

Mechanical Engineering Department
Subject Name: MT

Time: 3.00 pm to 4.00 pm

Subject Code: 3151912

Total Marks: 15

Date: 26.08.21

Instructions:

1. Make suitable assumptions wherever necessary.

Q. No.	Options		Marks	CO	Level
Q.1		Which of the following is not a property of moulding sand?	1	1	U
	(a)	Flowability			
	(b)	Green strength			
	(c)	Hardenability			
	(d)	Dry strength			
Q.2		Which of the following is 'not' an allowance given to the pattern for casting?	1	1	R
	(a)	Shrinkage			
	(b)	Draft			
	(c)	Hole			
	(d)	Machining			
Q.3		The life of a pattern is most likely to depend upon which of the following term?	1	1	A
	(a)	Number of castings produced			
	(b)	Type of cooling rate of the casting			
	(c)	Size of the casting			
	(d)	Size of the pattern			
Q.4		When sand is in its natural moist state it is known as?	1	1	U
	(a)	Green sand			
	(b)	Loam sand			
	(c)	Facing sand			
	(d)	Dry sand			
Q.5		The property of sand due to which it escapes a great amount of steam and other gases is called	1	1	A
	(a)	collapsibility			
	(b)	permeability			
	(c)	cohesiveness			
	(d)	adhesiveness			
Q.6		When a pattern is made in three parts, the top part, is known as a	1	1	U
	(a)	Cope			
	(b)	Drag			

	(c)	Cheek			
	(d)	None of the above			
Q.7		The shrinkage allowance for cast iron pattern is	1	1	R
	(a)	10mm/m			
	(b)	16mm/m			
	(c)	20mm/m			
	(d)	26mm/m			
Q.8		A taper provided on the pattern for its easy and clean withdrawal from the mould is known as	1	1	A
	(a)	machining allowance			
	(b)	draft allowance			
	(c)	shrinkage allowance			
	(d)	distortion allowance			
Q.9		The function of gating system is	1	1	U
	(a)	To fill the mold cavity before start of solidification			
	(b)	To find parting line			
	(c)	To identify casting defects			
	(d)	To release the gases evolved			
Q.10		In green sand what is the amount of water used?	1	1	U
	(a)	0 %			
	(b)	5%			
	(c)	15%			
	(d)	25%			
Q.11		The material of pattern in the case of investment casting is	1	1	R
	(a)	Wax			
	(b)	Thermosetting resin			
	(c)	Special plastic			
	(d)	Synthetic sand			
Q.12		The function of cores in casting is to	1	1	U
	(a)	form extended parts			
	(b)	form internal cavities			
	(c)	used for directional solidification			
	(d)	none of the above			
Q.13		Sprue in casting refers to.....	1	1	R

	(a)	gate			
	(b)	Vertical passage			
	(c)	runner			
	(d)	riser			
Q.14		Semi-centrifugal casting.....	1	1	A
	(a)	Is used to ensure purity and density at extremities of a casting			
	(b)	Is used to cast non symmetrical objects			
	(c)	Is used to obtain low density and pure casting			
	(d)	Uses heavy cast iron mould to act as chill			
Q.15		The tolerances produced by the investment casting process are of the order of	1	1	A
	(a)	A few microns			
	(b)	± 0.05 mm			
	(c)	± 1 mm			
	(d)	± 5 mm			

Q. No.	Options	Marks	CO	Level
Q.1	Which of the following welding process is used for welding of sheet metals in automobile and air craft industries?	1	3	A
	(a) Shield metal arc welding			
	(b) Gas tungsten arc welding			
	(c) Thermit welding			
	(d) Resistance welding			
Q.2	Grey cast iron is usually welded by	1	3	U
	(a) Gas welding			
	(b) Spot welding			
	(c) Arc welding			
	(d) TIG welding			
Q.3	Which of the following is an example of fusion welding?	1	3	N
	(a) Arc welding			
	(b) Forge welding			
	(c) Resistance welding			
	(d) Thermit welding with pressure			
Q.4	The heat generated (H) in resistance welding is expressed by	1	3	E
	(a) I^2Rt			
	(b) IR^2t			

	(c)	IRt^2			
	(d)	2IRT			
Q.5		Submerged arc welding is.....	1	3	U
	(a)	process which uses a mixture of iron oxide and granular aluminium			
	(b)	Accomplished by maintaining a hot molten metal pool between plates			
	(c)	A process in which arc is maintained under a blanket of flux			
	(d)	All of the above			
Q.6		Weld spalter is	1	3	U
	(a)	Flux			
	(b)	Welding defect			
	(c)	Electrode coating			
	(d)	Welding defect			
Q.7		The flux commonly used in brazing is	1	3	A
	(a)	borax			
	(b)	zinc chloride			
	(c)	ammonium chloride			
	(d)	rosin plus alcohol			
Q.8		The oxy-acetylene gas used in gas welding produce a flame temperature of	1	3	R
	(a)	1800°C			
	(b)	2100°C			
	(c)	2400°C			
	(d)	3200°C			
Q.9		The oxygen cylinder is usually painted with	1	3	R
	(a)	Black colour			
	(b)	White colour			
	(c)	Maroon colour			
	(d)	Yellow colour			
Q.10		In TIG arc welding, the welding zone is shielded by an atmosphere of	1	3	U
	(a)	Nitrogen gas			
	(b)	Argon gas			
	(c)	Oxygen gas			
	(d)	none of the mentioned			
Q.11		Arc length in arc welding should be equal to	1	3	C
	(a)	Diameter of electrode rod (d)			

	(b)	1.5d			
	(c)	2.5d			
	(d)	3d			
Q.12		Seam welding is best adopted for metal thickness ranging from	1	3	E
	(a)	0.025 to 3mm			
	(b)	3 to 5mm			
	(c)	5 to 8mm			
	(d)	8 to 10			
Q.13		Projection welding is a	1	3	R
	(a)	continuous spot welding process			
	(b)	multi-spot welding process			
	(c)	arc welding process			
	(d)	process used for joining round bars			
Q.14		In thermit welding, the iron oxide and aluminium oxide are mixed in the proportion of	1	3	N
	(a)	3:1			
	(b)	1:1			
	(c)	1:3			
	(d)	Mixture is of different oxides			
Q.15		Laser welding finds widest application in	1	3	A
	(a)	Heavy industry			
	(b)	Structural work			
	(c)	Process industry			
	(d)	Electronic industry			