

## Model Question Paper-2 with effect from 2020 (CBCS Scheme)

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### Fourth Semester B.E. Degree Examination Composite Materials

TIME: 03 Hours

Max. Marks: 100

Module -1			*Bloom's Taxonomy Level	Marks
Q.01	a	Write short notes on Particulate, short fiber and long fibers	L2	10
	b	Explain the Carbon Carbon composites	L2	10
OR				
Q.02	a	List out the properties of MMCs	L2	10
	b	Explain Squeeze casting Techniques with neat sketch	L2	10
<b>Module-2</b>				
Q. 03	a	Discuss the hand Layup and filament winding technique of preparing laminated composites	L2	10
	b	Write short notes of pultrusion process	L2	10
OR				
Q.04	a	Write neat sketch explain the following processes i)Autoclave ii) Pulforming	L2	10
	b	Explain the application of Al,Mg,Ti based MMC	L2	10
<b>Module-3</b>				
Q. 05	a	Derive an expression for elastic constant rule of mixtures and transformations of coordinates based on micro mechanics analysis	L2	20
OR				
Q. 06	a	Determine the global and stress of 2d lamina for fiber glass	L2	10
	b	Explain the short notes on carbon and aramid fiber reinforcement	L2	10
<b>Module-4</b>				
Q. 07	a	Explain details on maximum stress theory	L2	10
	b	Explain the failure prediction for delimitation initiation	L2	10
OR				
Q. 08	a	A unidirectional composite lamina is subjected to stresses as shown in Fig. 5.1. It has the allowable tensile stress of 750 MPa in the fiber direction and 50 MPa in the fiber transverse direction and the allowable compressive stress of 400 MPa in the fiber direction and 100 MPa in the fiber transverse direction. The allowable shear stress is 50 MPa. Determine whether, the lamina will fail under the applied stresses using the maximum-stress theory	L2	10
	b	Explain details on maximum strain theory and its derivation	L2	10
<b>Module-5</b>				
Q. 09	a	Write short notes on composites testing and its tensile and compression testing	L2	10
	b	Write short notes on ultrasonic testing A-B-C scan	L2	10
OR				
Q. 10	a	List out the application of composite in Electric, Electronic recreational and sports equipments	L2	20

\*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.