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(A-34) Seat NO: _____ No. of Printed Pages; 2

SARDAR PATEL UNIVERSITY EXTERNAL EXAMINATION, APRIL 2016 B.Sc (Semester 4) INDUSTRIAL CHEMISTRY(NC-2010 batch)

US04CICH01: Engineering Materials

02/05/2016, monday

Max. Marks:70

2.30 p.m to 5.30 p.m

Q-1 V	Vrite the number of the c	Orrect anewor		
			$[10 \times 1 = 10]$	
1.	The main engineering rec	uirement of materials falls under category		
	(a) Fabrication	(b) Service category	ory?	
	(c) Economical	(d) All of these		
2.	Purest form of iron is:	() or midde		
	(a) Pig iron	(b) Steel		
	(c) Cast iron	(d) Wraught iron		
3.	Grey cast iron possesses g	reyish colour due to presence of:		
	(a) non	(b) Iron carbido		
	(c) Both (a) & (b)	(d) Graphita		
4.	Most glasses produced bel	Ong to the category of		
	(a)porosincate gigss	(b) Potash glass	•	
_	(c) Fint glass	(d) Soda glass		
5.	Ceramics means:			
	(a) Clay products	(b) Refractory		
_	(c) Whiteware	(d) All of these		
6. Which of the following is neutral refractory:				
	(a) Magnesite	(b) Dolomite		
-	(c) Silica	(d) Graphite		
7,	7. Aluminium is manufacture from:			
	(a) Alunite	(b) Kaolinite		
0	(c) Bauxite	(d) Dolomite		
8 .	Alumina content in Bauxite	is?		
	(a) 40-45%	(b) 10-15%		
	(c) 55-60%	(d) 85-95%		
9.	which of following is impor	tant mineral ore of Nickel?		
1	a) calcite ore	(b) Bauxite ore		
10 (c) Sudbury ore	(d) Niccolite		
10.0	Clay contains mainly:			
	a) Silica	(b) Alumina		
l	c) Lime	(d) Both (a) & (b)		

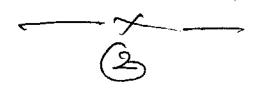


Q-2 Answer <u>Any six</u>

 $[6 \times 2 = 12]$

- 1. Define materials and engineering materials.
- 2. Name types of cast iron.
- 3. Enlist the uses of cement.
- 4. Enlist the various types of cement.
- 5. State important mineral ores of nickel.
- 6. Write commercial uses of silver and aluminium.
- 7. What are alloys? Discuss the types of alloys.
- 8. Discuss the purposes of making of alloys.

Q-3 Discuss the classification of engineering materials.	[08
OR OR	Loo
Q-3 Briefly explain the properties of Brasses and Bronzes	[08
Q-4 Explain the manufacturing method of Refractories.	[08]
OR	foo'
Q-4 Write a note on Ceramic industries.	[08]
Q-5 With the help of the suitable flow diagram, explain the manufacture of Ordinary Cement	[08
OR	
Q-5 Enlist the properties of glass and discuss it's types and application.	[08]
Q-6 What are alloy steels? Explain the need for making alloy steels. OR	[80]
Q-6 What is cast iron? Discuss about varieties of cast iron.	[08]
Q-7 Discuss in brief about the various factors affecting corrosion rate.	[**]
ΩP	[08]
Q-7 With the help of suitable examples, discuss various types of corrosion	TOOT
	[80]
Q-8 Giving examples, differentiate between Inorganic and organic coatings OR	[80]
Q-8 Explain the Characteristics of oils and pigments	[08]



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