D.N.R COLLEGE OF ENGINEERING & TECHNOLOGY
Department of Electronics and Communication Engineering
Academic Year: 2021- 2022 (ODD Semester)
Innovative Teaching Method

B-Tech, Semester& Branch: II/ I Semester ECE
Title: Electronic Devices and Circuits
Name of the Faculty member: K.Venkanna Naidu
Name of the Topic: Junction Field Effect Transistors
Name of the Innovative Practice: Visual Quiz
Date& Duration: 09.08.2021&10 Minutes

Justification:

The concept of Field Effect Transistor plays a vital role in forthcoming courses in the higher semesters. In order to assess the understanding level of the students, visible quiz activity was conducted.

Details of the Implementation:

Initially, 10 questions covering the important topic in the unit was taken and prepared in a power point presentation.

The students were split into a group of four members (class strength: 39). 10 groups were formed and each member of the group were given with a card containing A, B, C, D as shown below.

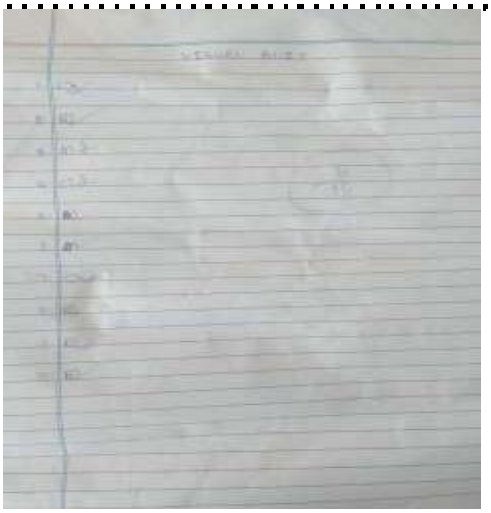
Each group was provided with a paper to write down the answer for each question.
Once the question is displayed one by one. The group member should raise the correct option card for the question.

1. An FET has

A. Very High Input resistance
B. Very Low input resistance
C. High connection emitter junction
D. Forward Biased PN Junction

4. The pinch-off voltage for a N-channel JFET is 4V. When V_{GS} = 1 V, the at $|V_{DS(min)}|$ which the pinch-off occurs is equal to

A. 3 V
B. 5 V
C. 4 V
D. 1 V



Reference :

1. Anil K.Jain, “Fundamentals of Digital Image Processing”, Prentice Hall of India, 9th Edition, Indian Reprint,2002.
2. B.Chanda, D.Dutta Majumder, “Digital Image Processing and Analysis”, PHI, 2009.

D.N.R COLLEGE OF ENGINEERING & TECHNOLOGY
Department of Electronics and Communication Engineering
Academic Year: 2021- 2022 (Even Semester)
Innovative Teaching Method

B-Tech, Semester& Branch: IV/ II Semester ECE
Title: Electronic Measurements and instrumentation
Name of the Faculty member: K.Venkanna Naidu
Name of the Topic: Dual trace oscilloscope
Name of the Innovative Practice: Flipped Classroom
Date& Duration: 21.02.2022&40 Minutes

Justification:

It allows students to learn in their own pace, it encourages students to actively engage with lecture material, it frees up actual class time for more effective, creative and active learning activities and students take control and responsibility for their learning.

Details of the Implementation:

Specific topic was given to the students learn on their own. Resources like reference book, videos were given to the students. Students are asked to prepare more in depth than before. Students are separate into groups where students are given a task to perform. Get the class back together to share the individual group's work with everyone.

Reflective Critique:

Feedback of practice from students and other stakeholders:ϖ Students feel that they have improved self-learning. They learn how to communicate with team members and work together.

Benefit of the practice:

Every students got equal opportunity to come forward to take part in this activity. The success of the activity was evaluated by asking the same question in Internal Assessment test II – Around 80% of students answered correct

Challenges faced in implementation:

The main challenge faced is that few students not exposed to flipped class room. Students struggle with self-discipline and may turn up to class without having absorbed the lesson. To make all students to participate I started to praise others, taking turns for equal participation, and shared decision making.

REFERENCES :

1. Electronic Instrumentation & Measurements - David A. Bell, PHI, 2nd Edition, 2003.
2. Electronic Test Instruments, Analog and Digital Measurements - Robert A.Witte, Pearson Education, 2nd Ed.,
2004.
3. Electronic Measurements & Instrumentations by K. Lal Kishore, Pearson Education - 2005.