### University Institute of Engineering & Technology
*(Recognised Under Section 2(f) and 12B of UGC)*
### Kurukshetra University, Kurukshetra

**ME – 3 Hrs 15 Min**

**THEORY EXAMINATION – Jan 2021**

| B.TECH - CSE | SEMESTER – VII |
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**M.M. - 56**

| PAPER - CSE-403 | SUBJECT- Computer Graphics and Animation |
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## INSTRUCTIONS TO BE FOLLOWED

- **Allotted time for examination is 3 hours 15 minutes that includes time for downloading the question paper, writing answers, scanning of answer sheets and E-mailing the PDF files to the designated Email ID.**
- **For CSE-A Regular Students, the Email ID is:- btech7thcsea@kuk.ac.in**
- **For CSE-B Regular and All Reappear Students, the Email ID is:- btech7thcseb@kuk.ac.in**
- **The candidates will be required to attempt 75% of the question paper (maximum) by choosing to their any best questions accumulating 56 marks.**
- **The PDF files should be saved as Roll No. and Subject Code. Proper attention should be given while sending the email and in the subject line, the Roll Number and Subject Code should be mentioned.**
- **Maximum Page Limit should be 20 (Twenty) for attempting the question paper on A4 sheets which could be downloaded and printed from the sample sheets given in the Kurukshetra University Examination guidelines.**
- **Over-attemptation should be avoided.**
- **Handwriting should be neat and clean and diagrams should be clear and contrasted.**
- **The candidate should not write their Mobile No. otherwise Unfair Means Case will be made.**
- **While attempting the paper, the candidate will use blue/black pen only.**
- **Before attempting the paper, the candidate will ensure that he/she has downloaded the correct question paper. No complaint for attempting wrong question paper by the candidate will be entertained.**
- **Candidate must ensure that he/she has put his/her signature on each page of the answer sheet used by him/her. Answer sheet without the signature of the candidate will not be evaluated.**

# PART-A  (15 Marks)

**Q. No. – 1 Answer the following in short.**               **15x1=15**

| | |
|---|---|
| (i) | Elaborate Animation? |
| (ii) | Define Computer Graphics. |
| (iii) | What Is Scan Conversion? |
| (iv) | What Is Vertical Retrace Of The Electron Beam? |
| (v) | What Is Resolution? |
| (vi) | Name Any Five Input Devices? |
| (vii) | Name Any Five Output Devices? |
| (viii) | What Do You Mean By Emissive And Non-emissive Displays? |
| (ix) | What Is Aspect Ratio? |
| (x) | Define Pixel? |
| (xi) | Define Circle? |
| (xii) | What Is "Point" In The Computer Graphics System? |
| (xiii) | What Is Transformation? |
| (xiv) | What Are The Features of Inkjet and LaserPrinters? |
| (xv) | Window Coordinates |

# PART-B (20 Marks)

| | UNIT-I | |
|---|---|---|
| 2 | With suitable example explain DDA line drawing algorithm. | 5 |
| | **UNIT-II** | |
| 3 | Discus the process of Window to View Port Transformation with suitable diagram | 5 |
| | **UNIT-III** | |
| 4 | With suitable diagram explain point and line clipping | 5 |
| | **UNIT-IV** | |
| 5 | Discus Priority algorithm | 5 |

# PART-C (40 Marks)

| | UNIT-I | |
|---|---|---|
| 6 | What do you understand by Display devices? Discus the principle of Monocrome, Coloured and Flat panel Display devices. | 10 |
| 7 | With suitable example elaborate Bresenhams's Circle drawing algorithm | 10 |
| | **UNIT-II** | |
| 8 | With suitable example explain Two dimension Translation, Scaling and Rotation | 10 |
| 9 | With neat n clean sketch elaborate the concept of "Reflection" and "Shear" | 10 |
| | **UNIT-III** | |
| 10 | What is Clipping? Explain Sutherland-Hodgemen polygon clipping algorithm. | 10 |
| 11 | What do you meant by Projection? Explain Parallel and Perspective Projection in detail. | 10 |
| | **UNIT-IV** | |
| 12 | Discuss the properties of Beizer Curves and Bezier Surfaces. | 10 |
| 13 | What are Hidden surface removal methods? Explain hidden surface elimination and depth buffer with suitable representation. | 10 |