MONAD UNIVERSITY

Village & Post Kastla, Kasmabad, P.O Pilkhuwa

Tehsil Hapur (U.P), India

Program:-B.Tech (All Branches) - II Sem

Course: Basics of Renewable Energy (EY-121)

Assignment No: 1

Due date of submission: 12.03.2018

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme and Enrolment No. clearly at the top of this page.

Q.1

(a) I know you are aware about renewable energy. Discuss the basic difference between renewable energy & non renewable energy.

(b) I know you are aware about Solar Energy Potential. Discuss about the solar energy and its uses.

Q.2

(a) We are familiar with solar collectors. Define the types of solar collectors.

(b) You are familiar with the expectations from the renewable energy during the 11^{th} Plan. Define the estimated potential during the 13^{th} Plan.

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Tehsil Hapur (U.P), India

Program:-B.Tech (All Branches) - II Sem

Course: Basics of Electronics Engineering (ES-122)

Assignment No: 1

Due date of submission: 12.03.2018

Instructions

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Q.1

a) Explain NOR and NAND based SR latches.

b) Sketch and explain Digital Logic circuits.

Q.2

a) Convert decimal numbers $(41.6875)_{10}$ and $(153.513)_{10}$ into binary numbers.

b) Write the differences between Combinational and Sequential circuits.

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Tehsil Hapur (U.P), India

Program:-B.Tech (All Branches) - II Sem

Course: Basics of Mechanical Engineering (ES - 123)

Assignment No: 1

Due date of submission: 12.03.2018

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Q.1

(a) You already know the basics of thermodynamics, if yes explain open, closed and isolated system with examples.

(b)With your fundamental knowledge of first law of thermodynamics; explain the consequences of first law of thermodynamics.

Q.2

(a) As you are familiar with second law of thermodynamics; write the Kelvin Planck and Clausius statement.

(b)You already have studied the basics of Thermodynamics; if yes explain reversible, irreversible and quasi static processes.

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Tehsil Hapur (U.P), India

Program:-B.Tech (All Branches) - II Sem

Course: Environmental Science (UG-HS-121)

Assignment No: 1

Due date of submission: 12.03.2018

Instructions

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Q. 1

(a) Write the differences between Living and non-living.

(b) What is ecology?

Q. 2

(a) Define-

1. Abiotic components.
2. Biotic components.

(b) Define Atmosphere.

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Village & Post Kastla, Kasmabad, P.O Pilkhuwa

Tehsil Hapur (U.P), India

Program:-B.Tech (All Branches) - II Sem

Course: Engineering Physics-II (BS-121)

Assignment No: 1

Due date of submission: 12.03.2018

Instructions

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Q1.

a) As you are aware of de-Broglie wave matter .Explain Heisenberg's uncertainty principle and its importance.

b) As you are aware of stimulated emission of radiation. Establish relation among "Einstein Coefficient"?

Q 2

a) Write note on :

(i) Pumping.

(ii) Population inversion.

(iii) Metastable state.

b) Explain the basic principle of optical fibre. Discuss fibre classification.

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Tehsil Hapur (U.P), India

Program:-B.Tech (All Branches) - II Sem

Course: Engineering Mathematics-II (BS-122)

Assignment No: 1

Due date of submission: 12.03.2018

Instructions

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Q.1

(a) Write the properties of Laplace transform and find Laplace transform of $e^{at}\sin at$.

(b) Define Unit impulse function and period function and State and prove first shifting theorem.

Q2.

(a) What is a Fourier series and what are the conditions for a Fourier expansion?

(b) Find the Fourier series of the function

$$f(x) = x;\ 0 < x < 2\pi.$$