	PCET's PIMPRI CHINCHWAD UNIVERSITY, Maval, Pune-412106	**Sate,**
Academic Year:2023-24 Term– I	**Unit Test-I Question Paper**	

Department: First Year Engineering

Class: F.Y.B.Tech. **Div:**
Subject: Applied Technical Communication **Maximum Marks:**30 **Duration:**1Hrs.
Subject Code: ENG101 **Date:**

Note: 1. Solve Q. 1 or Q.2 and Q.3 or Q.4
2. Give explanation or justification wherever required.

Course Outcomes:

CLO1: To understand Paraphrasing, deciphering instructions, interpreting guidelines, and discussion boards.

CLO2: To write error-free while making optimum use of correct Technical Vocabulary and grammar.

Que 1	a)	Select the correct word from the given list and complete the paragraph with the given word- Around , across, with , along ,to, after, next to, into , from, stop One day, as I was walking _____ the bank of the river, I saw my friend running _____ the field. He was calling my name and waving _____ me. I _____and waited. _____ sometime he reached where I was standing. He said, "I went all _____ the town looking for you. I have some exciting news to share _____ you. Do you remember the old house _____ the neem tree? Guess who is moving _____ that house? Janak Das, the great magician. Now we can learn lots of magic tricks _____ him."	(Marks -5) [CO1],BT-2
	b)	State the Indirect narration of the Direct one- i. He said to him," You were not listening carefully." ii. I said to them," Why are you not working carefully?" iii. Teacher said," Did you not know him?" iv. Mother said to her son," The work has not been done by him."	(Marks -4) [CO1], BT-1
	c)	Define sentence and importance of Topic Sentence.	(Marks -3) [CO1], BT-1
	d)	Change the following Active sentence into Passive i. He was working on this project. ii. Who has done the work? iii. They have opened a new shop. iv. The teacher graded the exams v. The postman delivers the mail vi. The construction workers built the skyscraper.	(Marks -3) [CO1], BT-3
		-------OR------	
Que 2	a)	Read the following sentences, identify the errors, and correct them. 1. The police has arrived at the crime scene. 2. My mother along with my sisters are going to the market. 3. Neither of the boys are attending the party. 4. He don't like to drink coffee. 5. Neither of the boys are attending the party.	(Marks –5) [CO1], BT-1

	b)	Explain the parts of speech with examples.	(Marks -4) [CO1], BT-2
	c)	Change the following Passive sentence into Active voice 1. The school was struck by lightning. 2. This morning the burglar was arrested by the police. 3. One type of air pollution is caused by hydrocarbons. 4. An elaborate supper for the miners was prepared by Mr. Patel and his children. 5. The cookies were stolen by the Mad Hatter. 6. It was decided by the court that the contract was invalid.	(Marks -3) [CO1], BT-3
	d)	Write a paragraph on- Blended mode of Education	(Marks -3) [CO1], BT-3
Que.3	a)	Define Blending and Compound form of word formation with examples	(Marks -5) [CO2], BT-1
	b)	Illustrate the Idioms and phrase using in your own sentence. i. Break the leg ii. Hit the sack iii. Under the weather iv. Break the ice v. A perfect storm vi. On the ball vii. See eye to eye viii. A blessing in disguise	(Marks -4) [CO2], BT-1
	c)	Replace each underlined word with a antonym - Many people are afraid of wolves, but if you see one in the wild, you are fortunate. They are magnificent creatures, and since they were reintroduced to several locations in the wild, they are no longer as scarce as they once were. Wolves were once hunted for their fur, especially in America during the 1800's. Biologists capture wolves to give them tracking collars, so their movements can be studied. While for years their numbers were decreasing, now the wolf populations are rising.	(Marks -3) [CO2], BT-1
	d)	What is Synonym? Write the Synonym of the given words- i. Fostering ii. Defer iii. Germinate vi-Augury	(Marks -3) [CO2], BT-1
		-------OR------	
Que.4	a)	Bring out the difference in the given words using in your own sentence. Homophones	(Marks -5) [CO2], BT-1
	b)	What do you mean by Acronyms? write the full form of the following acronyms- i. HRD ii. HMT iii. LTC iv NSS	(Marks -4) [CO2], BT-1
	c)	Define homonyms. Write the sentence using the following homonyms with meaning- i. Hoarse-Horse ii. Heal-Heel iii. Knight-Night	(Marks -3) [CO2], BT-1
	d)	Choose an option, which can be substituted for a given word/sentence/phrase out of given options. 1. A person who thinks only of himself A. Egoist B. Eccentric C. Proud D. Boaster 2. Ram speaks less in the forum. Ram is A. Unintelligible B. Reticent C. Garrulous D. Banal 3. This is a practice of having several wives. A. Polygamy B. Dotage C. Monogamy D. Bigamy 4. The act of murder of a human being. A. Matricide B. Patricide C. Homicide D. Suicide 5. A thing no longer in use A. Redundant B. Obsolete C. Sick D. Obnoxious 6. Words written on the tomb of a person A. Manuscript B. Inscription C. Epitaph D. Engrave	(Marks -3) [CO2], BT-1

Manuscipt Inscription Epitaph Engrave

PCET's PIMPRI CHINCHWAD UNIVERSITY,
Sate, Maval, Pune-412106

Academic Year: 2023-24 Term – I

Unit Test-I Question Paper

Department: First Year Engineering

Class: F.Y. B. Tech. **Div: F, G, H, I, J**

Subject: Engineering Graphics **Maximum Marks:** 30 **Duration:** 1Hrs.

Date: 07/10/23

Subject Code: MEC101

Note: 1. Solve Q. 1 a or b, Q. 2 a or b, Q.3 a or b
2. Figures to the right indicate full marks.
3. Give explanation or justification wherever required.

Course Outcomes:

CO1: Draw the fundamental engineering objects using basic rules and able to construct the Simple Geometries.

CO2 : Technical communication skill in the form of communicative drawings

Que. 1	a)	A line AB 80 mm long is inclined to HP at an angle of 30^0 & VP at an angle of 30^0. Draw it's projections if point A is 10 mm above the HP & 15 mm in front of VP.	(Marks -10) [CO1],BT-2
		-------OR------	
	b)	A line AB 75 mm long is inclined at an angle of 30^0 with horizontal plane and parallel to vertical plane. End point A is 15 mm above the HP and 10 mm in front of VP. Draw it's projections.	(Marks -10) [CO1], BT-2
Que. 2	a)	Point M of 80 mm long line MN is 20 mm above the HP while it's end point N is 15 mm in front of VP. It's elevation makes 40° with HP while projector distance between end points is 50 mm. Draw projections of a line & find inclinations with HP & VP.	(Marks –10) [CO1], BT-2
		-------OR------	
	b)	An isosceles triangle of base 30 mm and altitude 60 mm is having it's base on HP plane is perpendicular to VP and is inclined to HP in such a way that top view appears to be an equilateral triangle. Draw the projection if base makes 30^0 with VP.	(Marks -10) [CO2], BT-3
Que.3	a)	A hexagonal lamina of sides 25 mm rest one of it's side on HP. The lamina makes 45^0 to HP and the side on which its rests makes an angle 30^0 to VP. Draw it's projections.	(Marks -10) [CO2], BT-3
		-------OR------	
	b)	A rectangular plate of side 35mmX75mm, one of it's smaller edge rest on HP. it's surface makes 45^0 with HP and smaller side is inclined at 30^0 with VP. Draw it's projections.	(Marks -10) [CO2], BT-3

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PCET's PIMPRI CHINCHWAD UNIVERSITY,
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Academic Year: 2023-24 Term–I

Unit Test-I Question Paper

Department: First Year Engineering

Subject: Engineering Chemistry
Subject Code: CHM101

Class: F.Y.B.Tech.
Maximum Marks: 30

Div: F,G,H,I,J
Duration: 1Hrs.
Date: 05/10/2023

Note: 1. Solve Q. 1 or Q.2 and Q.3 or Q.4
2. Give explanation or justification wherever required.

Course Outcomes:

CO1 : Select appropriate electro-chemical technique and method of material analysis

CO2 : Apply the knowledge of different methods for preventing corrosion

Que 1	a)	Explain the titration curve for conductometric titration in case of weak base and strong acid.	(Marks -5) [CO1],BT-2,3
	b)	Explain principle, construction and working and working of Li-ion battery	(Marks -4) [CO1], BT-1,2
	c)	Explain the standardization procedure of pH meter	(Marks -3) [CO1], BT-1
	d)	Define specific conductance , specific resistance and cell constant with units	(Marks -3) [CO1], BT-1
		-------OR------	
Que 2	a)	Explain principle, construction and working and working of Li-ion battery	[CO1], BT-1,2
	b)	What is indicator electrode? Draw neat labelled diagram of glass electrode and give its representation	(Marks -4) [CO1], BT-1,2
	c)	What is electrochemical cell and give its type	(Marks -3) [CO1], BT-1
	d)	Explain Buffer solutions with Types and example	(Marks -3) [CO1], BT-1,2
Que.3	a)	Define corrosion. Explain corrosion is exactly reverse process of extraction of metal from their ore. State the consequences of corrosion faced by the industry.	(Marks -5) [CO2], BT-1,2
	b)	Explain with suitable example oxygen absorption mechanism of wet corrosion.	(Marks -4) [CO2], BT-1,2
	c)	Define overvoltage. State under which condition it affects the rate of corrosion.	(Marks -3) [CO2], BT-1
	d)	Explain the types of metal oxide forming on metals with example	(Marks -3) [CO2], BT-1,2
		-------OR------	
Que.4	a)	Explain with suitable example hydrogen evolution mechanism of wet corrosion.	(Marks -5) [CO2], BT-1,2
	b)	How would you clarify the meaning of galvanic corrosion with suitable example	(Marks -4) [CO2], BT-1
	c)	Summaries the cathodic protection method using sacrificial anode with respect to principle, method and applications.	(Marks -3) [CO2], BT-2
	d)	Write a note on Cathodic Coating	(Marks -3) [CO2], BT-1

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PCET's PIMPRI CHINCHWAD UNIVERSITY,
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Academic Year: 2023-24 Term – I

Unit Test-I Question Paper

Department: First Year Engineering

Class: F.Y.B.Tech. **Div:**

Subject: Basic Electrical Engineering **Maximum Marks:** 30 **Duration:** 1Hr.

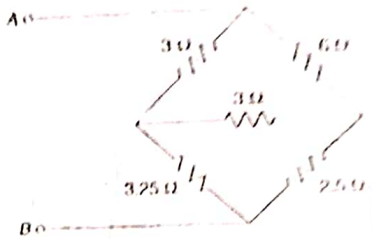
Subject Code: ELE101 **Date:** 06.10.2023

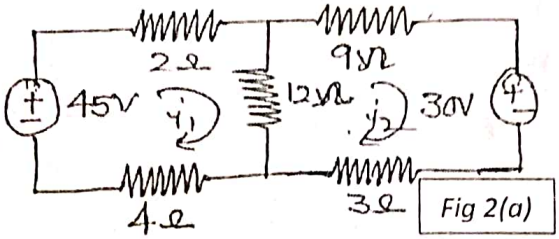
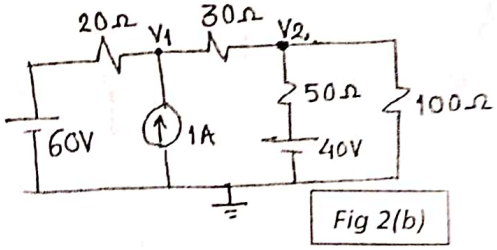
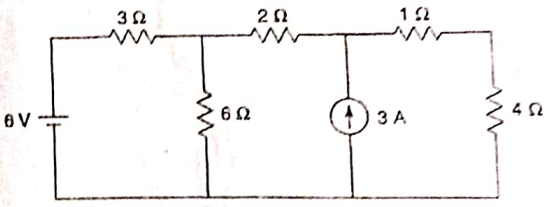
Note: Attempt *any three* from Q 1 & *any three* from Q 2

Course Outcomes:

CO1 : Apply and analyze the resistive circuits using star delta conversion and KVL KCL

CO2 : Apply and analyze different network theorems under DC supply

Que 1		***Attempt ANY Three***	
	a)	State and explain Kirchhoff's Laws with associated sign conventions used for currents and voltages. Draw neat diagrams.	(Marks -5) [CO1],BT-2
	b)	Find Req between AB for the circuit shown  Fig 1(b)	(Marks -5) [CO1], BT-3
	c)	The resistance of a coil increases from 80 ohm at 10^0C to 96.6 ohm at 60^0C. i) Find the temperature coefficient of the material at 0^0C. ii) Find the resistance of the material at 0^0C. iii) Find RTC at 60^0C. iv) Find the resistance of the material at 40^0C.	(Marks -5) [CO1], BT-3
	d)	Explain following terms: i) Linear parameter, ii) Active parameter, iii) Passive parameter, iv) Unilateral & v) Bilateral parameters	(Marks -5) [CO1], BT-2

Que 2		Attempt *ANY Three*	
	a)	Find mesh currents i1 & i2 [Fig 2(a)]  Fig 2(a)  Fig 2(b)	(Marks –5) [CO2], BT-3
	b)	Using Node Analysis, find node voltages V1 & V2 from the fig 2 (b)	(Marks -5) [CO2], BT-3
	c)	Find current flowing through 4 ohm resistor using source transformation  Fig 2(c)	(Marks -5) [CO2], BT-3
	d)	Write a note on Mesh Analysis	(Marks -5)