Enrollment No: Ex	xam Seat No:
-------------------	--------------

## C.U.SHAH UNIVERSITY

Winter Examination-2018

**Subject Name : Automotive Electrical and Electronics** 

Subject Code: 4TE05AEE1 Branch: B.Tech (Automobile)

Semester: 5 Date: 05/12/2018 Time: 10:30 To 01:30 Marks: 70

## **Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1		Attempt the following questions:				(14)
	<b>a</b> )	Which battery is used in aero planes				
		A) Dry cell	B) Lead acid battery	C) Edison cell	D) None of these	
		battery				
	<b>b</b> )	How many cells a	re used in a 12 volt car b	oattery		01
		A) 2	B) 4	C) 6	D) 8	
	c)	In Magneto Ignition	on system			01
		A) No battery is	B) Engine starting is	C) Used in high	D) All of the above	
		required	rather difficult	speed engines		
	d)	The magnetic field	ld required for starting motor operation is provided by the			01
		A) Armature	B) Field-winding	C) Solenoid	D) None of the above	
		assembly	assembly			
	e)	Electrolyte is a mi	exture of			01
		A) HCl and	B) PbSO <sub>4</sub> and Water	C) H <sub>2</sub> SO <sub>4</sub> and Water	D) HCl and H <sub>2</sub> SO <sub>4</sub>	
		Water				
	f)	Glow plugs are used for				01
	,	A) to cold the	B) to heat the engine	C) to cold the air	D) to heat the air	
		engine	,			
	g)	The current flow t	hrough electrolyte is due	e to the movement of		01
	Θ,	A) Electrons	B) Protons	C) Holes	D) Ions	
	h)	The particle having negative electric charge is called			01	
	/	A) a proton	B) an electron	C) both A & B	D) none of the above	
	i) The transistor, the current carries are constituted by					01
		A) protons and	B) holes and	C) holes and protons	D) none of the above	
		electrons	electrons			
j) The range of specific gravity of electrolyte used in battery is				01		
	•	A) 0.050-1.000	B) 1.000-1.150	C) 1.150-1.250	D) 1.250-1.350	



	<b>k</b> )	The increase in temperature of conductor results in					
		A) increase of	B) reduction of	C) increase of the	D) none of the above		
		the resistance	resistance	current			
	1)		strongly oppose the management B) semiconductors	ovement of electrons thro C) conductors	ough them are referred to D) none of the above	01	
	m)	·	of a lead acid battery		,	01	
	,	A) Lead	B) Spongy lead	C) Lead sulphate	D) Sulphuric acid		
	)	peroxide  Like magnetic poles	,			01	
	n)		B) attract each other	C) cancel out effect	D) none of the above	01	
		other	B) attract cach other	of each other	b) none of the above		
Atten	nnt anv	four questions fron	1 O-2 to O-8	or each other			
	ipt uiij	questions iron	1 Q 2 10 Q 0				
Q-2		Attempt all quest	ions			(14	
	(a)	Give the advantag	Give the advantages and the disadvantages of positive and negative earthing. 0'				
	<b>(b)</b>	Explain "Earthed" and "Insulated" return systems.					
Q-3		Attempt all questions (					
	(a)	Enlist the different types of battery test and explain any one.					
	<b>(b)</b>	Explain cause and prevention of Dazzle.					
Q-4		Attempt all questions (					
	(a)		al type speedometer			07	
	<b>(b)</b>	Explain the follow	•			07	
		(I) double hor					
0.5		(II) Relay-typ				(1.4	
Q-5	(a)	Attempt all quest		n the working of therm	postatio typo oil fuol	(14 07	
	(a)	gauge.	leip of a fieat diagraf	n the working of therm	iostatic type on ruei	U/	
	<b>(b)</b>	0 0	of MPFL system. Als	o give its advantages a	nd disadvantages	07	
Q-6	(2)	Attempt all questions					
	(a)			xplain Oxygen sensor	and wheel speed	(14 07	
		sensor.	-		_		
	<b>(b)</b>	Discuss the princi	ple operation of a lea	ad-acid battery.		07	
Q-7	, ,	Attempt all questions					
	(a)			circuit of an automobile		(14 07	
	(b)	,	•	rical system of an autom		07	
Q-8	(~)	Attempt all quest	_			(14	
₹ º	(a)			lock braking system.		07	
	(b)	Write short notes	-	Took oraking by stoil.		07	
	(10)		traction control			07	
		* *	Fraction & Stability	Control			
		(11) Dynamic 1	raction & Stabilly	Connor			

