These are sample MCQs to indicate pattern, may or may not appear in examination

University of Mumbai

Examination 2020

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2016

Examination: Second Year Semester III

Course Code: MEC 305 and Course Name: Material Technology

Time: 1hour Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	Composite materials are classified based on-----
Option A:	Type of matrix
Option B:	Size-and-shape of reinforcement
Option C:	Both
Option D:	Strength
Q2.	Usually softer constituent of a composite is
Option A:	Matrix
Option B:	Reinforcement
Option C:	Both are of equal strength
Option D:	Can't define
Q3.	Not an example for laminar composite
Option A:	Wood
Option B:	Bimettalic
Option C:	Coatings
Option D:	Cladding
Q4.	What mechanical property of a material refers to the resistance to plastic deformation?
Option A:	Rigidity
Option B:	Plasticity
Option C:	Ductility
Option D:	Hardness
Q5.	Following is not the 2-dimensional imperfection
Option A:	Twin boundary
Option B:	Dislocation
Option C:	Surface
Option D:	Grain boundary

Q6.	Figure out the odd one in the following
Option A:	Frenkel defect
Option B:	Tilt boundary
Option C:	Twist boundary
Option D:	Stacking fault
Q7.	What is the reason for elastic deformation?
Option A:	Dislocations intersection
Option B:	Twinning
Option C:	Slip
Option D:	Displacement of atoms to a fraction interatomic distance
Q8.	Cleavage fracture appears
Option A:	Bright
Option B:	Dull
Option C:	Difficult to identify
Option D:	None
Q9.	Brittle fracture is more dangerous than ductile fracture because _____.
Option A:	No warning sign
Option B:	Crack propagates at very high speeds
Option C:	No need for extra stress during crack propagation
Option D:	All
Q10.	Creep rate in ternary stage _____.
Option A:	Decreases
Option B:	Constant
Option C:	Increases
Option D:	None
Q11.	Fatigue strength for non-ferrous materials in defined at _____ stress cycles.
Option A:	10^3
Option B:	10^5
Option C:	10^7
Option D:	10^9
Q12.	Which of the following cannot be obtained using a phase diagram?
Option A:	Melting temperatures of various phases
Option B:	Temperature range for solidification
Option C:	Equilibrium solid solubility
Option D:	Purity of materials

Q13.	The point at which two liquidus lines meet is known as __ _____
Option A:	Eutectic point
Option B:	Isothermal point
Option C:	Solvus point
Option D:	Peritectic point
Q14.	**By adding silicon to steel which of the following property is enhanced?**
Option A:	Resistance to corrosion
Option B:	Electrical characteristics
Option C:	Magnetic property
Option D:	ductility
Q15.	Which of the following is the hardest constituent of steel?
Option A:	Ledeburite
Option B:	Austenite
Option C:	Bainite
Option D:	martensite
Q16.	Iron possesses BCC crystal structure above (in degree centigrade)?
Option A:	1539
Option B:	768
Option C:	910
Option D:	1410
Q17.	Which of the following processes will one use on hardened steel to reduce brittleness?
Option A:	Annealing
Option B:	Normalizing
Option C:	Spherodising
Option D:	Tempering
Q18.	In a hardnability curve which of the following is true
Option A:	Hardness increases as distance from quenched end increases
Option B:	Hardness decreases as distance from quenched end increases
Option C:	Hardness increases as martensite decreases
Option D:	Hardenability curve is a straight line
Q19.	Stainless steel is so called because of its _____.
Option A:	High strength
Option B:	High corrosion resistance
Option C:	High ductility

Option D:	Brittleness
Q20.	Fabrics are extensively made out of nano materials like _____
Option A:	Carbon nano tubes
Option B:	Fullerenes
Option C:	Mega tubes
Option D:	Polymers
Q21.	Based on the important category, concrete and fibre glass are the examples of _____.
Option A:	Ceramics
Option B:	Polymers
Option C:	Composites
Option D:	Semi conductors
Q22.	Which type of material expands and contract in response to an applied electric field?
Option A:	Advanced material
Option B:	Smart material
Option C:	Biomaterial
Option D:	Nanomaterial
Q23.	Steels containing up to 3% to 4% of one or more alloying elements are known as _____
Option A:	Low alloy steels
Option B:	HSLA steels
Option C:	High alloy steels
Option D:	Stainless steels
Q24.	In normalizing, cooling is done in which of the following medium?
Option A:	Air
Option B:	Water
Option C:	Oil
Option D:	Furnace
Q25.	Which reaction does this equation denote? Liquid + Solid 1 → Solid 2
Option A:	Eutectic
Option B:	Peritectic
Option C:	Eutectoid
Option D:	Peritectoid