8.2		Guru Nar	ak Dev Engin	eering Colleg	ge, Ludhiana	-			
			of Mechanical					· · ·	
Progra	am		Tech.(ECE)	Semester	-	1 st			
Subjec	ct Code		SC-103			<u> </u>		,	
		. , , ,	30-103	Subject Ti	tie		gineering Graphics and		
Mid Se	emester Test (M	ST) No. 2		Course Co	ordinator(s)		esign : Amrinder Si	ngh Dannu	
Max. N	Marks	24	1						
	of MST			Time Dura		1 1	our 30 minute	es	
Date 0	or IVIS I	9	^h Nov. 2023	Roll Numb	oer				
Note:	Attempt all quest	ions					914		
Q.			Question			· ·	CO- DDT	34 1	
No.			COs, RBT level	Marks					
Q1	Give classificati	ion of solids.					CO1, L1,	2	
							L2		
Q2	What are the benefits of CAD? Also discuss array command.						CO6, L2,	2	
							L5 CO2, CO3,		
Q3	A pentagonal prism of base side 30 mm and axis 60 mm has one of its rectangular faces on the H.P. and the axis inclined at 60° to the V.P. Draw its							4	
	rectangular face	es on the H.P. ar	nd the axis incli	ined at 60° to	the V.P. Draw	/ its	CO4, L3,		
04	projections.	ameter 50 mm is surmounted centrally on the top of a square CO2, CO3,						1	
Q4		ameter 50 mm i 60 mm and thick					CO2, CO3, CO4, L3,	4	
	arrangement.	Washing and thick	die35 20 mm. L	oraw the ison	ictile view of	the	L4, L6		
Q5		mid of base side	40 mm and axis	60 mm is rest	ting on its base	on	CO2, CO3,	4	
-		that a side of the					CO4, L3,		
		icular to the V.P			H.P., bisecting	the	L4, L6		
		development of					000 000	1	
Q6	A hexagonal p	CO2, CO3, CO4, L3,	8						
			is parallel to the V.P. It is cut by a plane whose V.T. is inclined erence line and passes through a point on the axis 20 mm from						
		Draw its section							
				- Cotain true si					
	rse Outcomes (C ents will be able t	•							
1		rious terms used	in engineering	drawing and l	Interpret the di	rawir	ng in terms of		
	engineering red	quirement.							
2	Conceptualize,	and deliver the	fundamentals o	f engineering	drawing for a	ny gi	ven applicatio	<u>n.</u>	
3	Apply rules an	d conventions as	per Internation	al Standards	for engineering	g dra	wing.		
4	Leam and appl	ly orthographic a	s well as isome	tric projection	ns as per engin	eerin	ng requirement	<u>. </u>	
5	Integrate ideas	for offering effic	cient and effect	ive solutions	to the engineer	ring	problems.		
6		to draw engineer	ing drawings (2	and basic	JU models.	or T	hinking Leve	s (HOTS)	
RBT	Classification	Lower Order	I hinking Leve	is (LUIS)	nigher Ord	CI I	minking Level		
PRT	Γ Level	L1	L2	L3.	L4	L5	L6		
	nber						Park Mess		
	T Level Name	Remembering	Understandin	g Applying	Analyzing	Eyal	usting Creat	ing	
			1.5 Sec.						
1				Married & Land Str. College of the Land Str. College		4.00	THE RESERVE OF THE PARTY OF THE	Section 19 hours and the	

Guru Nanak Dev Engineering College, Ludhiana

			ent of Mechanica	_	_		
NO CENT	ie	B. Tech.		Semester:		1st (ECI	
Snijetie		ESC -10)3	Subject Ti	tle:	Design	ering Graphics &
MST No.	251	1 st		Course Co	ordinator(S)		hveer Singh Khan
Max. Ma	V-4)	24		Time Dura		l hour 3	30mins
Date of 1		29,09.2	02302000	Roll Numb			
		Questions (Assur					
Q.No.	temperin s	Zuestione (1135th				CO's,R Leve	
QI .	Why it is a	lways preferred to	have 1st and 3rd ar	igle projection	ons in drawin	g? CO1, I	
		ne different types				CO2, L	
Q2. Q3.	Draw the	conventional repering practice. A	resentation of an	ly four type	of lines use cations.	d CO2, L	.1 4
Q4)	A Point P is 25 mm above the HP and 30 mm in front of the VP. Determine					ine CO2,CC	5
Q5.	Print "DI	stance from XY li HAN GURU NA	NAK* in single	stroke upp	ercase verti	cal CO2,CC CO4 L	
Q6.	A straight	using suitable so line AB 70 mm lo and A is 15 mm in elevation of the lin	cale. ong makes an angle front of VP and 25	of 40°to HF	and 30°to th	e CO2,CC	
				1		and the same of th	19
Cours	e Outcome	es (CO) Students arious terms used	in engineering d	rawing and	interpret the	drawing in te	rms of
1 Ur	iderstand va	irious terms used	m ongwe			· onv	lication
en	gineering re	equirement.	fundamentals of e	engineering	drawing for	any given app	meation.
2 Cc	nceptuanzo	and deliver the	s per Internationa	1 Standards	for engineer	ing drawing.	irement.
3 Ar	ply fules al	nd conventions a bly orthographic	as well as isometr	ic projectio	ns as per eng	gnicering requ	ns.
4 Le	arn and app	oly orthographic as for offering eff	icient and effective	e solutions	to the engine		
5 In	egrate luca				Higher Or	der Thinking	Levels
6 Us	RBT	Lower Order	Thinking Levels	(LOTS)	(HOTS)		
Class	ification			1.3	L4	L5	L6
	Level	Ll	1.2	1,5			Creating
Num		1	II landandino	Applying	Analyzing	Evaluating	Creating
RBT	Level	Remembering	Understanding	74/1/11-8			
Nam	<u>e</u>		X89		*	7 291 6	



				& Producti			
		B.Tech.		Semester:		2 nd	
rogramme ubject cod		ESC -10		Subject Titl	e:	Engineering Design	Graphics &
Tid Com T	est (MST N	(o·) 1 ST		Course Coo	rdinator(S)		
11d Sem. 1 1ax. Mark		24		Time Durat		1 hour 30mir	18
Date Of MS		25 th Mar	2023	Roll Number	er		
Jate Of Mis	nnt All Que		ne suitable data if	missing)			34 1-
Q.No.	npt An Que	Stions (1 tooms				CO's,RBT Level	Marks 2
01) W	hat is the dif	ference between	en first and third a	ngle projection	ons?	CO1, L2	
$\frac{2}{2}$	C Also Amore	o of a straight	line			CO2, L3	2
ZZA D	41	wantional ren	a straight line. tional representation of any four type of lines used actice. Also mention its uses or applications.				4
Q4. A	Point A is 3	0 mm above H	P and 20 mm infro and 25 mm behind 3 40 mm. Draw the	ont of the VP I the VP. The projections	. Another distance	CO2,CO3, CO4,L3	4
Q5. A	line AB, 60	aight lines join mm long, mal is 30 mm abo	to the HP an	d 450 to the	CO2,CO3, CO4,L4	4	
Q6.) A	oraw its proje regular hex	agonal lamina	of side 25 mm is p when a). a side is to the VP. Locate i	parallel to HP	and 15 mm	CO2,CO3, CO4,L4	8
 Under engine Conce Apply Learn Integr Use conce 	ering requi- eptualize and rules and c and apply of ate ideas fo	us terms used rement. d deliver the factorions as orthographic are offering efficience.	in engineering d fundamentals of case per International as well as isometricient and effective ring drawing (2D)	engineering al Standards ric projection ve solutions on and basic	drawing for a for engineerins as per eng to the engine	ny given appli ng drawing. ineering requir	rement.
Classific		1 2		L3	L4	L5	L6
RBT Lev	vel	L1	L2			v- ² u	C
Number RBT Lev		emembering	Understanding	Applying	Analyzing	Evaluating	Creating
Name	6 6	16		15	1	16	A

			gineering College, Ludhia	ma –		
			of Applied Science			
Program			Semester	2		
Subject Code	:	ESC-103	Subject Title Enginee Design		eering Graphics and	
Mid Semester	r Test (MST) No.	1	neet Kaur			
Max. Marks		24	Time Duration 1 hour :			
Date of MST		25 th March, 2023 (10:45-12:15)	Roll Number			
Note: Atter	npt all questions					
Q. No.		Questi	on		COs, RBT level	Marks
Q1 I	Draw different elem	ents of dimensioni	ng with neat sketch.		CO1, L2	2
Q2 V	Why projections in large	CO2, L3	2			
Q3 I	Draw and enlist applications of following line-types: Hidden Line (ii) Continuous thin line thick at Ends					4
Q4 A	A regular pentagonal plane having edge 30 mm long has its surface parallel to HP. Draw its projections if one of its edge (a) is parallel to VP (b) Perpendicular to VP					4
Q5/ A	\	m above HP and 4	5 mm in front of VP. Draw stance from origin.	its	CO2,CO3, CO4, L3	4
96	A line segment AB	70 mm long has its makes on angle of	s end A 15 mm above HP a 30° to HP and 45° to VP. D	nd 20 Draw its	CO2,CO3, CO4, L4	8
Students w	utcomes (CO) vill be able to	4				
	engineering require	ement.	ineering drawing and Interp			
2	Conceptualize, and	deliver the fundan	nentals of engineering draw	ing for a	ny given app	lication.
3	Apply rules and co	nventions as per In	temational Standards for er	ngineerin	g drawing.	
4	Leam and apply or requirement	thographic as well	as isometric projections as	per engir	neering	
5	Integrate ideas for	oflering efficient a	nd effective solutions to the	enginee	ring problem	S.
6	Use computer to di	aw engineering dra	awings (2D) and basic 3D r	nodels.	Page 25 18	

RBT	Lower Order	Thinking Levels	(LOTS)	Higher Or	der Thinking	g Levels (HOTS)
Classification RBT Level	L1	L2	L3	L4	L5	L6
Number			 ,			<u> </u>
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

						Y		
		Guru Nai	nak Dev Engi	neering Coll	ege, Ludl	niana		
D		Department	of Mechanic	al & Product	tion Engi	neering		
Prog		B. Tech.	ECE) Sem	ester		2nd		
	ect Code	ESC-103	Daylice illy (1)					esian
	Semester Test (MS	ter Test (MST) 2 Course Coordinator(s) Prof Shehbaaz S						
No.						Singh Prof R	amandeep Sir	satwani Sah
	. Marks	24	Tim	e Duration		hour 30 min	utes	igii
Date	e of MST	25 May,	2023 Roll	Number		nour 50 mm	utos .	it
Note	: Attempt all question	ons						
Q.	- DE		Question				1	
No.	-					,	COs,	Marks
QI	What is a sectional	view? Why sect	ional views ar	e used in draw	vina?		RBT level	
Q2\	Distinguish between	n frustum of a se	olid and town	c used in diaw	ving?		CO3, L1	2
	Distinguish between frustum of a solid and truncated of a solid?						CO2,	2
Q3	Write a short note on absolute and polar coordinate system.						L1,L2	
Q 4	A right regular ner	otagonal pyrami	d adapt fl	te system.			CO4, L3	4
_	A right regular pentagonal pyramid, edge of base 30 mm and height 50 mm, rests on its base on HP with one of its base edge perpendicular to VP. A section plane parallel to the HP cuts the pyramid bisecting its axis. Draw its front view and sectional top view							4
05	,							
Q5)	A cylinder of base 45° with the HP at	40 mm and hei	ght 50 mm is	cut by a section	on plane v	which makes	CO2, L6	4
_	the III at	a distance of 40) mm from lov	ver base. Drav	w the deve	elopment for	, _ ,	
Q6)	the forest part of the	ic cyimaer.						
	A sphere of diame	eter 45 mm rests	centrally over	a frustum of	cone of ba	ase diameter	CO4,	8
	60 mm, top diame combination of sol	ide 40 mm and	height 60 mm	. Draw isome	tric projec	tions of the	CO5, L6	
Cou	rse Outcomes (CO)					, ~		,
1	Understand various requirement.							ng
2	Conceptualize and	deliver the funda	mentals of eng	gineering draw	ing for an	v given annlig	ration	
3	Apply fules and co	nventions as per	International	tandards for e	ngineering	drawing		
4	Learn and apply or	thographic as we	ll as isometric	projections as	ner engin	eering require	ment	
5	Integrate ideas for	offering efficient	and effective :	solutions to the	e engineer	ing problems	ment.	
	Use computer to dr	aw engineering of	drawing (2D) a	nd basic 3D m	odels.	ing problems.		
6	RBT	Lower Order	Thinking Leve	els (LOTS)		Order Thinki	ng Levels (H	
				· /		CIACI THINK		1,1,1,1
	sification						ng Levels (110	OTS)
Clas		L1	L2	L3	L4	L5	L6	OTS)











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	Guru Nanak De	v Engineeri	ng College	, Ludhian	a		
	Department of Me	chanical &	Production	n Engineer	ring		
Program	B.Tech.	Semester		1st	•		
Subject Code	ESC -103	Subject T	itle	Eng	ineering Gr	aphics & De	sign
Mid Semester Test (MST)	1	Course C	oordinato	r(s) Prof	Gurpreet	Singh	
No.					•	_	
Max. Marks	24	Time Du	ration	1 ho	ur 30 minu	tes	
Date of MST	18 Nov., 2022	Roll Num			21501	4	
	1011011, 2022	7	. 18 gentlet				
Note: Attempt all questions	3						Ш
Q.		estion				COs,	Marks
No.						RBT level	
Differentiate between	first angle and third	angle.		- · · · · · · · · · · · · · · · · · · ·		CO1, L2	2
				- K. J 1 - 1	- K		
Q2 Draw the convention	al representation of lo	ong chạin thi	ck line and	its applica	tion.	CO1, L1	2
						000	1
Q3) A Point C is in the	HP and 40 mm inf	ront of the	VP. Anothe	er point D	is 30 mm	CO2,	4
below HP and 25 m	m behind the VP. T	he distance	between the	e end proje	ector is 40	CO3, L3	
mm. Draw the project	ction of points. Also	draw the stra	ight lines jo	oining their	riront and		
top views.				ID 100		CO2	1
Q4 A Line AB, 50 mm	long has its end A 3	30 mm away	from the F	HP and 20	mm away	CO2,	4
from the VP. The li	ne is parallel to both	HP and VP	. Draw its l	Projections	in all the	CO3, L3	
four quadrants.							
Q5 A regular pentagona	I lamina ABCDE of 2	25 mm side l	nas one side	on HP. Its	surface is	CO3,	4
	e HP and perpendicu	lar to the VP	. Draw its p	projections	and show	CO5, L6	
its traces.					CAID	CO2	8
Q6 A Line AB 60 mm	long has its end A 15	mm above the	he HP and $\frac{1}{2}$	20 mm inir	Ont of VP.	CO3, CO5, L6	0
The front and top v	iews of the line AB a	re inclined 4:	o and 30° r	espectively	. Draw its	CO3, L0	
projections and find	the true angles of inc	ination with	i nr aliu vr	•			1.
Course Outcomes (CO)							
1 Understand various	term's used in enginee	ering drawing	g and interp	ret the drav	ving in term	is of engineer	ing
requirement.				C			
2 Conceptualize and of	deliver the fundament	als of engine	ering drawi	ng for any	given appii	cation.	
3 Apply rules and cor	ventions as per Interr	national Stan	dards for en	igineering (ring requir	mont	
4 Learn and apply ort	hographic as well as i	isometric pro	jections as j	per enginee	a problems	ement.	
5 Integrate ideas for o	offering efficient and	effective solu	hosic 2D m	odels	g problems	•	
	aw engineering drawi	ng (ZD) and	T OTS)	Higher O	rder Thinl	king Levels ((2TOH
RBT	Lower Order Thinl	king Levels ((LUIS)	Higher O	raci Tiilli	Aing Levels (1015)
Classification	Ll	L2	L3	L4	L5	T	.6
RBT Level Number		derstanding	Applying	Analyzing			ating
RBT Level Name	Kemembering On	derstanding	יייניין איי	Zille	5 Draidati	5	5

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D		v Engineering College, Lu chanical & Production En	
Program	B. Tech.	Semester	14
Subject Code	ESC -103	Subject Title	Engineering Graphics & Design
Mid Semester Test (MST)	1	Course Coordinator(s)	Dr. Deepinder Singh
No.			
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of MST	18 Nov., 2022	Roll Number	

Q. Ng.	Attempt all questions Question	COs, RBT level	Marks
<u>(1)</u>	Differentiate between aligned and uni-directional method of dimensioning using a suitable example.	CO1, L2	2
Q2)	Sketch the hidden line and centre line.	CO1, L1	2
<u></u>	Draw the projections of points in third quadrant, when the (i) Point B lies 35 mm from the HP and 22 mm from the VP. (ii) Point C lies in the VP and 32 mm away from the HP.	CO2, CO3, L3	4
Q4 (V)	A Point P is 30 mm below the HP and 35 mm behind the VP. Determine its least distance from xy line.	CO2, CO3, L3	4
Q5	A straight line AB 60 mm long makes an angle of 45° to HP and 30° to the VP. The end A is 15 mm in front of VP and 25 mm above HP. Draw the projections of the line AB.	CO3, CO5, L6	4
Q6	A regular pentagonal lamina ABCDE of 30 mm side, rests on HP on one of its sides such that it is inclined to the HP at 45° and the side on which it rests, inclined at 30° to the VP. Draw its projections.	CO3, CO5, L6	8

Course Outcomes (CO) Students will be able to

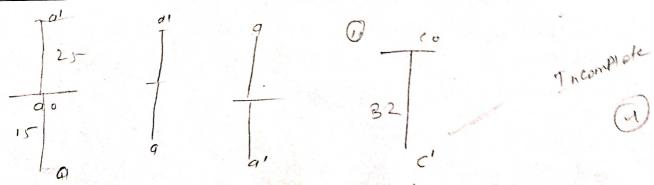
1	Understand various terms used in engineering drawing and interpret the drawing in terms of engineering
	requirement.
2	Conceptualize and deliver the fundamentals of engineering drawing for any given application.
3	Apply rules and conventions as per International Standards for engineering drawing.
13	1 describe a well as isometric projections as par angingaring paguirament

Learn and apply orthographic as well as isometric projections as per engineering requirement.

Integrate ideas for offering efficient and effective solutions to the engineering problems.

Use computer to draw engineering drawing (2D) and basic 3D models.

RBT	Thinking Levels		Higher Or	der Thinking	Levels (HOTS)	
Classification RBT Level Number	L1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating



	I	Department of I	Dev Engineerir Mechanical & I	Production	Engineering	3	•	
		B. Tech.	Semester		1 st			
rogra	t Code	ESC-103	Subject T	itle	Engine	Engineering Graphics & Design		
ubject	emester Test (MST)	2		oordinator(epinder S	Singh	
	emester rest (MDT)	-	002333					
No.	Marks	24	Time Dur	ation	1 hour	30 minut	tes	
	f MST	15 Dec., 202	2 Roll Num	ber	22	1405	-3	
Note:	Attempt all questions						COs,	Marks
Q.			Question				RBT level	
No	What is a sectional vie	wy Why section	al views are use	d in drawing	?		CO3, L1	2
Q1 Q2)	What is a sectional view? Why sectional views are used in drawing? Distinguish between frustum of a solid and truncated of a solid?						CO2, L1,L2	2
Q3	A right regular hexagonal prism, side of base 25 mm and axis 50 mm long, having one of its base edges parallel to the VP with its axis perpendicular to the HP. Draw its						CO4, L3	4
Q4	front, top and side views. A right regular pentagonal pyramid, edge of base 30 mm and height 50 mm, rests on its base on HP with one of its base edge perpendicular to VP. A section plane parallel to the HP cuts the pyramid bisecting its axis. Draw its front view and sectional top						CO2, L6	4
Q 5	view. A cylinder of base 4 450 with the HP at a	distance of 40 r	at 60 mm is cut nm from lower	by a section base. Draw t	plane which he developn	makes nent for	CO2, L6	4
66	the lower part of the A square pyramid, of such that one of its lead the VP and inclined front view, section pyramid.	edge of base 30 base edges is par 1 to the HP at 3 al top view and	allel to the VP. 100 cuts the pyra didevelop the l	A section promited bisection	g its axis. I	Oraw its	CO4, CO5, L6	8
Cou	rse Outcomes (CO)	Students will be a	able to		1	in tom	ms of angines	ring
1	Understand various requirement. Conceptualize and d							
2		I	atamatianal Stat	marns ini en	vinceinie ui	1001112.		
3			Loc tcometric nic	nechulis as i		115 10001	rement.	
4	· 1 C	fforing atticient	and effective sur	שונוטווט נט נווכווו	CIIGIIICCIIIIG	problem	S.	
5	Use computer to dra	nering efficient	rawing (2D) and	basic 3D mo	Jucis.			
6		Lower Order T	hinking Levels	(LOTS)	Higher Ord	ler Thin	king Levels	(HOTS
	INDI	Tower Order 1						
Cla	ssification		L2	L3	L4	L5		L6
0.10	T Level Number	L1	LZ	ן בם	2.			

	47.50	Guru Nar	nak Dev Enginee	ring Colleg	e, Ludhiana	1			
	1		of Mechanical &						
Program		B.Tech.	B.Tech. Semester 1*		1 1				
Subject Code		ESC -103			Engi	Engineering Graphics & Desi			
Mid No.	Semester Test (MS	Γ) 2 nd		Course Coordinator(s)					
-	. Marks	24	Time D	Time Duration 1 hour 30 minu			utes		
Date	of MST	15 Dec, 2					**		
Note	: Attempt all question	ons					146		
Q. No.			Question	A.*	,		COs, RBT level	Marks	
(QI)	Differentiate between	Differentiate between the Prism and Pyramid.						2	
02	What do you mean by	What do you mean by section plane?					CO2, L1	2	
Q3	A triangular prism side of base 30 mm and axis 55 mm long, lies on one of its rectangular faces in HP, with its axis perpendicular to VP. Draw its front and top view.						CO2, CO3, L3	4	
Q4	A right circular cone, diameter of base 50 mm and height 60 mm, rests on its base in HP. A section plane perpendicular the VP and parallel to the HP cuts the cone, bisecting its axis. Draw its front view and sectional top view.						CO2, CO4, L3	4	
Q 5						CO4, CO5, L6	4		
Q6	A right regular per on one of its base parallel to the VP. I	edges in HP, so Draw three view	uch that its axis s of the pentagona	is inclined			CO2, CO4, L6	8	
Cou	rse Outcomes (CO)	Students will be	e able to						
1	Understand various requirement.	terms used in er	ngineering drawir	ng and interp	oret the drawi	ng in tern	ns of engineer	ing	
2	Conceptualize and	deliver the funda	mentals of engine	eering drawi	ing for any g	iven appli	cation.	-	
3	Apply rules and cor	nventions as per	International Star	ndards for er	ngineering dr	awing.			
4	Learn and apply ort	hographic as we	Il as isometric pro	ojections as	per engineer	ing require	ement.		
5	Integrate ideas for o	offering efficient	and effective sol	utions to the	engineering	problems			
6	Use computer to dra	aw engineering o	trawing (2D) and	basic 3D m					
	RBT	Lower Order	Thinking Levels	(LOTS)	Higher Ord	der Think	cing Levels (HOTS	
Clas	sification		1 12	1.3	-				
	Level Number	L1 Demomboring	L2 Understanding	L3	L4	L5	L	6	
RBT	Level Name	Remembering	Understanding	Applying	Analyzing	Evaluati	ng Crea	iting	





	L	epartment of N	Icchanical & Production E	igineering	السو		
Program		B. Tech. Semester		1 st			
Subject Code		ESC-103	Subject Title	Engineering Graphics & Design			
Mid Semester Test (MST)		2	Course Coordinator(s)	Singh			
Vo.							
Max. Marks		24	Time Duration				
Date	of MST	15 Dec., 2022	Roll Number	22161	962		
Note:	Attempt all questions				1.00	Marks	
Q.		Q	uestion		COs, RBT level	Viarks 2	
21/	What is a sectional view	What is a sectional view? Why sectional views are used in drawing?					
Q 2	Distinguish between fr	CO2, L1,L2	2				
Q3	A right regular hexago one of its base edges p		4				
Q4	A right regular pentage its base on HP with or to the HP cuts the py	CO2, L6	4				
17, 51	view.						
Q5	A cylinder of base 40 45° with the HP at a c	distance of 40 mr	60 mm is cut by a section pla n from lower base. Draw the	ne which makes development for	CO2, L6	4	
Q6	A cylinder of base 40 450 with the HP at a control the lower part of the control A square pyramid, each that one of its bathe VP and inclined front view, sectional pyramid.	distance of 40 mr sylinder. dige of base 30 m ase edges is paral to the HP at 30° top view and	m and height 50 mm, rests on lel to the VP. A section plane cuts the pyramid bisecting it develop the lateral surface of	n its base in HP perpendicular to s axis. Draw its		8	
Q6	A cylinder of base 40 450 with the HP at a control the lower part of the control A square pyramid, each that one of its bathe VP and inclined front view, sectional pyramid.	distance of 40 mr sylinder. dge of base 30 m ase edges is paral to the HP at 30° top view and	m and height 50 mm, rests on lel to the VP. A section plane cuts the pyramid bisecting it develop the lateral surface of	n its base in HP perpendicular to s axis. Draw its f the truncated	CO4, CO5, L6	8	
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		B. Tech.	T. T	o rroduc	ction Engin	eering			
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Mid Semester Test (MST)		ESC -103	Subje	ect Title	E	Engineering Graphics & D			
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Max. Marks		Control of the State of the Sta							
Date of MST		24	Time Duration 1 hour 30 min				nutes		
		18 Nov., 2	022 Roll N	Number		22/6062			
Note:	Attempt all question	ns				and the second s		- Alle Silver Si	
Q.			Question				COs, RBT level	Mark	
QI	Differentiate between suitable example.	en aligned and t	uni-directional	method of	dimension	ing using a	CO1, L2	2	
Q2	Sketch the hidden line and centre line.						COI, LI	2	
							CO2,	4	
Q3 /	Draw the projections of points in third quadrant, when the (i) Point B lies 35 mm from the HP and 22 mm from the VP.						CO3, L3		
	(i) Point B lies	35 mm from the I	HP and 22 min	the HP	•				
	(ii) Point C lies in the VP and 32 mm away from the HP.							4	
Q4	distance from xy line.						CO3, L3		
							CO3,	4	
Q5	l and A is 15 mm in I	ront of vi and 2.	, , , , , , , , , , , , , , , , , , , ,				CO5, L6		
	AB.	Llamina ARCDE	na ABCDE of 30 mm side, rests on HP on one of its sides e HP at 45° and the side on which it rests, inclined at 30° to				CO3,	8	
Q6)	A regular pentagona	ad to the HP at 45	and the side o	n which it r	ests, incline	d at 30° to	CO5, L6		
	such that it is incline	intions	ATT THE PERSON NAMED IN	à .			•		
	the VP. Draw its pro	Students will be a	ble to	T. C. A. S. C. L.	TELL	uttare v			
Cou	rse Outcomes (CO) Understand various	new used in ene	ineering drawii	ng and interp	pret the draw	wing in term	ns of engineer	ring	
1	1	INCIDENCE IN THE	• • • • • • • • • • • • • • • • • • • •	Olegy	Mary Mary			-	
							cation.		
2									
3	Apply rules and conventions as per International Standards for engineering drawing. Apply rules and conventions as per International Standards for engineering drawing. Learn and apply orthographic as well as isometric projections as per engineering requirement. Learn and apply orthographic as well as isometric projections as per engineering requirement. Integrate ideas for offering efficient and effective solutions to the engineering problems. Integrate ideas for offering drawing (2D) and basic 3D models.							-	
4	and apply Uli	100	1 (C -1: 00)	utione to the	»	ig proofems			
5	Integrate ideas for o	w engineering dra	wing (2D) and	basic 3D m	odeis.			IOTO:	
6	Use computer to dia	w engineering did Lower Order Th	inking Levels	(LOTS)	migner O	raer I hink	ing Levels (b	iots)	
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Classification		L1	L2 Inderstanding	L3 Applying	L4 Analyzing	L5 Evaluating	L		
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[Total No. of Questions: 09]

[Total No. of Pages: 2]

Uni. Roli No.

Program/ Course: B.Tech. (Sem. 1st/2nd)

Name of Subject: Engineering Graphics and Design

Subject Code: ESC-103

Paper ID: 15931

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) All sections arecompulsory

2) Section- A and Section-B are based on Part-I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)

3) Section-C is out of Part-II [Practice (Drawing)] portion of syllabus (Traditional

Engineering Graphics ONLY).

4) Any missing data may be assumed appropriately.

Section - A (From Part - I (Theory) both TEG and CG)

[Marks: 02 each]

Q1. Define Trace of a Line.

Differentiate between first angle projections and third angle projections.

G) Give application of development of solids?

Enlist methods of dimensioning with neat sketch of each.

What are oblique planes?

What is the utility of extrude command?

Section - B (From Part - I (Theory) both TEG and CG)

[Marks: 04 each]

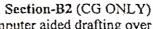
Section-B1 (TEG ONLY)



A right regular hexagonal prism with base edge 25 mm and axis 70 mm long is resting on one of its vertical edge on HP such that its axis is parallel to both HP and VP. Draw its projections.



A point P is 25 mm above HP and 40 mm in front of VP. Draw its projections and determine shortest distance of point from origin.





Enlist the advantages of computer aided drafting over manual drafting.

Enlist different types of array command. Discuss in detail stepwise procedure of Polar array along with its use.

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PAGE 1 OF 2

P.T.O.

The start .

Section - C (From Part - II [Practice (Drawing)] TEG only)

[Marke: 08 each]

08-12.24

(Q6.)

A right regular circular cone having diameter of base 50 mm and height 60 mm, lies one of its elements in HP with axis parallel to VP. Draw its projections.

Or

Draw the projections of the rhombus having diagonals 100 mm and 50 mm long resting on one of its corner in HP. The bigger diagonal is inclined at 45° to HP and smaller diagonal is parallel to both the planes.

16 -> 88

38 (07)

A right regular square pyramid of 35 mm base edge and axis 60 mm long is resting on its base on HP with one of its base edge parallel to VP. A section plane perpendicular to the VP and inclined to HP at 30° cuts the pyramid bisecting its axis. Draw its front view, sectional top view and develop the lateral surface of trancated pyramid.

70-13.27

A

A right regular pentagonal pyramid, edge of base 25 mm and height 70 mm resting on its base on HP with one of its base edge parallel to VP. It is cet by a section plane inclined at 30° to the VP at a distance of 10 mm away from its axis. Draw its top view, sectional afront view and true shape of the section.

Nofehook 16

A line CD 70 mm long is inclined at 45° to HP and 30° to VP, such that point C lies or? both HP and VP. Draw its projections.

Note book - 9



A line AB has its end A 25 mm above HP and 20 mm in front of VP while its end E is 55 mm above HP and 55 mm in front of VP. Draw its true length of AB $\hat{\beta}$, φ and locate its traces, if end projectors are 60 mm apart.

16-110



A right circular cone of base radius 20 mm and axis 30 mm long rest centrally on a right regular hexagonal prism having base edge 30 mm and axis 50 mm long. Draw its isometric projections.

Nb -111



Draw the isometric projections of a sphere of diameter 30 mm resting centrally on top of square block having side 60 mm and thickness 15 mm.

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[Total No. of Questions: 09]

[Total No. of Pages: 2.]

Uni. Roll No. .. 2203347

Program/ Course: B.Tech. (Sem. 1st/2nd)

Name of Subject: Engineering Graphics and Design

Subject Code: ESC-103

Paper ID: 15931

Scientific calculator and Drafter is allowed

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) All sections are compulsory 2) Section- A and Section-B are based on Part-I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)

3) Section-C is out of Part-II [Practice (Drawing)] portion of syllabus (Traditional Engineering Graphics ONLY).

4) Any missing data may be assumed appropriately

Section - A (From Part - I (Theory) both TEG and CG)

[Marks: 02 each]

01

Difference between 'fillet' and 'chamfer' command.

Which types of solid surfaces are developed by radial line method? — Cy Urdnew, Pyronw Differentiate between fractions and developed by radial line method?

Differentiate between frustum and truncated solid with neat sketch.

Give relation between isometric and true length.

What is orthographic projection and why they are named so?

(From Part - I (Theory) both TEG and CG) Section - B

[Marks: 04 each]

Section-B1 (TEG ONLY)

A point 'Q' lies 40 mm above HP and 60 mm in front of VP. Draw its projection and find

shortest distance from origin. Draw and enlist applications of zig-zag line; dotted line; long chain thin but thick at ends

and continuous thin line.

A

Section-B2 (CG ONLY)

What is User-coordinate system? Discuss its various types by considering an example for enstruction of rectangle with dimensions 60mm x 40mm.

Discuss different types of 'Array' commands.

(0,0) 60

(60, 40) . Page 1 of 2

Section - C (From Part - II [Practice (Drawing)] TEG only)

[Marks: 08 each]

A 70 mm long line PQ is inclined at 30° to the H.P. The end P is 15 mm in front of the V.P. and 25 mm above the H.P. The front view of the line measures 45 mm. Draw the projections of the line PQ and determine its true angle of inclination with the V.P.

20 - P. 9.215 A 100 mm long line PQ is inclined at 30° to the H.P. and 45° to the V.P. Its mid-point is 35 mm above the H.P. and 50 mm in front of the V.P. Draw its projections.

> PQRS is a rhombus having diagonal PR = 60 mm and QS = 40 mm and they are perpendicular to each other. The plane of the rhombus is inclined with H.P. such that its top view appears to be square. The top view of PR makes 30° with the V.P. Draw its projections and determine inclination of the plane with the H.P.

Nb-76 An equilateral triangular prism 20 mm side of base and 50 mm long rests with one of its base edge on HP such that the rectangular face containing that edge on which the prism rests is inclined at 30° to HP. The edge on which prism rests is inclined at 60° to VP. Draw its projections.

A square pyramid of base side 40 mm and axis 60 mm is resting on its base on the H.P. Dr-13,25 808 with all the sides of the base equally inclined to the V.P. Draw its sectional views and true shape W-83of the section, if it is cut by a section plane perpendicular to the V.P., bisecting the axis and is inclined at 45° to the H.P.

> Draw the development of the lateral surface of the cylinder having base diameter 40 mm and axis 60 mm long. A square hole of 20 mm side is drilled centrally through its axis such that edges of square hole are equally inclined to HP.

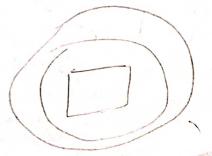
A square pyramid of base side 25 mm and axis 40 mm rests centrally over a cylindrical block of base diameter 50 mm and thickness 20 mm. Draw the isometric projection of the arrangement.

Or Draw the isometric projection of the frustum of a hexagonal pyramid of base side 40 mm, top side 25 mm and height 70 mm. The frustum rests on the base on the H.P.

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Page 2 of 2



MORNING 05 MAR 2021

[Total No. of Questions: 09] [Total No. of Pages: 2] Uni. Roll No. Program/ Course: B.Tech. (Sem. 1") Name of Subject: Engineering Graphics and Design Subject Code: ESC-103 Paper ID: 15931 Time Allowed: 03 Hours Max. Marks: 60 NOTE: 1) All sections are compulsory 2) Section- A and Section-B are based on Part-I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG) 3) Section-C is out of Part-II [Practice (Drawing)] portion of, syllabus (Traditional . Engineering Graphics ONLY). 4) Any missing data may be assumed appropriately Section - A [Marks: 02 each] a) Why the projections of an object not drawn in 2nd and 4d quadrants? b)) Name the various dimensioning techniques. c) What is the trace of a straight line? Draw the trace of a line when it is kept parallel to HP and inclined to VP. What are oblique solids? What do you mean by development of surfaces?

Section - B

[Marks: 04 each]

Section-B1



Write "HEALTH IS WEALTH" using 7:5 in single stroke vertical capital letters. A point A is 30mm above the HP and 25mm infront of the VP. Determine its least distance from xy-line.

Section-B2



What is the difference between absolute and incremental mode of drawing? What is the use of fillet, chamfer, array and trim in computer graphics?

Section - C

[Marks: 08 each]

PAGE 1 OF 2

P.T.0

MORNING

05 MAR 2021



Draw the projection of a pentagonal pyramid base 30 mm edge and axis 40 mm long is resting on HP with one of its base edge inclined at angle of 30° with VP.

Or

9-9.20 -1 119

Plan and elevation of a line AB, 60mm long, measure 50mm and 40mm respectively. End A is 15 mm above HP and 20mm in front of the VP. Draw its projections and determine the true inclination with HP and VP respectively.

P8-13-13

A right regular pentagonal pyramid, edge of base 30mm and height 55mm, rests on its base on HP, such that one of its base edges is perpendicular to the VP. A section plane parallel to the VP cuts the pyramid at a distance of 10mm from the axis. Draw its top view and sectional front view.

Nb-92.2

The state of the s

Or

A pentagonal prism of 25mm base edge and 50mm long is resting on its base with an edge of base at 45° to VP. The prism is cut by a sectional plane inclined at 30° to HP and passes through a point 25mm from the base along its axis. Develop the truncated prism.

16.20

(Car)

A cube of 30mm side rests on the top of a cylindrical slab of 60mm diameter and 25mm thick. The axis of the solids are in the same straight line. Draw an isometric projection of the solid.

Or

por -10.14 9

A regular hexagonal lamina ABCDEF 25mm side is normal to both HP and VP. It is lying with one of its edges(say AB) parallel to HP and perpendicular to VP. Draw its projections and locate its traces.

28-12.24

A right circular cone, diameter of base 60mm and height 70mm, lies on HP on one of its elements, such that its axis is parallel to VP. Draw its projections.

Or

Pg-13.25.

A square pyramid edge of base 35mm, height 50mm and rests on its base on HP with its base edges equally inclined to VP. A section plane perpendicular to the VP and inclined to the HP at 30°, cuts the pyramid bisecting its axis. Draw its front view, sectional top view and true shape of the section.

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PAGE 2 OF 2

[Total No. of Questions: 09]

MORNING 30 MAY 2019 [Total No. of Pages: 02]

Uni. Roll No.

Program/ Course: B. Tech. (Sem. 1st/2nd) Name of Subject: ENGINEERING GRAPHICS AND DESIGN Subject Code: ESC-103 Paper ID: 15931

Time Allowed: 03hrs

Max. Marks: 60

Note:

1. All sections are compulsory.

2. Section- A and Section - B are based on Part - I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)

3. Section - C is out of part II [Practice Drawing] portion of syllabus (Traditional Engineering Graphics ONLY).

4. Any missing data may be assumed appropriately.

(From Part - I (Theory) both TEG and CG) Section - A

[Marks: 02 each]

Q1.

a) Name the various dimensioning techniques.

b) What do you mean by single stroke letters?

What is the trace of a straight line?

Draw the symbol to represent 1st angle projection?

e) Describe the extrusion command.

What is the purpose of developing a surface?

Section - B (From Part - I (Theory) both TEG and CG)

[Marks: 04 each]

Section - B1 (TEG ONLY)

Write "DHAN GURU NANAK" in height 10 mm.

A regular pentagonal lamina having base edge 30 mm is resting on one of its corner in HP with its surface inclined at 450 to HP. Draw its Projection.

Section - B2 (CG ONLY)

Q4 Enumerate the types of array along with its applications.

P.T.O

Page 1 of 2

MORNING

30 MAY 2019

Os Describe the methods to draw a circle. (Any four).

Section - C (From Part - II [Practice (Drawing) TEO ONLY]

[Marks: 03 each]

Aby Plan and elevation of a line AB, 60mm long, measure 50mm and 40mm respectively. End A is 15mm above HP and 20mm in front of the VP. Draw its projections and determine the trace inclination with HP and VP respectively

Or

A line PQ 60 mm long having its end P 15 mm above HP and 25mm in front of VV is inclined to HP at 45° and 30° to VP. Draw its projections and locate its traces

having a side of base perpendicular to VP. It is out by a section plane parallel to VP and 16mm away from the axis. Draw its sectional plane and elevation.

A right regular pentagon prism of side 30 mm and 60 mm height is resting on its base on H2 having one of its base edges perpendicular to the VP. A section plane inclined to HP at 30 and perpendicular to the VP cuts its axis at a distance of 36 mm from the base. Develop the lateral surface of the truncated prism.

A cube of 30mm side rests on the top of a cylindrical slab of 60mm diameter and 25mm thick. The axis of the solids are in the same straight line. Draw an isometric projection of the solid.

A square prism of side 40mm and height 65mm is resting on ground. A vertical hole of diarneter 20mm is cut through from the top face reaching bottom face of the prism. Draw the isometric projection of the prism.

Q9 A cylinder of diameter 50mm and height 60mm has a hole of diameter 30mm drilled in it such that its axis intersects that of the cylinder at the middle at right angle. Draw the development of the lateral surface.

Or

A right regular hexagonal pyramid having edge of base as 25 mm and height 70 mm is resting on one of its triangular face on HP, Draw its projections

Page Lof 2

Please check that this question paper contains 09 questions and 03 printed pages within first ten minutes.

[Total No. of Questions: 09]

[Total No. of Pages: 3]

MORNING

Uni. Roll No.

Program/ Course: B.Tech. (Sem. 1st/2nd)

14 DEC 2018

Name of Subject: Engineering Graphics and Design

Subject Code: ESC-18103

Paper ID: 15931

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) All sections are compulsory

2) Section- A and Section-B are based on Part-I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)

3) Section-C is out of Part-II [Practice (Drawing)] portion of syllabus (Traditional Engineering Graphics ONLY).

4) Any missing data may be assumed appropriately

Section - A (From Part - I (Theory) both TEG and CG)

[Marks: 02 each]

Describe the line which will be used to show the cutting planes.

b) Distinguish between Aligned and Unidirectional systems of dimensioning.

Explain the differences between cylinder and cone.

(d) Elaborate the function of array command in computer graphics.

Draw the side view of a cylinder if its axis is parallel to both HP and VP?

How extrude and revolve commands are used as constructional tool?

Section - B (From Part - I (Theory) both TEG and CG)

[Marks: 04 each]

Section-B1 (TEG ONLY)

A point P is 25 mm below the HP and 30 mm behind the VP. Interpret its least distance from x-y line.

A straight line AB 60 mm long makes an angle of 45° to HP and 30° to the VP. The end A is 15 mm in front of VP and 25 mm above HP. Draw and evaluate the projections of the AB.

Section-B2 (CG ONLY)

Describe the various methods of drawing line in computer graphics. How rotation is done in 3D objects? Explain in detail with help of example.

Page 10/3

(From Part - II [Practice (Drawing)] TEG only) Section - C

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[Marks: 08 each]

Nb-93 (Q6.

A right regular pentagonal pyramid, edge of base 30 mm and height 55 mm, rests on its base on HP, such that one of its base edges is perpendicular to the VP. A section plane is parallel to the VP cuts the pyramid at a distance of 10 mm from the axis. Draw its view and sectional front view.

Or

Fig. 01 shows isometric projection of an object. Draw its Front view, Top View, Left side view and Right side View. All dimensions are in mm.

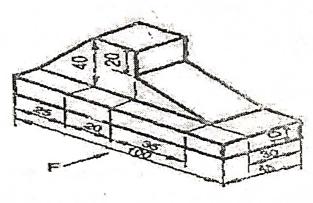


Fig. 01

A square lamina ABCD of 25 mm side rests on its corner C in HP. Its plane is inclined at 45° to the HP and diagonal DB inclined at 300 to the VP. Draw its projections.

Draw the projections of a square pyramid of base edges 30mm and axis 54mm resting on its base on HP with one of the base edge parallel to VP and axis perpendicular to the HP.

A right circular cylinder, diameter of base 50 mm and height 65 mm rests on HP on its base rim such that its axis is inclined at 456 to the HP and parallel to the VP. Draw its projections.

Develop the lateral surface of a funnel as shown in fig.02. All dimensions are in mm.

Fig. 02

Page 2 8 f 3

wte-4-1(09)

A line AB 50 mm long, has its end A is 25 mm away from the HP and 15mm away from the VP. The line is inclined to the VP at 300 and is parallel to the HP. Draw its projections in all the four quadrants. Assume that the whole of the line lies in the same quadrant.

. Or

r 16.20

A right circular cone of diameter 20 mm base and height 30 mm rests centrally on the top of a cube of 40 mm side. Draw the isometric projection of the two solids.

Please check that this question paper contains 09 questions and 09 printed pages within first ten minutes

[Total No. of Questions: 09]

[Total No. of Pages: 2]

Uni. Roll No.

Program/ Course: B.Tech. (Sem. 1st/2nd)

MORNING

Name of Subject: Engineering Graphics and Design 17 DEC 2018

Subject Code: ESC-18103

Paper ID: 15-931

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) All sections arecompulsory

2) Section- A and Section-B are based on Part-I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)

3) Section-C is out of Part-II [Practice (Drawing)] portion of syllabus (Traditional Engineering Graphics ONLY).

4) Any missing data may be assumed appropriately.

Section - A (From Part - I (Theory) both TEG and CG)

Marks: 02 each!

What are orthographic projections?

Differentiate between frustum and truncated.

Define the term trace of a straight line.

List any three types of lines used in engineering drawing along with neat sketch and their applications.

A point 20 mm below the HP and 45 mm behind the VP. Draw its projections. Distinguish between manual drafting and computer aided drafting.



Section - B (From Part - I (Theory) both TEG and CG)

[Marks: 04 each]

Section-B1 (TEG ONLY)

A line CD 60 mm long has its end C lies 25 mm above the HP and 30 mm in front of VP. Draw the projection of line when it is inclined to VP at 40° and parallel to HP.

A thin circular plate of diameter 50 mm and negligible thickness rest on HP on its rim and makes an angle of 45° to HP. Draw its projection when surface is perpendicular to VP.

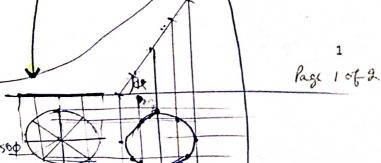
Section-B2 (CG ONLY)

Explain any four modify commands along with suitable sketches used in computer

Explain the different co-ordinate system used in computer graphics with suitable



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Section - C (From Part - II [Practice (Drawing)] TEG only)

[Marks: 08 each]

A right regular pentagonal pyramid, edge of base 30 mm and height 55 mm lies on HP on one of its triangular face and has its axis parallel to VP. Draw its projection.

5-12-17

A right regular pentagonal prism having a base 30 mm side and 60 mm long axis is resting on one of its rectangular face on HP with axis parallel to both the reference planes. Draw its projections.

0-19.2

Q7. A square prism of base edge 35mm is resting on the HP on one of its base with one of its vertical face inclined at 36° to the VP. It is cut by a section plane parallel to the VP and 10 mm away from the axis. Draw its sectional front view and top view.

-14.25

A square pyramid, edge of base 30 mm and height 50 mm, rest on its base on HP such that one of its base edges is parallel to the VP. Draw its projections and develop the lateral surface of the pyramid.

OSA line AB has its end A 20 mm in front of VP and end B 55 mm above the HP. The line is inclined at 30° to HP while its front view makes an angle of 45° to the XY line. Draw its projections, when its top view is 50 mm long. Find the true length of true angle of inclination with the VP.

- 10·29 - 10·29

16-116

A rectangular lamina ABCD of 60 mm x 30 mm has its smaller side on ground plane and the surface is inclined at 60° to ground and the side on which it rest is inclined at 45° to VP. Draw its projection in third quadrant.

5 (09) right circular cone of diameter 40 mm and height 60 mm rest centrally on the top of a square block 70 mm side and 25 mm thick. Draw the isometric projections of the solids.

Or

A right regular pentagonal prism, edge of base 30mm and height 60 mm, has a circular hole of diameter 25 mm drilled centrally through it, along its axis. Draw its isometric drawing.

Page 2 of 2

[Total No. of Questions: 09]

[Total No. of Pages: 02]

Uni. Roll No. 2203236

Program/ Course: B.Tech. (Sem. 1st/2nd)

Name of Subject: Engineering Graphics and Design

Subject Code: ESC-103

Paper ID: 15931

Scientific calculator is not Allowed

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) All sections are compulsory

2) Section- A and Section-B are based on Part-I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)

3) Section-C is out of Part-Il [Practice (Drawing)] portion of syllabus (Traditional

Engineering Graphics ONLY).

4) Any missing data may be assumed appropriately

Section – A (From Part - I (Theory) both TEG and CG)

[Marks: 02 each]

Q1.

Enlist various types of Projections. -a)

b) Explain the purpose of development of surface by citing an example.

Mention atleast two principles of dimensioning with neat and clean sketches. ret

Distinguish between projector and projection with suitable sketches. <u>d</u>)

·e) Create a solid model by using Extrusion command.

Mention the steps required to draw a circle with the help of any graphics software.

(From Part - I (Theory) both TEG and CG)

[Marks: 04 each]

Section-B1 (TEG ONLY)

Differentiate between frustum and truncated of a solid with neat sketch.

A point Q is 25 mm above HP and 30 mm infront of VP. Determine its least distance Q3. from xy line.

Section-B2 (CG ONLY)

Mention and explain the different types of modify commands. Q4.

Distinguish between User coordinate system(UCS) and World coordinate system (WCS)? Q5. Discuss its various types by considering an example for construction of rectangle with dimensions 50mm x 50mm.

(From Part - II [Practice (Drawing)] TEG only) Section - C

[Marks: 08 each]

A straight line AB 50 mm long makes an angle of 30° to HP and 45° to the VP. The end Q6. A is 15 mm behind the VP and 25 mm below the HP. Draw the projections of the line

Or

End C is 25mm above HP and 45mm infront of VP. End D is 45mm above HP and 60mm infront of VP. The distance between end projectors is 40mm. Draw the projections of line and find out true length, true angle of inclination with HP, true angle of inclination with HP, horizontal trace and vertical trace with any of the method.

A regular hexagonal lamina ABCDEF of 25mm side, rests on one of its sides on HP. Its surface is inclined at 45° to the HP and perpendicular to the VP. Draw its projections and O7. locate its traces.

Or

A regular pentagonal prism base 25 mm and axis 50 mm long lies on one of its rectangular faces on HP with axis parallel to VP. Draw its front, top and side views.

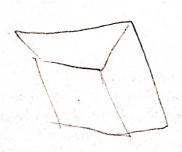
A right circular cone, diameter of base 50mm, height 60mm, rests on its base on HP. A section plane perpendicular to VP and inclined to HP at 30°, cuts the cone bisecting its O8. axis. Draw its front view, sectional top view and true shape of the section.

A right regular hexagonal prism, side of base 30mm and height 60mm, rests on its base on HP with one its base side parallel to VP. A horizontal circular hole of diameter 40mm drilled centrally through it, such that the axis of the hole is perpendicular to it. Develop its lateral surface.

Three cubes of 40mm, 30mm and 20mm are placed centrally such that the biggest cube at the bottom whereas the smallest on the top. Draw the isometric drawing of the solids.

Or

A cylindrical block of 45mm diameter and 25mm height is placed centrally on a cube of 45mm side. The axes of the two solids are in the same straight line. Draw the isometric drawing of the solids.



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[Total No. of Questions: 09]

[Total No. of Pages: 02]

Uni. Roll No.

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Subject Code: ESC-103

Paper ID: 15931

Scientific calculator and Drafter is Allowed

Time Allowed: 03 Hours

Max. Marks: 60

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4) Any missing data may be assumed appropriately

Section - A (From Part - I (Theory) both TEG and CG)

[Marks: 02 each]

Q1.

a) Classify the different methods of dimensioning.

Why the projections of an object not drawn in 2nd and 4th quadrant?

c) What are oblique solids?

d) Differentiate between frustum and truncated solid with neat sketch.

Describe the four centre method of drawing in isometric projection of a circle?

Differentiate between fillet and chamfer command.

Section - B (From Part - I (Theory) both TEG and CG)

[Marks: 04 each]

Section-B1 (TEG ONLY)

Q2. Draw and enlist applications of; continuous thick line; continuous thin with zig-zag and long chain thin but thick at ends.

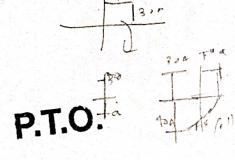
Q3. A point A is 30 mm above the HP and 40 mm infront of the VP. Determine its least distance from xy line.

Section-B2 (CG ONLY)

Differentiate absolute and incremental modes of drawing used in AutoCAD.

Enlist the advantages of computer aided drafting over manual drafting.

Page 1 of 2



TP

Section - C (From Part - II [Practice (Drawing)] TEG only)

[Marks: 08 each]

A straight line AB 50 mm long has its end A 15mm away from HP and 20 mm away from the VP. It is inclined at 30° to the HP and 45° to the VP. Draw its projections in first quadrant.

Or

Qб.

Q8.

The end point A of a straight line AB=36 mm long is 12 mm away from HP and VP and another point B is 24 mm away from HP and VP respectively. Draw the top view and front view of the straight line AB and determine the true inclination with the HP and V^D respectively.

A rectangular lamina ABCD of 60 mm × 30 mm, has its side AB in HP and inclined at 45° to the VP and the plane of the lamina is inclined at 60° to the HP. Draw its projections.

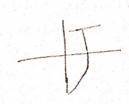
A right circular cone, diameter of base 60 mm and height 70 mm, lies on HP on one of its elements, such that its axis is parallel to VP. Draw its projections.

A right regular hexagonal prism, side of base 20 mm and length of axis 55 mm, is lying on one of its rectangular faces in HP. Its axis is parallel to both HP and VP. It is cut by a section plane parallel to and at a distance of 20 mm from the HP. Draw its front view and sectional top view.

A square pyramid, edge of base 30 mm and height 50 mm, resting on its base in HP such that all of its base edges are equally inclined to the VP. A section plane perpendicular to the VP and inclined to the HP at 30° cuts the pyramid, bisecting its axis. Draw its front view, sectional top view and develop the lateral surface of the truncated pyramid

A cube of 40 mm edge is placed centrally on the top of a square block of 60 mm edge and 20 mm thick. Draw the isometric projections of the two solids with the edges of the two block mutually parallel to each other.

Draw the isometric projection of a sphere of radius 30 mm resting centrally on the top of a square block of 60 mm edge and 15 mm thick.



Please check that this question paper contains 09 questions and 02 printed pages within first ten minutes.

[Total No. of Questions: 09]

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Page 1 of 2

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[Marks: 08 each]

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- Or

 A right circular cone, diameter of base 60 mm and height 70 mm, lies on HP on one of its elements, such that its axis is parallel to VP. Draw its projections.
- Q8. A right regular hexagonal prism, side of base 20 mm and length of axis 55 mm, is lying on one of its rectangular faces in HP. Its axis is parallel to both HP and VP. It is cut by a section plane parallel to and at a distance of 20 mm from the HP. Draw its front view and sectional top view.
- A square pyramid, edge of base 30 mm and height 50 mm, resting on its base in HP such that all of its base edges are equally inclined to the VP. A section plane perpendicular to the VP and inclined to the HP at 30° cuts the pyramid, bisecting its axis. Draw its front view, sectional top view and develop the lateral surface of the truncated pyramid
- Q9. A cube of 40 mm edge is placed centrally on the top of a square block of 60 mm edge and 20 mm thick. Draw the isometric projections of the two solids with the edges of the two block mutually parallel to each other.
- Draw the isometric projection of a sphere of radius 30 mm resting centrally on the top of a square block of 60 mm edge and 15 mm thick.

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