions in 3D transformation in detail. | CO2-U |
| e) | What are multiple 3D transformations? Explain in detail. | CO2-U |
| f) | Explain view volumes for projections. | CO2-U |
| Q.3) | Attempt any 3 out of 6 | 20M |
| a) | Explain 3D viewing pipeline with diagram. | CO3-U |
| b) | Explain canonical view volume in brief. | CO3-U |
| c) | What is meant by radiance and irradiance? | CO3-U |
| d) | Explain calorimetry and its different applications in brief. | CO3-U |
| e) | What is meant by colorspace and colorwheel? | CO3-U |
| f) | Explain units and uses of Radiometry. | CO3-U |
| Q.4) | Attempt any 3 out of 6 | 15M |
| a) | Explain Scan-Line method. | CO4-U |
| b) | Explain Binary Space Partition trees with example | CO4-R |
| c) | What are properties of Bezier Curve? | CO4-R |
| d) | Write a short note on Quadratic Surfaces. | CO4-U |
| e) | Write a short note on Area-Sub division Method. | CO4-R |
| f) | Define Curve & Its types. | CO4-R |
| Q.5) | Attempt any 3 out of 6 | |
| a) | Write a short note on Key Frame animation. | CO5-U |
| b) | Define computer animation & its principle | CO5-R |
| c) | State and explain procedural techniques in animations. | CO5-U |
| d) | What is image ? Explain in detail. | CO5-U |
| e) | Write a short note on image enhancement. | CO5-U |
| f) | Explain the concept of deformation. | CO5-U |