

MATERIAAL OF CONSTRUCTIONS [15CE11T]

Unit – 1STONES			
S No	Questions	Marks	Appeared in
1	Explain crushing strength test conducted on stone.	5/10	April, Nov 2017, NOV 2019
2	List the qualities of preservation of stones.	5	April, Nov 2016,2017
3	What are the characteristics of good building stone.	5	April,Nov,2017,May/june,2018
4	What are the precautions to be taken in the process of blasting.	5	April2017,Nov 2016
5	List the different types of preservatives applied on stone surface.	5	April, may/nov,2015,2017,2018 Nov/dec 2018
6	Briefly explain the classification of stones.	5	Nov 2015, Nov 2016
7	Explain the geological classification of rocks.	10	Nov/ dec 2015, May/june,2018, NOV 2019
8	Draw a neat sketch & explain quarrying of stones by blasting.	10	Nov/dec 2015, April,may2017
9	Points to be kept in mind while selecting a site for quarrying.	10	Nov/dec 2016, April,may2016
10	Define LLR, Impact test conducted for stones	3+7	Nov/dec 2018
11	Discuss the field test conducted for cement	5	Nov/dec 2018, NOV 2019
12	With a neat sketch, explain, briefly the process of Quarrying by wedging, For which type of rock this method is suitable.	10	Nov/dec 2017, Nov/dec 2018
13	Summarize acid & attrition test conducted for stones	5	Nov/dec 2018, NOV 2019
14	List the properties of good building stones	5	Nov/dec 2018
15	Draw neat sketch of clamp and explain burning process	5	Nov/dec 2018
16	Draw the flow diagram of mixing of raw materials in dry process of manufacturing cement	5	Nov/dec 2018
17	Define igneous rocks classify its types with examples	7	Nov/dec 2018
18	Name the preservatives commonly adopted to preserve stones	3	Nov/dec 2018
19	What are the causes of deterioration of stone & mention preservatives commonly used	10	NOV 2019
Unit –2BRICKS			
1	List quality of good bricks.	5	Nov 2015, April 2017, Nov 2016
2	List properties & uses of fire clay bricks.	5	Nov 2015, Nov/dec 2017
3	Difference between clamp & kiln.	5	Nov 2015, April 2017,
4	Write short note Refractory bricks.	5	April/may2017, Nov/dec 2017, April/may2016, Nov/dec 2016
5	List test conducted on bricks.	5	Nov/dec 2017, April 2016
6	Draw a neat sketch of clamp and explain the burning process of bricks	5	Nov/dec 2018, NOV 2019
7	Explain burning process by clamp.	5	April/may2016, May/june,2018
8	List & explain the useful & harmful ingredients of good brick earth.	10	Nov/dec 2015
9	Explain burning of bricks in holfman’s kiln.	10	April/may2017, Nov/dec 2016,2017
10	Explain water absorption test &efflorancetest conducted for bricks.	10	April/may2016, May/june,2018
11	List types of molding of bricks. Explain ground molding.	10	Nov 2015, Nov/dec 2017
12	Explain process of pug-mill. and explain pugging of clay	10	April/may2017, Nov/dec 2016,2017 Nov/dec 2018

13	Explain Bull-trench kiln.	10	April/may 2016,2017Nov/dec 2017,
14	Explain briefly the constituents of good brick earth	10	Nov/dec 2018
15	Explain with neat sketch the working of pug mill in manufacture of bricks	5	NOV 2019
16	Draw a neat sketch & explain burning of bricks in Intermittent kilns	10	NOV 2019
17	Explain classification of bricks as per I.S. specifications.	5	NOV 2019
18	Write requirements of good bricks	5	NOV 2019
UNIT – 3TIMBER			
1	Explain defects due to conversion & seasoning	5	Nov/dec 2015, Nov/dec 2016, Nov/dec 2018
2	State what is heart wood. point out the importance of it	3	Nov/dec 2018
3	What is exogenous tree give example Draw a neat sketch of cross section of exogenous tree and label the parts	3+5	Nov/dec 2018 NOV 2019
4	Draw a neat sketch and explain natural seasoning of timber	7	Nov/dec 2018
5	Draw a neat sketch and explain the shake defects caused in timber due to natural forces	7	Nov/dec 2018
6	List market forms of timber.	5	April/may2016, NOV 2019
7	Difference between hard wood, soft wood.	5	April/may2017, Nov/dec 2017, April/may2016
8	List object of seasoning.	5	Nov/dec 2015, Nov/dec 2016
9	Explain the defects in timber due to insects.	5	April/may2017, Nov/dec 2015, Nov/dec 2016
10	Define conversion of timber, List factor consider during conversion.	5	Nov/dec 2015, May/june,2018
12	Explain classification of timber based on more of growth	5	NOV 2019
13	What are the advantages of artificial seasoning of timber.	5	Nov/dec 2017
14	Explain defects due to fungi.	5	May/june,2018
15	Draw a neat sketch of exogenous tree. And label the parts	5	Nov/dec 2015, Nov/dec 2018
16	Uses of timber.	5	April/may2017Nov/dec 2017, April/may2016
17	List the qualities of good timber.	10	Nov/dec 2016, NOV 2019
18	Explain Air seasoning.	10	May/june,2018
19	Explain the different methods of preservation of timber.	10	April/may2017Nov/dec 2017, April/may2016

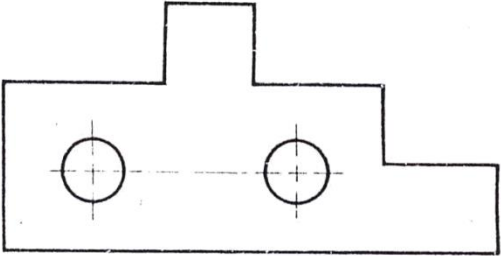
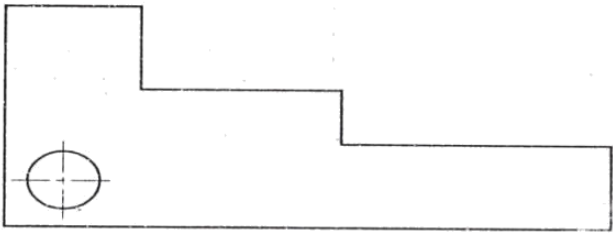
Unit - 4 CEMENT			
1	List physical properties of cement.	5	May/june,2018
2	What are the precautions to be taken while storage of cement.	5	Nov/dec 2015, April/may2016
3	List the ingredient of cement.	5	April/may2016, Nov/dec 2016
4	What are the uses of cement.	5	April/may2017, Nov/dec 2017
5	Functions of ingredient of cement.	5	May/june,2018
6	Explain flow diagram of dry process & wet process.	10	Nov/dec 2016, May/june,2018
7	Explain working process of Rotary kiln.	10	Nov/dec 2017
8	Explain the process of tube mill.	10	Nov/dec 2015
9	Draw a neat sketch and explain the grinding process of cement in ball mill	7	Nov/dec 2018
10	Discuss the field test for cements	5	Nov/dec 2018
11	Draw the flow diagram of mixing of raw materials in dry process of manufacturing cement	5	Nov/dec 2018
12	Write composition of ordinary Portland cement	5	NOV 2019
13	What are the different varieties of cement? Mention their uses in construction industry	10	NOV 2019
Unit -5 PAINTS			
1	List the objects of paints.	5	Nov/dec 2015, May/june,2018
2	What are the ingredients of varnish & list characteristic of paint.	10	April/may2017,2016, Nov/dec 2017,2016
3	What are the characteristics of good paint.	10	April/may2017, Nov/dec 2018, NOV 2019
4	What are the properties of distemper	5	Nov/dec 2018
5	List the objects of varnishing	5	Nov/dec 2018
6	What are the ingredients of Oil Paint	5	NOV 2019
Unit - 6 ferrous non ferrous and alloys			
1	List properties of wrought iron.	5	Nov/dec 2015 Nov/dec 2018
2	List uses of cast-iron.	5	May/june,2018
3	State properties & uses of tin.	5	Nov/dec 2015, Nov/dec 2016, May/june,2018, NOV 2019
4	State properties & uses of zinc.	5	April/may2017
5	Define Alloy? List the types of Alloys.	5	Nov/dec 2017, April/may2016, Nov/dec 2016
6	List the properties of copper.	5	Nov/dec 2017
7	List the properties & uses of TMT bars.	5	April/may2016
8	State market forms of structural steel.	5	Nov/dec 2015, April/may2017
9	List th properties & uses of alluminium.	5	Nov/Dec 2017, May/june,2018 Nov/dec 2018, NOV 2019
10	Distinguish between mild steel bars and TMT bars	5	Nov/dec 2018
11	Write the properties of aluminium	5	Nov/dec 2018
12	Write properties of mild steel.	10	April/may2016
13	List five properties & uses of cast iron	5	NOV 2019
14	List types of copper alloys. Mention properties & uses	5	NOV 2019
15	List properties & uses of high tensile steel	5	NOV 2019

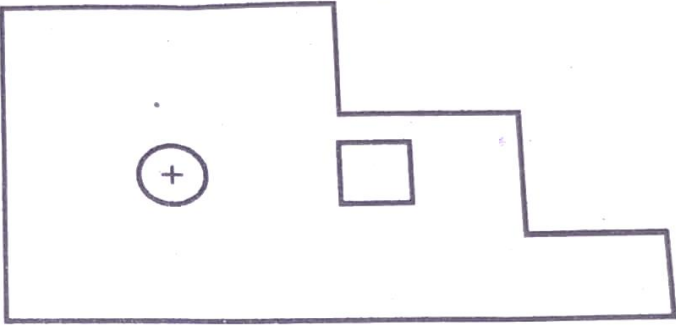
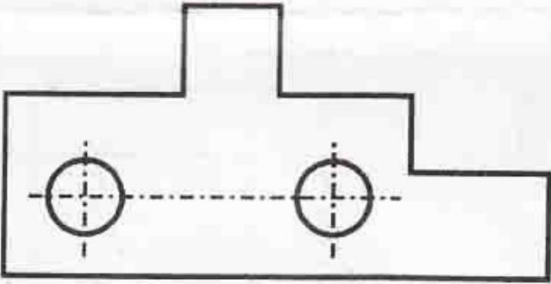
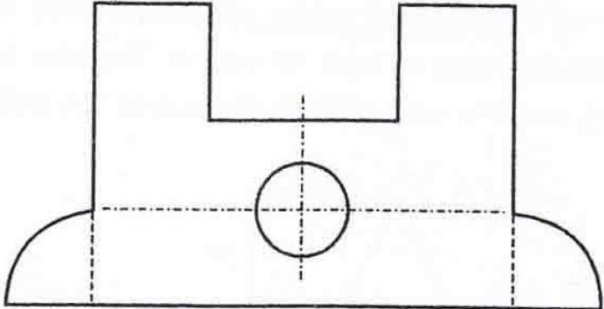
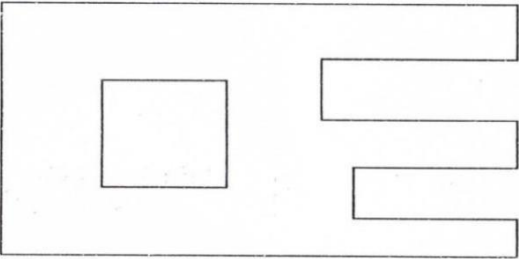
Engineering drawing-I (15CE12D)

Unit – 1 Lettering

S No	Questions	Marks	Appeared in
1	Print the following statement in single stroke vertical capital letter of height 22 mm “KARNATAKA EXAMINATION AUTHORITY”	10	NOV/2015
2	Print the following statement in single stroke vertical capital letter of height 20 mm “RAIN WATER HARVESTING”	10	NOV/2016
3	Print the following statement in single stroke vertical capital letter of height 18 mm “INDIFFERENT LETTERING SPOILS GOOD”	10	APR/2016
4	Print the following statement in single stroke vertical capital letter of height 20 mm “DEPARTMENT OF TECHNICAL EDUCATION”	10	DEC/2017
5	Print the following statement in single stroke vertical capital letter of height 20 mm. DRAWING IS THE LANGUAGE OF ENGINEER	10	MAY/2018
6	Print the following statement in single stroke vertical capital letter of height 20 mm “SAVE RAIN WATER TO GROW”	10	NOV/2018
7	Print the following statement in single stroke vertical capital letter of height 21 mm “MYSORE DASARA 2019”	10	NOV 2019

Unit – 2 Dimensioning

1	Copy the sketch adopt aligned dimensioning (1:1) Aligned with Chain dimensioning.	10	NOV/2015/18
			
2	Copy the sketch adopt aligned dimensioning (2:1) Unidirectional with chain dimensioning.	10	NOV/2016
			

	Copy the sketch adopt aligned dimensioning (2:1) Unidirectional with chain dimensioning.	10	NOV 2019
			
3	Copy the sketch adopt aligned dimensioning (1:1) Unidirectional with chain dimensioning.	10	APR/2016
			
4	Copy the sketch adopt aligned dimensioning (1:1) Unidirectional with parallel dimensioning.	10	DEC/2017
			
5	Copy the sketch adopt aligned dimensioning (1:1) Unidirectional with combined dimensioning.	10	MAY/2018
			

Unit –3 Geometric Construction

1	Draw an arc of radius 90mm tangential to circle of radius 30mm and externally to another circle of radius 15mm. The center of two circles is 80 mm apart.	10	NOV/15/18
2	Inscribe 6 circle in a rectangular hexagon side 60mm so as to touch one side and two adjacent circle	10	NOV/15'
3	A jet from ground level at an inclination of 45 degree to the ground, Horizontal distance 7.5 m Trace the path of jet scale 1:100	10	NOV/15

4	A parallel has a side 130 mm and 90 mm at angle of 65 degree. Inscribe ellipse in parallelogram, Find major axis and minor axis	15	NOV/15
5	Draw common internal tangent to two circle of diameter 60 mm and 40 mm having their center 100mm apart.	10	MAY/16
6	Draw a common external tangent to two circle of diameter 40 mm and 20 mm having their center 90mm apart.	10	NOV 2019
7	Inscribe three equal in hexagon in side of 60mm	10	MAY/16
8	Inscribe three equal in hexagon in side of 50mm so as to touch two sides and two adjacent circles	10	NOV 2019
9	Inscribe parabola in a rectangle of side 120mm and 80mm.	15	MAY/16, Nov/18
10	Draw an arc of radius 80mm tangential internally to two circles of radii 35mm and 25mm and having their centers 100mm apart.	10	NOV/16
11	Draw an arc of radius 90mm tangential internally to a circle of radius 30mm and externally to another circle of radius 15 mm the center of the two circles are 80mm apart.	10	NOV/16
12	Inscribe 5 equal circles in a regular Pentagon of side 60mm so as to touch each side and two adjacent circles.	10	NOV/16
13	An ellipse has the major and minor axes in the ratio 3:2. Draw the ellipse when the major axis is 120mm by concentric circles method.	10	MAY/2017
14	Inscribe 3 equal circles in a regular Hexagon of side 60 mm so as to touch one side and two adjacent circles.	10	MAY/2017
15	Draw a common internal tangent to two circles of diameters 60mm and 40mm having their centers 100mm apart.	10	MAY/2017
16	Draw an arc of radius 80mm tangential internally to two circles of radii 35mm and 25mm and having their centers 100mm apart.	10	MAY/2017
17	A stone thrown from a ground level reaches a maximum of 50mt and falls on the ground at distance of 120mt from the point of projection. Trace the path of the stone in space, select scale of 1:1000.	10	NOV 2019
18	A shot is discharged from the ground level at an inclination of 55° to the ground which is assumed to be horizontal. The shot returns to the ground at a point 75m distance from the point of discharge. Trace the path of the shot. Take scale 1:1000.	15	MAY/2017
19	Construct an ellipse whose major axis are 110 mm and 70 mm respectively by concentric circle method	10	NOV/2018
Unit –4 Scales			
1	On building plan a line 10cm long represents a distance of 5m. Construct a diagonal scale for the plan to read up to 6m. Show, meters, decimeters and centimeters indicate on the scale the length 4.54m and 5.37m.	15	NOV/15
2	Construct a plain scale to read centimeter and decimeter and long enough to measure 6 decimetre. RF=1/4. Show on it a distance of 4.9 decimetre.	15	MAY/16
3	Construct a plain scale to show kilometer and hectometer when R.F = 1:40000 and long enough to measure 6 km. Mark on the scale 3.2km and 4.3 km on the scale.	15	NOV/16
4	Construct diagonal scale of RF 1:20 capable of measuring 3meters. Mark 2.37 & 1.17m on it.	10	Nov 19
5	The distance between Bangalore and Chennai is 352km. On a map, it is represented by a length 70.4mm. What is the R.F. on which the map has been drawn? Draw a diagonal scale of this R.F. to read up to one km and long enough to measure 800km. Mark on the scale the distances 549km and 207km.	15	MAY/17
6	The distance between two stations is 600 Km. It is represented by on a road map a line of 20 Cm Long. Construct a Diagonal Scale to measure kilometer and find its R.F Show Distance of 349 Km on it.	15	NOV 2018
Unit – 5 Projection of Points			

1	A point P is 40 mm in front of VP, 50 mm above HP and 30 mm in front of left PP. Draw the three principal views of the point.	10	NOV/15
2	A point P is 35 mm above VP, 45 mm above HP and 30 mm in front of left PP. Draw the three principal views of the point	10	NOV 2019
3	A point P is 30 mm above HP, 50 mm behind VP and 45 mm in front of left PP. Draw the three principal views of the point	10	MAY/16
4	Draw the three principal views of a point P lying 40 mm behind VP, 60	10	MAY/17/18
5	Draw the three principal views of a point P lying 60 mm below HP, 50 mm in front of VP and 45 mm in front of the left PP.	10	NOV/17
6	A point P is 25 mm in front of VP, 30 mm above HP and 30 mm in Front of left P.P Draw three Principle views of a point.	10	NOV/18
Unit – 6 Projection of Lines			
1.	The distance between the end projectors passing through the end points of a line AB is 40 mm. The end A is 20 mm above HP and 15 mm in front of VP. The line AB appears as 65 mm long in the front view. Complete the projections. Find the true length of the line and its inclinations with HP & VP.	15	NOV/15
2.	A line AB 95 mm long is inclined at 40° to HP and parallel to VP. The line is 90 mm in front of VP. The lower end A is 35 mm above HP, 110 mm in front of the right PP and is away from it than the higher end. Draw the three principal views of the line.	15	NOV/15
3.	Draw the projections of a line AB, 80 mm long inclined at 30° to HP and parallel to VP. The line is 40 mm in front of VP. The lower end A is 20 mm above HP.	15	MAY/16
4	A line AB has its end A 15 mm above HP and 10mm in front of VP. The end B is 55 mm above HP and the line is inclined at 30° to HP. The distance between the end projectors of the line when measured parallel to the line of intersection of HP & VP is 50 mm. Draw the projections of the line and find its inclinations with VP.	15	NOV 2019
5	A line PQ has its end P 15 mm above HP and mm in front of VP. The end Q is 55 mm above HP and the line is inclined at 30° to HP. The distance between the end projectors of the line when measured parallel to the line of intersection of HP & VP is 50 mm. Draw the projections of the line and find its inclinations with VP.	15	MAY/16
6	A line AB measuring 70 mm has its end A 15 mm in front of VP and 20mmaboveHP.TheotherendBis60mminfrontofVPand50mm above HP. Draw the projections of the line with HP &VP.	15	NOV/16
7	A line AB 80 mm long is inclined at 45° to VP and parallel to HP. The endnearer toVPis30mm infrontofVP,60mmaboveHPand100 mm in front of right PP. Draw the three principal views of theline.	15	NOV/16/18
8	A line AB 95 mm long is inclined at 40° to HP and parallel to VP. The line is90mm in front of VP. The lower end A is 35mm above HP, 110 mm in front of the right PP and is away from it than the higher end. Draw the three principal views of the line.	15	MAY/17
9	Draw the projections of a line 80mm long placed parallel to HP is inclined at 45° to VP. The end nearer to VP is 30mm infront of VP, 60mm above HP and 100mm in front right picture plane.	15	Nov 19
10	A hexagonal lamina of 40mm sides rests on HP on one of its sides. The side which is on HP is perpendicular to VP and the surface of the lamina is inclined to HP at 45°.The lamina is then rotated through 90° such that the side on HP is parallel to the VP, while the surface is still inclined to HP at 45°. Draw the front view and the top view of the lamina in its final position.	15	NOV/15

11	A square lamina of ABCD of 40mm side rests on the corner C such that diagonal AC appears as at 35° to the VP in the top view. The two sides BC and CD containing the corner C make equal inclinations with the HP. The surface of the lamina makes 40° with HP. Draw its top view and front views	15	NOV/15
12	A hexagonal lamina of 25mm sides rests on HP on one of its sides. The side which is on HP is perpendicular to VP and the surface of the lamina is inclined to HP at 45° . The lamina is then rotated through 90° such that the side on HP is parallel to the VP, while the surface is still inclined to HP at 45° . Draw the front view and the top view of the lamina in its final position.	15	Nov 2019
13	A hexagonal lamina of 40mm sides rests on HP on one of its sides. The side which is on HP is perpendicular to VP and the surface of the lamina is inclined to HP at 45° . The lamina is then rotated through 90° such that the side on HP is parallel to the VP, while the surface is still inclined to HP at 45° . Draw the front view and the top view of the lamina in its final position.	15	MAY/16
14	A circular lamina of 60mm diameter rests on HP such that the surface of the lamina is inclined at 30° to HP. The diameter through the point on which the lamina rests on HP appears to be inclined at 30° to the VP in the top view. Obtain its projections.	15	NOV 2019
15	A circular lamina of 65mm diameter rests on HP such that the surface of the lamina is inclined at 40° to HP. The diameter through the point on which the lamina rests on HP appears to be inclined at 50° to the VP in the top view. Obtain its projections.	15	MAY/16
16	A pentagonal plane lamina of edges 30mm is resting on HP with one of its corner touching it such that plane surface makes an angle of 50° with HP. The two of the base edges containing the corner on which the lamina rests make equal inclinations with HP. If the edge opposite to this corner makes an angle of 40° with the VP, draw the top and front views of the plane lamina in this position.	15	NOV/16
17.	An equilateral triangular lamina of side 50mm rests with one its sides on HP so that the surface of the lamina is inclined at 40° to HP. The side on which the lamina rests is inclined at 50° to VP. Draw the projections of the lamina.	15	NOV/16/18
18.	An equilateral triangular lamina of side 40mm rests with one its edges on HP so that the surface of the lamina is inclined at 60° to HP. If the edge on which it rests is inclined to VP at 60° . Draw projections.	15	NOV 2019
19.	A hexagonal lamina of side 30mm is resting with one of its corner on HP so that the diagonal passing through that corner is inclined at an angle of 45° and appears to be inclined at 30° to VP. Draw the top and front views of the lamina.	15	MAY/17/ NOV18
20.	A square lamina of 40mm side rests with one of its sides on HP so that the surface of the lamina is inclined at 30° to HP. The side on which the lamina rests is inclined at 45° to VP. Draw the top and front views of the square lamina in this position.	15	MAY/17