

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: 2

Due date of submission: 20.04.2018

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 biomass resources. Write the classification of biomass resources.
- (b) I know you are aware about composition of biomass. Write the composition of biomass.

Q.2

- (a) We are familiar with biogas energy. Define the biogas energy and also discuss the uses of biogas energy.
- (b) You are familiar with process parameters which affect the biogas production. Define the process parameters which affect the biogas production.

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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: 2

Due date of submission: 20.04.2018

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Q.1

- a) Explain P-N junction in forward and reverse bias mode.
- b) Sketch and explain Common base configuration of N-P-N Transistor.

Q.2

- a) Write the characteristics of an ideal Op-Amp.
- b) Sketch and explain summing and subtraction operation of Op-Amp.

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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: 2

Due date of submission: 20.04.2018

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Q.1

- (a) You already know the basics of mechanics, if yes state and prove “Law of parallelogram of forces”.
- (b) You already know the basics of internal combustion engine, if yes; explain the differences between S.I engine and C.I engine.

Q.2

- (a) You already have studied friction, if yes; explain the laws of friction.
- (b) You already have studied the resolution of forces, if yes; state and prove Lamis Theorem.

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Tehsil Hapur (U.P), India

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

Course: Environmental Science (UG-HS-121)

Assignment No: 2

Due date of submission: 20.04.2018

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Q. 1

- (a) What is the concept of ecosystem?
- (b) Draw the diagram of pyramid of energy.

Q. 2

- (a) Short notes on Biosphere.
- (b) What are the segments of environment?

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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: 2

Due date of submission: 20.04.2018

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Q. 1

- a) You are aware of nuclear force. Explain different characteristics of nuclear force.
- b) You are aware of cohesive energy. Give the formula of physical significance of cohesive energy.

Q. 2

- a) Explain the principle of holography and discuss its characteristics.
- b) As you are aware of thermodynamics. Explain the entropy of Universe.

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Tehsil Hapur (U.P), India

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

Course: Engineering Mathematics-II (BS-122)

Assignment No: 2

Due date of submission: 20.04.2018

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Q.1

- (a) What do you understand by LPP? Explain it in your words with the help of real life example.
- (b) As you are aware of LPP, Solve the linear programming problem by simplex method

$$\text{Maximize: } Z = 12x + 16y$$

$$\text{Subject to: } 10x + 20y \leq 120$$

$$8x + 8y \leq 80$$

$$x, y \geq 0$$

Q.2

- (a) As you are aware of Fourier sine transform, find the Fourier sine transform of $\frac{1}{1+x^2}$.
- (b) As you are aware of Fourier transform, what is complex Fourier transform?