



MONAD UNIVERSITY HAPUR (UP)

Programme: **Diploma(Common to all branch)**

Semester: **II**

Course: **DIP-123, Applied Mathematics-II**

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 Number clearly at the top of the page.

Q.1

(a) Find the value of the following:

(i) $\lim_{x \rightarrow 1} \frac{x^5 - 1}{x^3 - 1}$

(ii) $\lim_{x \rightarrow 1} \frac{(2x-3)(\sqrt{x}-1)}{2x^2+x-3}$

(b) If $f(x) = \begin{cases} \frac{\sin 2x}{x}, & \text{when } x \neq 0 \\ 1, & \text{when } x = 0 \end{cases}$, then show that $f(x)$ is discontinuous at $x = 0$.

Q.2

(a) If $y = x \sin y$, then prove that $x \frac{dy}{dx} = \frac{y}{1-x \cos y}$.

(b) Find maxima and minima of the function $f(x) = x^3 + x^2 - 8x + 1$.



MONAD UNIVERSITY HAPUR (UP)

Programme -Diploma (common to all branch)

Semester: II

Course: APPLIED PHYSICS-II, DIP-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.
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Q1.

- a) Explain the various uses of potentiometer.
- b) Explain the working of a Carrey foster bridge. What is the advantage of Carrey foster bridge over Meter Bridge?

Q 2

- a) As you are aware of Kirchoff's law. Explain Kirchoff's law of electric circuit.
- b) Write the short note on :
 - (i) Electric potential.
 - (ii) Potential difference.



MONAD UNIVERSITY HAPUR (UP)

Programme: **Diploma**

Semester: **II**

Course name: **Applied chemistry-II**

Course code: DIP-123

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 Number clearly at the top of the page.

Q1.

- 1) What is hardness of water? Discuss different types of hardness in water.
पानी की कठोरता क्या है? पानी में विभिन्न प्रकार की कठोरता पर चर्चा करें।
- 2) What is Purification of water? Explain different methods of purification of water.
पानी की शुद्धिकरण क्या है? पानी की शुद्धि के विभिन्न तरीकों को समझाओ

Q2.

- a) Define fuels with its major classification.
इसके प्रमुख वर्गीकरण के साथ ईंधन को परिभाषित करें।
- b) What do you understand by sterilization of water?
पानी के जीवाणुरहित से आप क्या समझते हैं ।



DEPARTMENT OF MECHANICAL ENGINEERING MONAD UNIVERSITY, HAPUR

Dated:-01/03/2018

Course: DIP-124-Applied Mechanics.

Assignment No: 1

Due date of submission: 12/03/2018

Instructions

1. Write the responses to the assignment in your own handwriting & don't copy from other's assignment.
2. Submit the responses to your **faculty within** due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

Q.1

(a) You are aware about friction. Explain Laws of friction.

आप घर्षण के बारे में जानते हैं | घर्षण के नियम को समझाओ |

(b) You know about Principle of transmissibility of a force. Explain it with neat sketch.

आप एक बल की transmissibility सिद्धांत के बारे में जानते हैं | साफ स्केच के साथ इसे समझाओ |

Q.2

(a) You are familiar with polygon Law of forces. Explain it.

आप बलों के बहुभुज नियम से परिचित हैं | इसे समझाओ।

(b) You are aware about Lami's theorem. What is the statement of Lami's theorem? Prove the theorem.

आप लामी के प्रमेय के बारे में जानते हैं | लामी के प्रमेय का बयान क्या है? प्रमेय साबित करें |



Assignment No: 1

Programme: Diploma (Common to all Branch)

Semester: II

Course name: Basic of renewable energy

Course code: EY-121

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 Number clearly at the top of the page.

Q.1

(a) Differentiate between renewable and non renewable energy resources.

अक्षय और गैर अक्षय ऊर्जा संसाधनों के बीच अंतर लिखें।

(b) Write importance of renewable energy resources. Write advantage and disadvantage of renewable energy.

अक्षय ऊर्जा संसाधनों का महत्व लिखें। अक्षय ऊर्जा का लाभ और नुकसान भी लिखें।

Q.2

(a) Write conversion process of biogas generation and also explain a biogas plant.

बायोगैस बनाने की रूपांतरण प्रक्रिया लिखें और एक बायोगैस संयंत्र भी बताएं।

(b) Define biomass and also explain sources of biomass.

बायोमास को परिभाषित करें और बायोमास के स्रोतों को भी समझाएं।



Programme: Diploma (Common to all Branch)

Dated: – 01/03/2018

Course: DIP-127, Environmental science

Assignment No: I

Due date of submission: 12/03/2018

Instructions

1. Write the responses to the assignment in your own handwriting & don't copy from other's assignment.
2. Submit the responses to your course teacher within due date.
3. Write your name, programme, and Enrollment no. clearly at the top of the page.
4. Each question's part carries 5 marks.

Q.1

(a) You already know about atmosphere. If yes, explain about the types of atmospheric layers.

आप पहले से ही वातावरण के बारे में जानते हैं यदि हाँ, वायुमंडलीय परतों के प्रकारों के बारे में समझाएं।

(b) You already know about ecosystem. If yes, explain the classification of ecosystem.

आप पहले से ही पारिस्थितिक तंत्र के बारे में जानते हैं यदि हां, पारिस्थितिकी तंत्र का वर्गीकरण समझाएं।

Q.2

(a) As you are aware of term ozone. If yes, explain the importance of ozone on earth.

जैसा कि आप शब्द ओजोन के बारे में जानते हैं यदि हां, तो पृथ्वी पर ओजोन के महत्व की व्याख्या करें।

(b) As you are aware of trophic levels. Explain the energy flow in various trophic levels in ecosystem.

जैसा कि आप ट्राफिक स्तरों से अवगत हैं। पारिस्थितिकी तंत्र में विभिन्न ट्राफिक स्तरों में ऊर्जा प्रवाह को बताएं।