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# G.PULLAIAH COLLEGE OF ENGINEERING AND TECHNOLOGY

NANDIKOTKUR ROAD, VENKAYA PALLI, KURNOOL - 518 452

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### VISION

To produce engineers with sound knowledge in Electronics and Communication related domains with entrepreneurial skills to serve societal needs.

### MISSION

The department imparts quality technical education with professional competence, leadership abilities and ethical values through effective teaching learning process.

### PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

**PEO - I**
Apply the principles of basic engineering sciences in performing professional tasks in Electronics and Communication Engineering and to develop awareness on societal concerns.

**PEO - II**
Demonstrate problem-solving abilities that permit to contribute in a variety of signal processing, design of circuitry and academic careers.

**PEO - III**
Thrive in diverse, global, and multidisciplinary environments with team spirit for successful completion and management of electronic projects.

**PEO - IV**
Participate in lifelong-learning activities to enhance professional and ethical development.

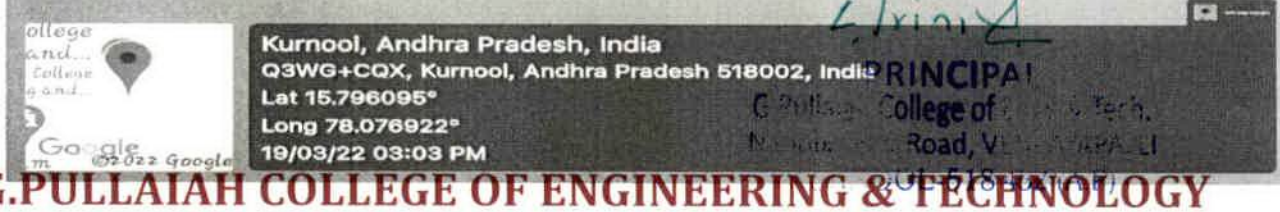
### PROGRAMME SPECIFIC OUTCOMES (PSOS)

**PSO - I**
Apply the principles of Electronics, Analog and Digital Systems in the potential fields of Consumer Electronics, Medical and Defence.

**PSO - II**
Get profound knowledge in Communications, Signal and Image Processing along with programming & Simulation tools for research advancement.

### PROGRAMME OUTCOMES (POS)

a) **Engineering Knowledge**: An ability to apply the knowledge of mathematics, science, engineering Fundamentals and an engineering specialization to the solution of complex engineering problems.
b) **Problem Analysis**: An ability to identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
c) **Design / Development of solutions**: An ability to design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and Environmental considerations.
d) **Conduct investigations of complex problems**: An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
e) **Modern Tool Usage**: An ability to create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
f) **Engineering and Society**: An ability to apply reasoning informed by the contextual knowledge to assess Societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
g) **Environment and Sustainability**: An ability to understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
h) **Ethics**: An ability to apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
i) **Individual and Teamwork**: An ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
j) **Communications**: An ability to communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give receive clear instructions.
k) **Project management and finance**: An ability to demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
l) **Life-long Learning**: An ability to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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# DEPARTMENT OF MECHANICAL ENGINEERING

## VISION

*Providing outstanding technical education in Mechanical Engineering with the help of state of art infrastructure and make the students to meet the universal requirements.*

## MISSION

*Provide admirable Teaching-Learning process using state of art facilities to help a holistic growth in the disciplines of Thermal, Design, Manufacturing, Management and Quality areas with an emphasis on practical applications. Arouse innovative ideas leading to higher learning.*

## PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

**PEO - I**
Apply Mechanical Engineering concepts by analyzing and solving the real time problems arising in mechanical systems of industry.

**PEO – II**
Develop leadership skills and engage in life-long learning to meet the changing global needs.

**PEO – III**
Adapt to rapidly changing industry needs by acquiring require technical knowledge that promotes innovation

## PROGRAMME SPECIFIC OUTCOMES (PSOS)

**PSO - I**
Apply the knowledge of Manufacturing Engineering and Engineering Management to solve complex engineering problems.

**PSO - II**
Identify, Formulate and Analyse complex engineering problems in Thermal Engineering, Design of Machines and Control Engineering.

## PROGRAMME OUTCOMES (POS)

a) **Engineering Knowledge**: An ability to apply the knowledge of mathematics, science, engineering Fundamentals and an engineering specialization to the solution of complex engineering problems.
b) **Problem Analysis**: An ability to identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
c) **Design / Development of solutions**: An ability to design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and Environmental considerations.
d) **Conduct investigations of complex problems**: An ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
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l) **Life-long Learning**: An ability to recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.


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# G.PULLAIAH COLLEGE OF ENGINEERING AND TECHNOLOGY

NANDIKOTKUR ROAD, VENKAYA PALLI, KURNOOL - 518 452

# DEPARTMENT OF CIVIL ENGINEERING

## VISION

*To be the source of imparting quality education to civil engineers along with necessary skill, knowledge and personality in order face the challenges in the society.*

## PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

**PEO - I**
Apply principles of civil engineering with analytical thinking and problem solving skills for developing solutions to civil engineering problems

**PEO - II**
Adapt to rapidly changing industry needs by acquiring required civil engineering skills

**PEO - III**
Analyze and design Civil engineering systems with social awareness and responsibility.

**PEO – IV**
Exhibit professionalism, ethical approach, communication skills, team work in their profession and adapt to modern trends by engaging in lifelong learning.

## PROGRAMME SPECIFIC OUTCOMES (PSOS)

**PSO - I**
Design civil engineering structures using relevant codes of practice, materials, techniques and software.

**PSO – II**
Adapt state-of-the-art practices and materials in the field of civil engineering

**PSO - III**
Follow human values and ethics with team spirit in every civil engineering project undertaken.

## MISSION

- *To provide a platform for gaining knowledge regarding emerging technologies in the area of civil engineering*
- *To inculcate critical and innovative thinking in the minds of young engineers in order to face the challenges of the society*
- *To provide good ethical and moral values to the young engineers*

## PROGRAMME OUTCOMES (POS)

a) **Engineering Knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems

b) **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

c) **Design / development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

d) **Conduct investigations of complex problems**: use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions

e) **Modern tool usage**: create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

f) **The engineer and society**: apply reasoning informed by the contextual knowledge to assess Societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

g) **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

h) **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice

i) **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

j) **Communications**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give receive clear instructions.

k) **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments

l) **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

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# G.PULLAIAH COLLEGE OF ENGINEERING AND TECHNOLOGY

NANDIKOTKUR ROAD, VENKAYA PALLI, KURNOOL - 518 452

## DEPARTMENT OF ELECTRICAL AND ELECTONICS ENGINEERING

### VISION

To produce professionally competent engineers in the field of Eletrical and Electronics Engineering for societal empowerment.

### MISSION

The department trains the students to achieve academic excellence through active learning methods by promoting the research and development activites with professionol and ethical standards.

### PROGRAMME EDUCATIONAL OBJECTIVES (PEOS)

**PEO - I**
Apply the principles of basic engineering sciences in performing professional tasks in Electrical and Electronics Engineering and to develop awareness on the issues of societal concerns.

**PEO – II**
Analyze and design Electrical and Electronics Engineering projects considering environmental and socio-economic impacts.

**PEO – III**
Develop team spirit and leadership skills for successful completion and management of projects.

**PEO – IV**
To pursue lifelong learning to meet societal and professional challenges.

### PROGRAMME SPECIFIC OUTCOMES (PSOS)

**PSO - I**
Design a variety of Electrical and/or Electronic-based components and systems for applications including Power Electronics, Power Systems, Signal processing, Control systems and Electrical Machines

**PSO - II**
Evaluate alternate assumptions, approaches, procedures and results related to Electrical Engineering problems employing Modern Engineering tools.

### PROGRAMME OUTCOMES (POS)

a) **Engineering Knowledge**: An ability to apply the knowledge of mathematics, science, engineering Fundamentals and an engineering specialization to the solution of complex engineering problems.
b) **Problem Analysis**: An ability to identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
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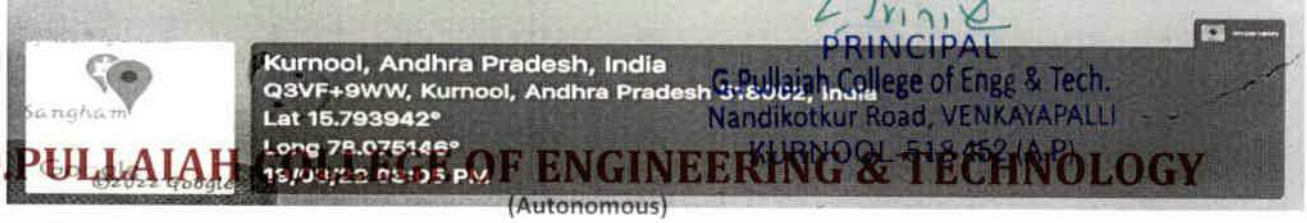

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## G.PULLAIAH COLLEGE OF ENGINEERING AND TECHNOLOGY
NANDIKOTKUR ROAD, VENKAYA PALLI, KURNOOL - 518 452

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### VISION

*To deliver the qualitative, innovative and ethical computer science technocrats who strive for the benefit of the society.*

### MISSION

*Nurturing the future leaders in academia, information technology industry and entrepreneurial pursuit, through a contemporary curriculum of theory and application that develops the ability to solve problems individually and in teams.*

### PROGRAMME EDUC[illegible]L OBJECTIVES (PEOS)

A graduate of the Computer Science and Engineering Program should:

**PEO 1 :**
Apply principles of Computer science and engineering with analytical thinking and problem solving skills for developing software systems.

**PEO 2:**
Adapt to rapidly changing industry needs by acquiring required technical skills.

**PEO 3:**
Assess real time problems and develop suitable technological solutions to full fill the needs of society.

**PEO 4:**
Develop leadership skills and engage in life-long learning to meet the changing global needs.

### PROGRAMME SPECIFIC OUTCOMES (PSOS)

Program specific out comes: (PSO's)

**PSO-1:**
Design, Develop, test and maintain software systems for business applications

**PSO-2:**
Evaluate and tune software systems for better performance.

### PROGRAMME OUTCOMES (POS)

1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering Fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design / development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the Cultural, societal, and Environmental considerations.
4. **Conduct investigations of complex problems:** use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex Engineering activities with an understanding of the limitations.
6. **The engineer and society:** apply reasoning informed by the contextual knowledge to assess Societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional Engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change projects and in multidisciplinary environments.

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**G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY:KURNOOL**

**(Autonomous)**

**III- SEM (II-B.Tech) I Mid Examinations December-2021**

**(EEE)**

**Sub: ELECTRICAL MACHINES-I (A30206)** **Date: 07-12-2021**

**Time: 1hour 30 minutes** **SET NO: 1** **Max.Marks:30**

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**(Answer ALL Questions) (3X10=30M)**

| Q.No | Question | Marks | Unit | CO | Cognitive level |
|---|---|---|---|---|---|
| 1. | Enumerate the working principle of dc generators with simple loop circuit. | 10M | 1 | A30206.1 | Understand |
| | **(OR)** | | | | |
| 2. | A). Derive EMF equation of a dc generator. | 5M | 1 | A30206.2 | Understand |
| | B). The lap wound armature of a 4 pole generator has 51 slots. Each slot contains 20 conductors. What will be the emf generated in machine when driven at 1500 rpm? The useful flux per pole is 0.01wb. | 5M | 1 | A30206.2 | Apply & Analyze |
| 3. | Explain how the magnetization characteristic of a dc machine can be obtained experimentally. Explain the procedure to obtain critical values of field resistance and speed. | 10M | 1 | A30206.3 | Understand, Analyze |
| | **(OR)** | | | | |
| 4. | Explain in detail various characteristics of dc shunt and series motors. | 10M | 2 | A30206.3 | Understand |
| 5. | Explain the Swinburne's test and find out the efficiency of a given DC machine. | 10M | 2 | A30206.4 | Understand, Analyze |
| | **(OR)** | | | | |
| 6. | What is the need of starter? Explain construction and operation of 3-point starters in detail . | 10M | 2 | A30206.5 | Understand |

Signature of the faculty

Signature of the HOD

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# G.Pullaiah College of Engineering and Technology:: Kurnool
## (Autonomous)

III B.Tech I SEM (R-19) I MID Examinations Nov 2021

**Subject Name & Code: DDRCS (A2117)** **Date: 15-1-2021**

**Time : 02.00 PM to 3.50 PM** **Max Marks: 30**

SET-4

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### Part-A

**(Answer any one following Questions, 1x14Marks= 14 Marks)**

1. A Rectangular beam supported on 300mm wall using Clear span 6m ,Live load is 12KN-m use M20 grade of concrete and FE-415 steel Material width of beam is fixed at 300mm ,Design the beam

| MARKS : 14 | UNIT : 1 | CO : C301.1 | COGNITE LEVEL : Evaluate/Remembering |
|---|---|---|---|

2. Find the reinforcement required for a doubly reinforced beam section to the following particulars of the beam Width of beam is 250mm depth of the beam to the centre reinforcement is 500mm effective cover to the centre of compression reinforcement is 50mm Max BM under working load is 160 KN-M use M20 grade of concrete and Fe 250 Steel

| MARKS : 14 | UNIT : 2 | CO : C301.2 | COGNITE LEVEL : Evaluate/Remembering |
|---|---|---|---|

### PART – B (Answer any two following Questions, 2x8Marks= 16 Marks)

1. Determine the tensile and compressive reinforcement required for a rectangular beam with the following data: Overall size of the beam is 250mm x 550mm Factored moment is 200kN-m. Effective cover is 50mm Use M20 concrete and Fe 415 steel.

| MARKS : 8 | UNIT : 1 | CO : C301.1 | COGNITE LEVEL : Evaluate |
|---|---|---|---|

2. What are the general requirements to design a beam with formulae's as per Is Provisional codes

| MARKS : 8 | UNIT : 1 | CO : C301.1 | COGNITE LEVEL : Remembering |
|---|---|---|---|

3. A Discuss & draw stress-strain curves for concrete & steel, explain?
   B) Explain about the Requirements of Good Concrete and uses of concrete

| MARKS : 8 | UNIT : 1 | CO : C301.1 | COGNITE LEVEL : Evaluate/ Remembering |
|---|---|---|---|

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Signature of HOD

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**G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (AT), KURNOOL**

**IV B.Tech – I Semester (R15) MID II Examinations**

**Branch: ECE**

**SET 3**

**Sub: Optical Fiber Communication (15A04701)** **Date: 08-02-2021**

**Time: 1½ Hrs.** **Max Marks: 30M**

**Question 1 is compulsory. Answer one from 2 or 3 and one from 4 or 5.**

| | | Marks | Unit | CO | Cognitive Level |
|---|---|---|---|---|---|
| 1.i) | Define Internal Quantum efficiency | 2 | 3 | C401.4 | Understand |
| 1.ii) | What do you mean by Laser diode? | 2 | 4 | C401.3 | Remember |
| 1.iii) | Distinguish between direct and indirect band-gap materials | 2 | 4 | C401.5 | Remember |
| 1.iv) | What are the advantages of Quantum well LASER? | 2 | 5 | C401.3 | Understand |
| 1.v) | What are the system requirements? | 2 | 5 | C401.6 | Remember |
| 2 | what is splicing ?explain about different splicing techniques | 10 | 3 | C401.3 | Understand |
| 3. a) | a) Establish the threshold gain condition for lasing to occur in a fabry- perot resonator based laser diode . | 5 | 3 | C401.3 | Apply |
| 3. b) | b) Draw and discuss the lensing schemes for coupling improvements | 5 | 3 | C401.4 | Apply & understand |
| 4(a) | Give the comparison of PIN and APD detectors. | 5 | 4 | C401.5 | Analyze |
| 4(b) | b) Explain Responsivity of photodetectors. | 5 | 4 | C401.5 | understand |
| 5(a) | Explain about Link power budget analysis | 7 | 5 | C401.6 | understand |
| 5 (b) | Design an optical link for transmitting 15mb/sec of data for a distance of 4km with fiber attenuation of 6 db/km and BER of $10^{-9}$ | 3 | 5 | C401.6 | Apply |


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G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (AT), KURNOOL

IV B.Tech – I Semester (R15) MID II Examinations

Branch: ECE

SET 3

Sub: Optical Fiber Communication (15A04701) Date: 08-02-2021

Time: 1½ Hrs. Max Marks: 30M

Question 1 is compulsory. Answer one from 2 or 3 and one from 4 or 5.

| | | Marks | Unit | CO | Cognitive Level |
|---|---|---|---|---|---|
| 1.i) | Define Internal Quantum efficiency | 2 | 3 | C401.4 | Understand |
| 1.ii) | What do you mean by Laser diode? | 2 | 4 | C401.3 | Remember |
| 1.iii) | Distinguish between direct and indirect band-gap materials | 2 | 4 | C401.5 | Remember |
| 1.iv) | What are the advantages of Quantum well LASER? | 2 | 5 | C401.3 | Understand |
| 1.v) | What are the system requirements? | 2 | 5 | C401.6 | Remember |
| 2 | what is splicing ?explain about different splicing techniques | 10 | 3 | C401.3 | Understand |
| 3. a) | a) Establish the threshold gain condition for lasing to occur in a fabry- perot resonator based laser diode . | 5 | 3 | C401.3 | Apply |
| 3. b) | b) Draw and discuss the lensing schemes for coupling improvements | 5 | 3 | C401.4 | Apply & understand |
| 4(a) | Give the comparison of PIN and APD detectors. | 5 | 4 | C401.5 | Analyze |
| 4(b) | b) Explain Responsivity of photodetectors. | 5 | 4 | C401.5 | understand |
| 5(a) | Explain about Link power budget analysis | 7 | 5 | C401.6 | understand |
| 5 (b) | Design an optical link for transmitting 15mb/sec of data for a distance of 4km with fiber attenuation of 6 db/km and BER of $10^{-9}$ | 3 | 5 | C401.6 | Apply |


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# G.Pullaiah College of Engineering and Technology

## (Autonomous)

**IVB.Tech I Semester (R18) I MID Examinations November-2021**

**WIRELESS COMMUNICATION SYSTEMS (A1432)**

**(ELECTRONICS AND COMMUNICATION ENGINEERING)**

**Time: 1hr 50 MINUTES** **Date:16-11-2021** **Max Marks: 30**

## SET-3

**PART-A (12 * 0.5 Mark = 6 Marks)**

**(Answer all the Questions)**

1.

a) List out 3G standards?
b) Explain about Mobile station?
c) What are the applications off full duplex systems?
d) What are the applications of 2G standard?
e) Write about GSM Standard?
f) Write about Half duplex system?
g) Define EDGE.
h) Write about UMTS.
i) What are the limitations of 2G standard?
j) Define WLL.
k) What are the data rates of IS-95 and Japanese standard?
l) What are data rates of Bluetooth?

| | | | |
|---|---|---|---|
| MARKS:6 | UNIT- I&II | CO: 1&2 | COGNITIVE LEVEL: Remember and Understand |

**PART-B (3 * 8 Mark = 24 Marks)**

**(Answer any THREE Questions)**

**2.**Explain the paging system and cordless telephone system

| | | | |
|---|---|---|---|
| MARKS:8 | UNIT- I | CO: 1 | COGNITIVE LEVEL: Understand |

**3.**Explain about simplex and duplex systems with diagrams and examples?

| | | | |
|---|---|---|---|
| MARKS:8 | UNIT- I | CO: 1 | COGNITIVE LEVEL: Understand |

**4.**Compare and contrast IEEE 802.11 a, b, g and n standards.

| | | | |
|---|---|---|---|
| MARKS:8 | UNIT- II | CO: 2 | COGNITIVE LEVEL: Understand |

**5.**Write notes on GPRS and EDGE Wireless standard?

| | | | |
|---|---|---|---|
| MARKS:8 | UNIT- II | CO: 2 | COGNITIVE LEVEL: Remember |

6.

a. Explain about TDD and FDD?
b. Write explanatory notes on CDMA2000 standards and specifications?

| | | | |
|---|---|---|---|
| MARKS:4&4 | UNIT- I&II | CO: 1&2 | COGNITIVELEVEL:Understand,Remember |

Signature of the Staff

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Signature of the HOD

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B.Tech – IV-II Semester (R15) MID I Examinations
Branch: ECE

**SET 1**

**Sub: LOW POWER VLSI CIRCUITS & SYSTEMS(15A04802)** **Date: 08-7-2021**
**Time: 1½ Hrs.** **Max Marks: 30M**

**Question 1 is compulsory. Answer one from 2 or 3 ,one from 4 or 5 .**

| S.no | Questions | Marks | Unit | CO | Cognitive Level |
|---|---|---|---|---|---|
| 1.i. | Define sub threshold swing. | 2 | 1 | C409.1 | Remember |
| 1.ii. | What is meant by drain induced barrier lowering? | 2 | 1 | C409.1 | Remember |
| 1.iii. | Describe the operating regions and modes for a MOS transistor. | 2 | 1 | C409.1 | Remember |
| 1.iv. | Define fan in and fan out of gates with example. | 2 | 2 | C409.2 | Remember |
| 1.v. | Mention the disadvantages of resistive load. | 2 | 2 | C409.3 | Remember |
| 2. | What is the need for low power VLSI chips? Explain the various sources of power dissipation. | 10 | 1 | C409.1 | Understand |
| 3.a. | Briefly explain the short channel effects in MOS transistor. | 5 | 1 | C409.1 | Understand |
| b. | Explain the modes of operation of a transistor. | 5 | | | |
| 4. | Explain the operation of CMOS inverter with neat sketches. | 10 | 2 | C409.2 | Understand |
| 5.a. | Discuss in detail about CMOS transmission gates. | 5 | 2 | C409.3 | Apply |
| b. | Design EX-OR gate using pass transistor logic. | 5 | | | |


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G.PULLAIAH COLLEGE OF ENGINEERING & TECHNOLOGY (AT), KURNOOL
B.Tech – IV-II Semester (R15) MID I Examinations
Branch: ECE

SET 1

Sub: LOW POWER VLSI CIRCUITS & SYSTEMS(15A04802) Date: 08-7-2021
Time: 1½ Hrs. Max Marks: 30M

Question 1 is compulsory. Answer one from 2 or 3 ,one from 4 or 5 .

| S.no | Questions | Marks | Unit | CO | Cognitive Level |
|---|---|---|---|---|---|
| 1.i. | Define sub threshold swing. | 2 | 1 | C409.1 | Remember |
| 1.ii. | What is meant by drain induced barrier lowering? | 2 | 1 | C409.1 | Remember |
| 1.iii. | Describe the operating regions and modes for a MOS transistor. | 2 | 1 | C409.1 | Remember |
| 1.iv. | Define fan in and fan out of gates with example. | 2 | 2 | C409.2 | Remember |
| 1.v. | Mention the disadvantages of resistive load. | 2 | 2 | C409.3 | Remember |
| 2. | What is the need for low power VLSI chips? Explain the various sources of power dissipation. | 10 | 1 | C409.1 | Understand |
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| 4. | Explain the operation of CMOS inverter with neat sketches. | 10 | 2 | C409.2 | Understand |
| 5.a. | Discuss in detail about CMOS transmission gates. | 5 | 2 | C409.3 | Apply |
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(Recognized by UGC under 2(f) & 12(B) & ISO 9001: 2008 Certified Institution)

**(IV B.Tech II Semester (R15) II-MID Descriptive Examination July- 2021)**

## INNOVATION AND IT MANAGMENT (15A05803)

**(COMPUTER SCIENCE AND ENGINEERING)**

**TIME: 90 MINUTES** **MAX MARKS: 30**
**DATE: 08-07-21**

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**PART-I (2*5=10M)** **SET NO: I**

| Q.NO | | Questions | Marks | Unit | CO | Cognitive Level |
|---|---|---|---|---|---|---|
| 1 | A | Mention any two IT security threats. | 2 M | III | C407.3 | Remember |
| | B | What is a business process? Give two examples of business process? | 2 M | IV | C407.5 | Analyze |
| | C | What is a supply chain? Give two examples. | 2 M | IV | C407.4 | Apply |
| | D | How does corruption impact e-governance? | 2 M | V | C407.3 | Define |
| | E | How are blogs different from social networking sites? | 2 M | V | C407.5 | Remember |

**PART-II (2*10=20M)**

| | | | | | |
|---|---|---|---|---|---|
| 2 | Describe the various IT security threats to the organizations. | 10 M | III | C407.3 | Understand |
| | OR | | | | |
| 3 | What are the main issues to manage for a successful ERP implementation? | 10 M | IV | C407.4 | Analyze |
| 4 | What is the difference between e-governance and e-participation? | 10 M | V | C407.4 | Apply |
| | OR | | | | |
| 5 | Discuss the role of social networks in enterprise. | 10 | V | C407.5 | Analyze |

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