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**BVOC**  
**(SEM I) THEORY EXAMINATION 2021-22**  
**ENGINEERING MATERIAL**

**Time: 3 Hours****Total Marks: 30****Notes:**

- Attempt all Sections and assume any missing data.
- Appropriate marks are allotted to each question, answer accordingly.

SECTION-A	Attempt <b>All</b> of the following Questions in brief	Marks(6X1=6)
Q1(a)	Highlight the comparison between cast iron and stainless steel.	
Q1(b)	Define thermal insulation.	
Q1(c)	Define plastic materials and their classification.	
Q1(d)	Define ductility of materials.	
Q1(e)	Define white metals or babbitt metals.	
Q1(f)	Define RCC and uses of RCC.	

SECTION-B	Attempt <b>ANY THREE</b> of the following Questions	Marks(3X3=9)
Q2(a)	Explain the building insulation materials which are commonly used.	
Q2(b)	Write Short Notes on any two of the following: i) Ceramic materials and their applications ii) Asbestos and their applications	
Q2(c)	Illustrate any three properties and three applications of the following insulating materials : i) Glass ii) jute	
Q2(d)	Illustrate the mechanical and technological properties of engineering materials.	
Q2(e)	Examine the desirable properties and functions of different constituents of concrete.	

SECTION-C	Attempt <b>ANY ONE</b> following Question	Marks (1X3=3)
Q3(a)	Explain the properties of conducting materials.	
Q3(b)	Distinguish between copper and aluminum in any ten aspects.	

SECTION-C	Attempt <b>ANY ONE</b> following Question	Marks (1X3=3)
Q4(a)	Explain the electrical properties of insulating materials.	
Q4(b)	Define timber. Explain the methods for preservation of timber.	

SECTION-C	Attempt <b>ANY ONE</b> following Question	Marks (1X3=3)
Q5(a)	Define Semiconductor Materials. Explain the characteristics and applications of semiconductor materials.	
Q5(b)	Illustrate any three characteristics and use of the following materials: i) Abrasives materials ii) Celluloid materials	

SECTION-C	Attempt <b>ANY ONE</b> following Question	Marks (1X3=3)
Q6(a)	Explain the structure and properties of Copper and its alloys.	
Q6(b)	Explain the structure and properties of Aluminum and its alloys.	

SECTION-C	Attempt <b>ANY ONE</b> following Question	Marks (1X3=3)
Q7(a)	Explain briefly, with applications, (i) High early strength cement, (ii) Low alkali cement, (iii) Rapid hardening cement.	
Q7(b)	Explain any five measures to be taken for quality control for improving engineering properties of bricks.	