#REF!

WALCHAND COLLEGE OF ENGINEERING, SANGLI.
(An Autonomous Institute)

First Year B.Tech. (Civil, Electrical & Electronics)
END SEMESTER EXAMINATION SEM. I   DECEMBER-2017
ENGINEERING CHEMISTRY   (3CH101)

ESE

Print Question Paper

SELECT COURSE CODE
3CH101

Exam Seat Number: _____

FACULTY
Dr. Pendse M.H. - Powar A.A.

Max Marks: **0**

Students   208

**Number of Prints
(Regular + Re-reg +
Extra)**

IMP: Verify that you have received question paper with correct course, code, branch etc.
i) All questions are compulsory. Writing question number is compulsory. The answers may not be assessed if question number is not written.
ii) Figures to the right of question text indicate full marks.
iii) Assume suitable data wherever necessary, Write the answers with neat handwriting.
iv) Only FX82 series non programmable Calculator is allowed.

			Marks			Options
Q1	A)	What are Primary Standard? Discuss criteria/Requirements for choosing primary standard substances towards preperation of standard solutions used in titrimetry.	CO3	6	Module 1	Obj
Q1	B)	List different sources of natural water and compare them with respect to Purity, Impurities present and their significance. --OR-- Define hardness of water? Why it is caused. List different units used to measure hardness of water with interrelation among them.	CO2	6	Module 2	An-S
Q1	C)	With neat labeled diagram, discuss Pb-Ag system.	CO1	6	Module 3	Desc
Q2	A)	Define alloy and discuss with example purposes of making alloys. --OR-- What are carbon steels? How are they classified? Give composition, properties and uses of High Carbon Steel.	CO3	4	Module 4	Obj
Q2	B)	State compound composition of Portland cement and mention functions of each constituent in setting and hardening of Portland cement with reactions.	CO3	6	Module 4	Obj

(P.T.O.)

Q3 A)	With neat labeled diagram discuss constuction and working of TGA equipment. With proper example describe TGA thermogram. List at least four applications.	CO1	10	Module 6	Desc
Q3 B)	Following data was recorded while determining calorific value of gaseous fuel by Boy's gas calorimeter. i) Volume of gas burnt at STP = 0.09m3 ii) Mass of water used in time 't' = 24 Kg iii)Temperature of inlet water = 22 0C iv) Temperature of outlet water = 35 0C v) Mass of steam condensed = 0.03 Kg Calculate Higher and Lower calorific value. (Given: Latent heat of condensation of water vapour 587 Kcal/Kg)	CO2	3	Module 5	An-M
Q3 C)	A sample of coal containing 5% hydrogen was tested in Bomb Calorimeter for it's calorific value, following data were recorded. Weight of coal burnt= 0.98gm, Acid correction = 55 Cal. Rise in temperature = 2.52 0C, Water equivalent of bomb & calorimeter = 550 gm, Weight of water taken in copper calorimeter = 2200 gm Latent heat of condensation of steam = 587 cal/gm Calculate Gross & Net calorific value.	CO2	4	Module 5	An-M
Q3 D)	Compare solid and gaseous fuels with respect to Calorific value,Ignition temperature, Velocity of combustion, Control of combustion, Risk of fire hazard, use for IC engines, Transport and storage, Products of combustion.	CO2	5	Module 2	An-M

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