

FEA QUESTION BANK FOR PRACTICE

1	From the following, which type of element is not two dimensional
	Rectangle
	Quadrilateral
	Parallelogram
	Tetrahedron
2	From the following, which type of element is not three dimensional?
	Hexahedron
	Quadrilateral
	Rectangular prism
	Tetrahedron
3	For truss analysis, which type of elements is used?
	Triangle
	Bar
	Rectangle
	Parallelogram
4	To solve the FEM problem, it subdivides a large problem into smaller, simpler parts that are called
	finite elements
	infinite elements
	dynamic elements
	static elements
5	The art of subdividing the structure into a convenient number of smaller elements is known as?
	assemblage
	continuum
	traction
	discretization
6	The sum of the shape function is equal to
	0
	0.5
	1
	2
7	A triangular plane stress element has how many degrees of freedom?
	3
	4
	5
	6
8	Number of displacement polynomials used for an element depends on _____.
	nature of element
	type of an element
	degrees of freedom
	node
9	On gathering stiffness and loads, the system of equations is given by

	KQ=F
	KQ≠F
	K=QF
	K≠QF
10	The finite element method is mostly used in the field of
	structural mechanics
	classical mechanics
	applied mechanics
	engineering mechanics
11	At fixed support, the displacements are equal to
	1
	2
	3
	0
12	In FEA, the sub domains are called as _____ .
	particles
	molecules
	elements
	none
13	The numbers of node for 1 D element are
	1
	2
	3
	0
14	Finite element analysis deals with _____ .
	approximate numerical solution
	non-boundary value problems
	partial differential equations
	Laplace equations
15	Stiffness matrix depends on
	material
	geometry
	both material and geometry
	none of the above
16	Example of 2-D Element is _____ .
	bar
	triangle
	hexahedron
	tetrahedron
17	For 1-D bar elements if the structure is having 3 nodes then the stiffness matrix formed is having an order of
	2*2
	3*3
	4*4
	6*6

18	To find the nodal displacements in all parts of the element, _____ are used.
	shape function
	node function
	element function
	coordinate function
19	The nature of loading at various locations and other surfaces conditions called
	boundary condition
	traction
	friction
	surfacing
20	The truss element can resist only
	axial force
	surface force
	point load
	none of the above