

# **Sai Nath University**

## **Assignment For Diploma in AUTOMOBILE Engineering 1<sup>st</sup> SEM.**

The Assignment will consist of two parts, A and B. Part A will have 5 short answer questions(40-60 words) of 4 marks each. Part B will have 2 long answer questions of 10 marks each

**All questions are compulsory.**

These Assignments should be completed and submitted in written form by the student to his/her respective Faculty/Examiner. Assignment Submission Dates are:

➤ Nov-17

### **List Of Suggested Questions**

The list of suggested questions are for students to practice. Although optional, we recommend that students solve these questions, as they will help them in preparing for exams as well as in clearing the important concepts of the subject.

### **List of Practicals and suggested practicals**

The list of practical's should be done by the students in their Lab Sessions. These are the basic practical's, which each student should be able to do himself independently. While the list of suggested practicals are optional, but it is recommended that students should perform those practical so as to have a thorough knowledge of the subject

### **Education Delivery Schedule (EDS)**

As per University Semester scheme, the minimum contact hours of each paper has been Divided into two hours theory and practical class.

The faculty will maintain this attendance paper wise for his/her batch.

## **Subject Code**

## **Subject Name**

**DEAE-101**

**Communication Skills**

**DEAE-102**

**Engineering Mathematics**

**DEAE-103**

**Applied Physics**

**DEAE-104**

**Applied Chemistry**

**DEAE-105**

**Applied Physics Practical**

**DEAE-106**

**Applied Chemistry Practical**



# **SAI NATH UNIVERSITY**

## **Cover page of Assignment**

ID NUMBER .....

NAME .....

COURSE .....

STREAM .....

SEMESTER .....

SUBJECT CODE .....

SUBJECT NAME .....

**Assignments will be completed by the Student in his/her own handwriting.**

## DEAE-101

### Communication Skills

#### Part A

1. What is professionalism ? Define with an example ?
2. What are different barriers to communications ?
3. What are psychological barriers ?
4. What is premature Evaluation ?
5. What are the seven Cs of Professionalism?

#### Part B

1. What are the ways by which we can remove noise in the communication ?
2. What are the different ways by which we can reduce our hesitation of speaking?

## DEAE-102

### [ENGINEERING MATHMATICS]

#### Part A

1. Resolve  $\frac{5x+12}{(x+2)(x+3)}$  into partial functions.
2. Expand  $(x^2+2y)^5$  by the binomial theorem.
3. Find the value of  $(.98)^{-3}$  up to 2 decimal places.
4. Prove that  $\sin^2 \frac{\pi}{6} + \cos^2 \frac{\pi}{3} - \tan^2 \frac{\pi}{4} = -1/2$ .
5. prove that  $\sin \frac{7\pi}{12} \cos \frac{\pi}{4} - \cos \frac{7\pi}{12} \sin \frac{\pi}{4} = \frac{\sqrt{3}}{2}$

#### Part B

1. Expand the determinant 
$$\begin{vmatrix} 6 & 2 & 3 \\ 2 & 3 & 5 \\ 4 & 2 & 1 \end{vmatrix}$$
2. show that  $\cot 2x \cot x - \cot 3x \cot 2x - \cot 3x \cot x = 1$

**DEAE-103**  
**[Applied PHYSICS]**  
**Part A**

1. What is dopplers effect? Deduce the expression of apparent frequency of sound for the relative motion between the source and observer.
2. Derive an expression of energy of plane progressive sound wave of sure form and hence obtain the expression for energy current (i.e., intensity of sound waves).
3. Differentiate between longitudinal and transverse waves. How are these produced.
4. What do you understand by superposition of waves ? Under what conditions the stationary waves, beats are interference are produced.
5. State the characteristics of a plane progressive waves. Deduce the expression of simple harmonic.

**Part B**

1. Explain systematic and random errors with the help of an example.
2. What do you mean by dimension of physical quantity? Give the dimensions and units of energy,

**DEAE-104**  
**[Applied Chemistry]**  
**Part A**

1. What are quantum numbers and types of quantum numbers.
2. What is the difference between an orbit and an orbital's ? What do you know about p-orbital ? describe in brief.
3. Write a note on de-Broglie's equation.
4. State Pauli's exclusion principle.
5. Write the electronic configurations of atom cr, cu, zn, Fe, Na ca al, cl.

**Part B**

1. What is Electrochemical cell? Explain with example of Dexial cell
2. What is polymers and types of polymers?

## DEAE-105 [HkkSfrd foKku]

### Part A

- 1- ofuZ;j dSfylZ dh lgk;rk ls fn, x, Bksl inkFkZ dh  $f=T;k \frac{1}{4}\text{Diameter}\frac{1}{2}$  Kkr djukA
- 2- ofuZ;j dSfylZ dh lgk;rk ls fn, x, [kks[kys  $\frac{1}{4}\text{flysf.M}^{\text{a}}\text{dy}\frac{1}{2}$  inkFkZ dh xgjbZ Kkr djukA
- 3- LdzwC xst dh lgk;rk ls fn, x, rkj dh eksVkbZ izklr djukA
- 4- LdzwC xst dh lgk;rk ls fn, x, /kkqr  $\frac{1}{4}\text{Metalic Sheet}\frac{1}{2}$  i= dh eksVkbZ Kkr djukA
- 5- LQsjksehVj }kjk fdLh voryh; @mRryh; inkFkZ dh m;pkbZ rFkk xgjbZ Kkr djukA

### Part B

- 1- fCgVLVksu lsrq  $\frac{1}{4}\text{ehVj czht}\frac{1}{2}$  dh lgk;rk ls nks vyx&vyx izfrjks/k ds rkjksa dks lekUrj rFkk Øekxr Js.kh esa tksM+dj mudk izfrjks/k Kkr djukA
- 2- vkse ds fu;e dk lR;kiu fn, gq, pkyd rkj dk izfrjks/k Kkr dj djukA

## DEAE-106 [ilk;u foKku]

### Part A

1.  $M/10$  eksyjrK dh lkUnzrk dk vkDlsfyd vEy rS;kj djukA
2.  $M/10$  eksyjrK dh lkUnzrk okys vkDlsfyd vEy dk vuqekiu  $\frac{1}{4}\text{KMnO}_4\frac{1}{2}$  iksVSf'k;e ijeSXusV ds foy; ls djuk rFkk  $\text{KMnO}_4$  dh lkUnzrk ,oa mldh 'kfDr xzke@yhVj esa Kkr djukA
- 3- lJy yksyd ls xq:RoRoj.k g dk eku Kku djukA
- 4- vuqukn ufydk ls  $0^{\circ}\text{C}$  ij ok;q esa /ofu dk osx fudkyukA
- 5- tsuj  $\frac{1}{4}\text{Zecner diode}\frac{1}{2}$  Mk;ksM dh lgk;rk ls fjoLZ czsd MkmU cksYVst  $\frac{1}{4}\text{Reverse Break down Voltage}\frac{1}{2}$  dh fo'ks"krk oØ js[kk f[kpukA

### Part B

1- IkUnz {kkj  $\frac{1}{4}\text{NaOH}$  $\frac{1}{2}$  rFkk IkUnz vEy  $\frac{1}{4}\text{HCL}$  $\frac{1}{2}$  ds ruqrk dk v/;;u djukA

2-  $\frac{1}{4}\text{M/80 KMnO}_4$  $\frac{1}{2}$   $\frac{1}{4}\text{iksVSf'k;e ijeSXusV}$  $\frac{1}{2}$  dh eksyjrkd foy;u rS;kj djuk rFkk mldk vuqekiu fn, x, vkDlsfyd vEy ls vuqekiu fof/k }kjk djukA