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		Question Pa	per Code: 52708	
	B.E.	/ B.Tech. DEGREE B	EXAMINATION, MAY 2	018
		Second	l Semester	
		Mechanica	ll Engineering	
	15UME208	- BASIC CIVIL AN	D MECHANICAL ENGI	NEERING
	(Co	ommon to Electrical a	nd Electronics Engineerin	g)
		(Regula	ation 2015)	
Dur	ation: Three hours		Ν	/laximum: 100 Marks
		Answer A	LL Questions	
		PART A - (10	) x 1 = 10 Marks)	
1.	The first sight taken elevation is called	on a leveling staff he	ld at a point of known	CO1- R
	(a) Bench Mark	(b) Back Sight	(c) Fore sight	(d) Change Point
2.	Granite is a			CO1- R
	(a) Igneous rock		(b) Sedimentary rock	
	(c) Metamorphic roc	k	(d) All of the above	
3.	The part of the struc	ture which is above th	ne ground level is called	CO2- R
	(a) Foundation	(b) Plastering	(c) Planning	(d) Superstructure
4.	The horizontal distance ourse is called	nce between the vertice	cal joints of successive bri	ick CO2- R
	(a) Header	(b) Bed	(c) Lap	(d) Stretcher
5.	The power plant usin	ng working medium a	s water is called	CO3- R
	(a) Hydro power pla	nt	(b) Steam power plant	
	(c) Gas power plant		(d) Generator	

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6.	Pump is a device which convert					CO3- R		
	(a) Mechanical energy into hydraulic energy (b)Hydraulic energy into mechanica					l energy		
	(c) Electrical energy into mechanical energy (d)Mechanical energy into electrical				l energy			
7.	Dies	sel engine is a				CO4- R		
	(a) S	Steam engine		(b) External combustion en	igine			
	(c) Internal combustion engine (d) Stirling engi			(d) Stirling engine				
8.	Another name of steam generator is					CO4- R		
	(a) l	Evaporator	(b) Steam turbine	(c) Condenser	(d) Boiler			
9.	The	end of condensati	ion we get			CO5- R		
	(a) 1	Vapour	(b) Dry air	(c) Steam	(d) Liquid			
10	(a) The	function of throat	(0) Dry an		(u) Liquid	CO5 D		
10.	The		le valve in terrigeratio	n process		СОЗ- К		
	(a) <b>(</b>	Compression	(b) Condensation	(c) Expansion	(d) Vapori	zation		
			PART – B (5 x	2= 10Marks)				
11.	. What is meant by surveying?				CO1- R			
12.	. Define safe bearing capacity. C					CO2- R		
13.	. Name the materials used as moderators.					CO3- R		
14.	List two extreme positions occupied by the piston.					CO4- R		
15.	Write the unit of wet bulb temperature.					CO5- R		
PART – C (5 x 16= 80Marks)								
16.	(a)	Explain with ne compass surveyi	eat sketch prismatic ng.	compass and principles o	of CO1-U	(16)		
			Or					
	(b)	What are the diffuses?	ferent types of cement	? Explain the properties and	d CO1-U	(16)		
17.	(a)	Explain with nea	t sketch the different t	ypes of foundation.	CO2- U	(16)		
	Or							

- (b) A rod 125cm long and of diameter 2cm is subjected to an axial CO2- App (16) force of 20 KN. If the modulus of elasticity of the rod is 2 x 10<sup>5</sup> n/mm<sup>2</sup>. Determine
  (i) Stress
  (ii) Strain and
  (iii) Elongation of the rod
- 18. (a) With the aid of a general layout, explain the working of different CO3- Ana (16) circuits of a thermal power plant.

## Or

- (b) Give a schematic layout of a storage type hydro-electric power CO3- Ana (16) plant and explain the function of each component of the plant.
- 19. (a) Describe the principal parts and functions of a Four Stroke Diesel CO4-U (16) engine with neat sketch.

## Or

- (b) Discuss the principal parts and functions of a Two Stroke Petrol CO4- Ana (16) engine with neat sketch
- 20. (a) Explain the principle and working of the vapour absorption CO5-U (16) refrigeration system.

Or

(b) With the neat sketch explain the layout of a window room air CO5-U (16) conditioning.