# Best Practice -2 Objective Evaluation

# **Supporting documents for Objective Evaluation**

- Controller of Examinations office level

# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA. (ACADEMIC SECTION)

NO.SS/24/, 30/

DATED: 19.06.2017

### Sub: Change of pattern of end semester question papers.

Sir,

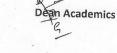
It is informed that NBA Evaluator's team for PG Programms who visited in the college last time has pointed during exit meeting about the pattern of question paper being followed by our institute. Existing pattern of question paper is not able to measure all learning outcomes of a particular course. In the light of this, a committee of following members is constituted to make the new format for question papers of UG & PG courses:

Sr.No.	Name of Staff Member & Designation	
1	Dr. Sehijpal Singh, HOD (ME); and Institute Accreditation Coordinator-UG Programmes	·Chairman
2	Dr. Jagbir Singh, Prof. (CE); and Deputy Registrar(Academics)	Member
3	Dr. B.S. Dhaliwal, Assistant Prof. (ECE)	
4	Dr. K.D. Singh, Assistant Prof. (EE); and	Member
	Assistant Controller (Question Paper Setting)	Member

The committee is requested to submit its recommendations within two weeks for all programs for which syllabus has been designed by the institute by going into the details of the curriculum.

### Distribution:

Director – for information please. All concerned Student Section R.K./Office copy







# ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਇੰਜ: ਕਾਲਜ

### GURU NANAK DEV ENGINEERING COLLEGE

An Autonomous College u/s 2(f) and 12(B) of UGC Act, 1956

1405

MINUTES OF MEETING OF HODS HELD ON MONDAY, 4.9.2017 AT 3 PM IN COMMITTEE

PRESENT:

1 HODs 2 COE

Following recommendations are made unanimously:

- New pattern of theory question papers (MST and External End Semster Examination) will be applicable for B.Tech. (Ist Year)Scheme-2017 from current session onwards(copy attached). The syllabus of various courses will be bifurcated into two parts (1 & II) –applicable for Scheme 2017 onwards.
- End Semester Theory examination will be started w.e.f 22<sup>nd</sup> November, 2017 onwards Department website must contain POs and PSOs as per the above points.
- Program curriculum should be evolved using POs and PSOs.
- For each course (including all theory and practical subjects like trainings, projects etc.) atleast 6 COs must be formulated for which attainment can be computed through midsemester tests, mid-term evaluations for practical, assignments and end semester examination(theory and practical).
- For assessement of additional COs (if any) other assessement tools like ( rubrics/ quiz/ survey) may be used.
- All course outcomes must be mapped with POs and PSOs with appropriate correlation value.
- The COs should not be defined topic/module/unit wise and rather based on the POs/PSOs through appropriate mapping.
- Revised Bloom's Taxonomy should also be referred while defining COs.

HOD(CE) HOD(ME) HOD(EE) HOD(BCE) HOD(DSE) DEAN (AC) Approved/Not Approved Mi DGNDEC

Copy to:

HODs COE

Gill Park, Gill Road, Ludhiana-141006

Phone: 0161-2502700, 2502240 (Fax), Email:director@gndec.ac.in

### GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

# An Autonomous College Under UGC Act - 1956 [2(f) and 12(B)] Affiliated to I.K.G. Punjab Technical University

No. NBA/104/21 Date: 21-02-2018

### All HODs

In continuation to No.SS/CBS 2017/990, Dated 19.02.2018 (circular from the office of Dean Academics), please ensure that attached templates for (B.Tech./MBA/MCA and M.Tech.) are used by faculty for setting of mid semester test (MST) question papers from the current session. It is further suggested that at department level a committee to scrutinize the quality of MST question papers (before using them for the test) should also be formulated. The tentative constitution is as follows:

- 1. HOD as Chairman
- 2. Concerned Course Coordinator
- 3. Concerned Subject/Course Expert (not the course coordinator)
- 4. Concerned Module Coordinator
- 5. Deptt. NBA I/c as Convenor

The softcopy of the sample templates is also available in faculty login (<a href="http://exam.gndec.ac.in">http://exam.gndec.ac.in</a>). The explanation for Revised Bloom's Taxonomy's (RBT) standard terms (LOTS and HOTS) and related verbs/phrases to be used in questions is given in the table 1.

Table 1: Revised Bloom's Taxonomy (RBT) Levels

Sr. No.	Low Order Thinking Skills (LOTS)	High Order Thinking Skills (HOTS)
1.	Remembering: Recalling relevant terminology, specific facts, or different procedures related to information and/or course topics. At this level, a student can remember something, but may not really understand it. (Recalling information, Recognizing, Listing, Describing, Retrieving, Naming)	Analyzing: The ability to break information down into its component parts. Analysis also refers to the process of examining information in order to make conclusions regarding cause and effect, interpreting motives, making inferences, or finding evidence to support statements/arguments.  (Breaking information into parts to explore understanding and relationships, Comparing, Organizing, Deconstructing, Interrogating, Finding)
2.	Understanding: The ability to grasp the meaning of information, facts, definitions, concepts, etc. that has been presented. (Explaining idea or concepts, Interpreting, Summarizing, Paraphrasing, Classifying, Explaining)	Evaluating: Being able to judge the value of information and/or sources of information based on personal values or opinions.  (Justifying a decision or course of action, Checking, Hypothesizing, Critiquing, Experimenting, Judging)
3.	Applying: Being able to use previously learned information in different situations or in problem solving. (Using Information in another familiar situation, Implementing, Carrying out, using, executing)	<b>Creating:</b> The ability to create or uniquely apply prior knowledge and/or skills to produce new and original thoughts, ideas, processes, etc. At this level, students are involved in creating their own thoughts and ideas. (Generating new ideas, Products, or ways of viewing things, Designing, Constructing, Planning, Producing, Inventing)

For more information , please refer  $\underline{\text{https://tlc.iitm.ac.in/PDF/Blooms\%20Tax.pdf}}$ 

**Institutional Coordinator Accreditation (NBA)** 

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- 2. Dean Academics
- 3. Office Copy



# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA An Autonomous College Under UGC Act - 1956 [2(f) and 12(B)] Affiliated to I.K.G Punjab Technical University, Jalandhar

No. COE/101/ 7688

#### Principal

As per Question Paper format for B. Tech. 2018 admission batch, in Part 'C' Question No. 8 (LOTS) should be from Part-A of syllabus and Question No. 9 (HOTS) should be from Part-B (Copy attached)

Some HODs pointed out that for many subjects, the quality of question paper will be lowered if these guidelines are followed. So accordingly the following guidelines for Part-C are

Part - C

Q8. Question based on Low Order Thinking Skills (LOTS)

Question based on Low Order Thinking Skills (LOTS)

Q9. Question based on Low Order Thinking Skills (HOTS) OR

Question based on Low Order Thinking Skills (HOTS)

Note: Out of Q8 and Q9 one should be from Part-A and other should be from Part-B of the syllabus.

Submitted for approval please.

- alls Controller of Examinations

Approved / Not approved

Principal



### GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA An Autonomous College under UGC Act - 1956 [2(f) and 12(B)] Affiliated to I.K.Gujral Punjab Technical University

No. COE/104/7705

Dated: 13-11-2019

#### Notice

It is for the information of students of B. Tech. admission batch 2018 (All Branches) and M. Tech. admission batch 2019 (All Branches Full Time / Part Time, AICTE / RC) that the outcome based (OB) examinations and evaluation system has been implemented for these programs. Therefore, the OB question paper pattern will be followed in the End Semester Examination (ESE) Nov. 2019 for the regular examination for students belonging to above mentioned batches.

The template of these question papers is attached herewith. All students of these batches / Programs are advised to prepare for examination according to these new question paper patterns.

However, old question paper patterns will continue to be followed for all other batches / programs (Regular / Re-appear students).

Controller of Examinations

Encls:

1. Question paper pattern for B. Tech. admission batch 2018 onwards

2. Question paper pattern for M. Tech. admission batch 2019 onwards

Copy to: -

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2. Dean Academics

3. All HODs

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Display: General Notice Board and College/Department websites

DISTRIBUTION : ALL HOD'S

FPE SAPP SG. 10 MCA JUL

11. Workshop..

Please che	ck that this question paper contains	questions and	printed pages within first ten minutes.
[Total N	[o. of Questions: 08]		[Total No. of Pages:]
Uni. Ro	ll No		
Time A	Name of Su Subject Cod	Tech. (Batch 2019 on bject:le:	ward)  Max. Marks: 100
NO			112411111121111111111111111111111111111
1) A	Attempt all questions Any missing data may be assumed	appropriately	
	Part-	A (4 @ 5 = Marks)	
Q1.	Question based on Lower Order	Thinking Skills (LOTS	5).
Q2.	Question based on Higher Order	Thinking Skills (HOT	S).
Q3.	Question based on Lower Order	Thinking Skills (LOTS	5).
Q4.	Question based on Higher Order	Thinking Skills (HOT	S).
	Part-B	(4 @ 20 = 80 Marks)	
Q5.	Question based on Lower Order	Thinking Skills (LOTS	5).
	Question based on Lower Order	Or Thinking Skills (LOTS	5).
	(Internal choice only i.e. both o	questions should be fr	om same module)
Q6.	Question based on Higher Order	Thinking Skills (HOT	S).
	Question based on Higher Order	<b>Or</b> Thinking Skills (HOT	S).
	(Internal choice only i.e. both q	uestions should be fro	om same module)
Q7.	Question based on Lower Order	Thinking Skills (LOTS	5).
	Question based on Lower Order	<b>Or</b> Thinking Skills (LOTS	5).
	(Internal choice only i.e. both	questions should be fr	om same module)

**Q8.** Question based on Higher Order Thinking Skills (HOTS).

 $\mathbf{Or}$ 

Question based on Higher Order Thinking Skills (HOTS).

(Internal choice only i.e. both questions should be from same module)

\*\*\*\*\*

_	of Questions	=	[Total No. of	Pages:]
UIII. KOII	No		(Datah 2019 anyyand)	
		•	. (Batch 2018 onward)	
		· ·		
		3		
Time Allo	owed: 03 Hou			Max. Marks: 60
NOTE:				
<b>2</b> ) Pa	rt-C has Two	e compulsory Questions Q8 and Q9. a may be assumed app	Both are compulsory, but woropriately	vith internal choice
		Part – A		[Marks: 02 each]
Q1.				
	a) Ques	tion based on Low Or	der Thinking Skills (LOTS)	
	b) Ques	tion based on Low Or	der Thinking Skills (LOTS)	
	c) Ques	tion based on Low Or	der Thinking Skills (LOTS)	
	d) Ques	tion based on Low Or	der Thinking Skills (LOTS)	
	e) Ques	tion based on High Or	der Thinking Skills (HOTS)	)
	f) Ques	tion based on High Or	der Thinking Skills (HOTS)	
		Part – B		[Marks: 04 each]
Q2.	Question bas	sed on Low Order Thin	nking Skills (LOTS)	
Q3.	Question bas	sed on Low Order Thin	nking Skills (LOTS)	
Q4.	Question bas	sed on Low Order Thin	nking Skills (LOTS)	
Q5.	Question bas	sed on High Order Thi	nking Skills (HOTS)	
Q6.	Question bas	sed on High Order Thi	nking Skills (HOTS)	
<b>Q7.</b>	Question bas	sed on High Order Thi	nking Skills (HOTS)	

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

Part – C [Marks: 12 each]

**Q8.** Question based on Low Order Thinking Skills (LOTS)

OR

Question based on Low Order Thinking Skills (LOTS)

**Q9.** Question based on High Order Thinking Skills (HOTS)

OR

Question based on High Order Thinking Skills (HOTS)

**Note:** Out of Q8 and Q9, one should be from part-A and other should be from Part-B of the syllabus.

Paper setter is requested to delete content of this text box, before taking printout.

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# Supporting Documents for Adopting Objective Evaluation -Departmental level

# **Department of Civil Engineering**

# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

# An Autonomous College Under UGC Act - 1956 [2(f) and 12(B)] Affiliated to I.K.G. Punjab Technical University

No. NBA/104/21 Date: 21-02-2018

### All HODs

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3.	Applying: Being able to use previously learned information in different situations or in problem solving. (Using Information in another familiar situation, Implementing, Carrying out, using, executing)	Creating: The ability to create or uniquely apply prior knowledge and/or skills to produce new and original thoughts, ideas, processes, etc. At this level, students are involved in creating their own thoughts and ideas. (Generating new ideas, Products, or ways of viewing things, Designing, Constructing, Planning, Producing, Inventing)

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Institutional Coordinator Accreditation (NBA)

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# Guru Nanak Dev Engineering College, Ludhiana

## (An Autonomous Institute) Civil Engineering Department

No. Ge 2004

Dated 28/2/18

NBA Coordinator,

A departmental level Committees of following members to scrutinize the quality of MST question papers is constituted.

Chairman: Dr.K.S.Gill (Prof and Head)

Deptt. NBA I/C: Prof.Inderpreet Kaur (Convenor)

Following faculty were also a part of committee as Course coordinator. Subject Expert and Module Coordinators for the subjects listed below.

S.No	Ject	Sen		Subject Expert	Module Coordinat
	Structural Analysis-I	4	Dr.Jagbir Singh	Dr.Harvinder	Dr.Harvinder Singh
2	CMWM	4	Prof Harjinder	Singh Dr. Harjinder Sing	
3	DCS-I	4	Singh Prof Charnjeet	Prof.Inderpreet	7
4	Irrigation Engg	I 4	Singh Prof Pritpal Kaur	Kaur	Dr.Harvinder Singh
5	Fluid Mech. II	4	Prof.Kulwinder	Prof Amandeep Singh	Prof Harjinder Singh-
6	Geomatics	4	Singh	Prof Prashnat Gar	Prof Harjinder Singh
7	DCS-II	6	Prof Ajitpal Singh Prof Inderpreet	THE PARTY OF THE P	Dr.B.S. Walia
8	PMM	6	Kaur	Dr.Harvinder Singh	Dr. Harvinder Singh
9	Professional Practice	6	Prof Ajit Pal Singh Prof. Amandeep	Dr.Harjinder Singh Prof Gurpuneet	
10	Foundation Engg.	6	Singh Prof.Gagandeep	Singh Dr.B.S.Walia	Prof.Harjinder Singh
11	Environment EnggII	6	Raur Prof.Gagandeep	Prof.Pritpal Kaur	Dr.K.S.Gill
12	Elements of	8	Kaur Prof.Gurbir Kaur		Dr.Puneet Pal Singh
	Earthquake Engineering		Naur Naur	Prof.Inderpreet Kaur	Dr.Harvinder Singh
	Irrigation Engg-	8	Prof.Pritpal Kaur	Prof. Amandeep	Prof.Harjinder Singh
	Prestressed Concrete	8	Prof.Sukhwinder	Singh Dr.Harpal Singh	
5 1	Pavement Design	8	Singh Prof. Prashant Garg	1	Dr.Harvinder Singh
	Matrix Method f SA	8	Dr.Harvinder Singh	Prof.K.S.Gill Dr.H.S.Rai	Prof. Prashant Garg
D	lydrology & Dams	8	Prof.Gurpuneet Singh	Prof.Harjinder Singh	Dr. Harvinder Singh  Prof. Harjinder Singh,
In	round nprovement		Dr.Gurdeepak Singh	Prof.Hariinder	Dr.K.S.Gill
E	arth Retaining ructures	8	Dr.B.S. Wallia	Singh Dr.K.S.Gill	Dr.K.S.Gill
De	esign of steel uctures – II	8 1	Or.Jagbir Singh	De Late of	
Tra	ansportation gg-II	8 F	Prof.Charnjeet	Prof Do 1	Dr.Harvinder Singh Prof. Prashant Garg

# M.Tech. (Geotechnical Engg.)

S.No.		Semester	Course Coordinator	Subject Expert	Module Coordinator
	Design of Highway and Airport Pavements	2	Prof.Prashant Garg	Dr.K.S.Gill	Dr.K.S.Gill
2	Advanced Foundation Engg.	2	Dr.K.S.Gill	Dr.B.S.Walia	Dr.B.S.Walia
3	Soil Dynamics	2	Prof Amandeep Singh	Dr.B.S.Walia	Dr.B.S.Walia
4	Research Methodology	2	Dr.Gurdeepak Singh	Prof.Inderpreet Kaur	Dr.Gurdeepak Singh
5	Numerical Method	2	Dr.H.S.Rai	Prof.inderpreet Kaur	Prof.Inderpreet Kaur

# M.Tech (Structural Engg.)

S.No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
1	Plastic analysis & Design of Steel Structures	2	Prof.Sukhwinder Singh	Dr.Harvinder Singh	Dr.Harpal Singh
2	Earthquake Resistant Design of Masonry and RC Buildings	2	Prof.Gubir Kaur	Prof.H.S.Rai	Dr.Harpal Singh
3	Bridge Engineering	2	Dr.Harpal Singh	Dr.Jagbir Singh	Dr.Harpal Singh

## M.Tech (Environmental Engg)

S.No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
1	Pollution Monitoring Techniques	2	Dr.A.K.Sodi	Dr.Puneet Pal Singh	Dr.Puneet Pal Singh
2	Air Pollution and Control	2	Prof. Preetinder Kaur	Dr.Puneet Pal Singh	Dr.Puneet Pal Singh
3	Biological Treatment Methods	2	Dr.Puneet Pal Cheema	Dr.A.K.Sodi	Dr.Puneet Pal Singh

Dr.K.S.Gill HOD,(CE)

# Guru Nanak Dev Engineering College, Ludhiana Department of Civil Engineering

Program	B. Tech.(Civil Engineering)		
Subject Code	CF 14403	Semester	4 <sup>th</sup>
MST No.	1	Subject Title	Design of Concrete Structures-1
Max. Marks	21	Course Coordinators	Harvinder Singh, Charnjeet Singh, Amandeep S. Gill
		Time Duration	1 hour 30 minutes
Date of WIST	7 <sup>th</sup> March, 2018	Write your Roll Number	

### Note: Attempt all questions

Q. No.	Questions	COs,	Marks 2	
Q1	What do you mean by an over-reinforced RC beam section?	CO2, L1		
Q2	How would you obtain a compression stress-block for a RC beam section?	CO4,	L4	2
Q3	Describe the strain-compatibility method used to analyze the RC beam sections. Also, draw a flow chart to illustrate the analysis procedure using this technique.	CO5,	L3	4
Q4	Determine the balanced percentage tensile steel area for a rectangular beam section east using M25 concrete and Fe 500 grade steel rebars.	CO4,	L3	4
Q5	Design a rectangular beam section to support a uniform distributed load of 35 kN/m (without self weight). It is acting over the entire 6 m beam span. The beam is simply supported at its ends. Use M20 concrete and Fe 415 grade steel rebars.	CO6.	L6	4
Q6	a) Determine the ultimate flexural capacity of a rectangular beam section (300 mm wide, 550 mm effective depth). It is reinforced with 2 layers of the tensile rebars: lower one consists of 4-20 dia. and 2-16 dia. are provided in the 2nd layer. The beam is cast using M25 concrete and Fe 500 grade steel rebars.		L5	8
	b) What will be the change in the beam flexural capacity, if the 2-16 dia. rebars in the part (a) are shifted to the compression zone of the beam? Take effective cover to the compression steel as 35 mm. Assume that the other beam parameters are the same in both cases.			

### Course Outcomes (CO): The students will be able to

1	Identify the quality control tests on concrete making materials.
2	Understand the behavior and the durability aspects of the concrete / section under different loading and exposure conditions.
3	Design the concrete mixes as per various mix techniques.
4	Apply the stress-strain response of steel and concrete in the design of various RC elements.
5	Compare the fundamental concepts of different design philosophies available for RC elements.
6	Execute the solution using a logic and structured approach based on Limit State Method and IS code provisions for various RC elements, such as beams, slabs and stairs.

RBT Classification*	Lower	Order Thinking Lo (LOTS)	evels	Higher Order Thinking Levels (HOTS)		
RBT Level Number	LI	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

iru Nanak Dev En	gineering College, Ludhia	na
Department	of Civil Engineering	
M.Tech.(SE)	Semester	2
MTST-16502	Subject Title	Bridge Engineering
2	Course Coordinator(s)	Dr. Harpal Singh
30	Time Duration	1 hour 30 minutes
March, 2018	Roll Number	1 Hour 50 Hinates
	Department   M.Tech.(SE)   MTST-16502   2   30	MTST-16502 Subject Title 2 Course Coordinator(s) 30 Time Duration

Note: 1. Attempt all the questions.
2. All questions carry equal marks
3. Use of IRC 6: 2014 is allowed

Q. No.	Question	COs, RBT level	Marks
Q1	Describe Piguerd's Method	CO4, L2	5
Q2	Describe the load distribution theories for the longitudinal girders in a bridge deck.	CO4, L5	5
Q3	For a T-Beam bridge with the following data:  Effective span = 20m; Width = 2 lanes Live load as per IRC  Materials M-25 concrete and Fe-415 steel Number of main girders = 3; Spacing of cross girders = 3m  Design  a. An intermediate panel of slab b. Cantilever portion of slab	CO4, L3	10
Q4	Design intermediate Girder for the above bridge	CO5, L6	10
Student	Outcomes (CO) s will be able to	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
2	Students will learn classification layout, planning of bridges		
3	Students will be able to understand and apply IRC loads		
4	Students will be able to design superstructure of bridges.		
5	Students will be able to design subrstructure of bridges Students will be able to design foundationd of bridges.		
6	Students will be able to design foundationd of bridges.  Students will be able to inspect and rehabilate the bridges.		

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

	Gu		gineering College, Ludhia	na		
			of Civil Engineering			
Program		B.Tech.(CE)	Semester	6		
Subject Code Mid Semester Test (MST) No.		DECE-14607	Subject Title	Reinforced Earth and Geotextiles		d
		1 Course Coordinator(s) Chara		Charnje	eet Singh	
Maximu	ım Marks	24 Time Duration 1 5 <sup>th</sup> March, 2018 Roll Number		1 hour 30 minutes		
Date of	MST					
Note: A	attempt all questions					TO THE
Q. No.		Questio	on .		COs, RBT level	Marks
			of the geosynthetics material		CO1, L2	2
1 2			e with the properties: thick and density of the polymer		CO4, L5	2
	Briefly explain diffe area.	erent type of geosyr	thetics with example of app	olication	CO3, L3	4
Q4	What are the v geosynthetics? Expl		mechanisms performed	by the	CO1, L2	4
Q5	How will you decide or separation in any		on of geosynthetics as reinfo	orcement	CO2, 1.4	4
Q6	a) Explain about t	he permeability char	acteristics of the geosyntheti	cs.	CO4, L5	4
	length (flow of following para Nominal Thick Head loss in p Flow rate of w	direction) by a 200 meters were measure kness =2.6 mm, lane of the geotextile vater normal to the plant of the plant is the plant in the plant is th		men, the		4
	ourse Outcomes (CO					
31			d earth and different towns of	rain f		
2		s and functions of ge	d earth and different types of osynthetics.	remnorcei	ment techniqu	ies.
3	Compare the dif		products for different constru	ction proj	ects.	
4	Identify the testi	ing methods for geos	ynthetics.			
5		l and artificial geosy				
(	Design of pave geosynthetics.	ed and unpaved road	ds, embankments and retaini	ng walls	with differe	nt types

RBT Classification	Lower Order T	ninking Levels (LOTS)		Higher Order Thinking Levels (HOTS		
RBT Level Number	LI	L2	L3	L4	1.5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

# Guru Nanak Dev Engineering College, Ludhiana

Department	15	Civil	Engin	cering
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Program	M.Tech.(CE)	Semester	2	
Subject Code	MTST-506	Subject Title	Plastic Analysis and Design of Steel Structures	
Mid Semester Test (MST) No.	1	Course Coordinator(s)	Sukhwinder Singh	
Max. Marks	30	Time Duration	1 hour 30 minutes	
Date of MST	5 <sup>th</sup> March, 2018	Roll Number		

Note: Attempt all questions

Q. No.	Question	COs, RBT level	Marks
Q1	Compute the reserve strength of a fixed beam of uniform section subjected to a single concentrated load in the middle assuming the shape factor value equal to 1.14.	CO1, L4	5
Q2	Find the shape factor for the following sections.  NA  NA  NA  NA  NA  NA  NA  NA  NA  N	CO1, L4	5
Q3	State the upper and lower bound theorems. Demonstrate the same with the aid of a fixed beam of uniform section subjected to a single concentrated load in the middle.	CO2, L2	10
Q4	A continuous beam ABCD is loaded as shown in figure.  Determine the collapse load in case  a) The beam is of uniform section.  b) The beam is of unequal section. The value of Mp for BC is 1.5 times that of AB and CD.  Compute also the load factor and draw plastic bending moment diagram.  10 tm  4 m, Mp  6 m, 15 Mp	CO4, L4	10

Course Outcomes (CO) Students will be able to

1 Students will learn to concepts of plastic design

### Guru Nanak Dev Engineering College, Ludhiana

### Department of Civil Engineering

Program	B.Tech.(CE)	Semester	8
Subject Code	DECE-14808	Subject Title	Pre-stressed Concrete
Mid Semester Test (MST) No.	1	Course Coordinator(s)	Sukhwinder Singh
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of MST	7th March, 2018	Roll Number	

Note: 1S 1343 is permitted in examination.

Q.	No.	Question	COs, RBT level	Marks
Q	1	Sketch the stress distribution diagram in propped prestressed concrete beam.	CO2, L2	2
0	2	What is partial prestressing?	CO2, L1	2
10	23	A rectangular concrete beam of cross-section 500 x 300 mm is prestressed by means of 15 wires of 5 mm diameter located at 90 mm from the soffit of the beam and 3 wires of 5 mm diameter, 25 mm from the top. Assuming the prestress in steel as 1000 N/mm², calculate the stresses at the extreme fibres at the mid-span section when the beam is supporting a uniformly distributed live load of 6 kN/m² is imposed. Evaluate the working stresses in concrete at the mid-span section and locate the pressure line at the mid span and quarter span. Effective span of beam is 7 m and density of concrete is 24 kN/m².	CO3, L3	4
	Q4	Explain with the aid of an example the "concept of Pressure-line in the PSC members".	CO2, L2	4
	Q5	A simple beam of span 10m is carrying a UDL of 30 kN/m over the entire length. The cross-section of the beam is 300 x 900 mm. Determine the loss of the jacking force due to following factors and then, determines the effective prestress in the beam section.  a) Shrinkage, b) Creep, c). Relaxation, d). Elastic shortening of the member due to jacking force of 2000 kN Grade of concrete M 60. The beam was water cured for 30 days and jacking force was applied at 50 days through bonded tendons (3600 mm²). Tendons were stretched at 0.7½. Relative humidity at the time of curing was 80% and during the prestressing operations, it reduces to 60%.		A
	Q6	For the post-tensioned beam with a flanged section having top flange of 500 x 200 mm and bottom flange of 250 x 200 mm and web of 600 x 150 mm. The profile of cable is parabolic with 350 mm eccentricity at mid span and no eccentricity at ends. The Live load moment due to service loads at mid span is 648 kNm. The prestress after transfer (Po) is 1600 kN. Assume 15% loss at service, grade of concrete is M30. Evaluate the following quantities		

	a) Kern levels b) Cracking moment c) Location of pressure line at mid-span at transfer and at service. d) The stresses at the top and bottom fibres at transfer and at service. Compare the stresses with the following allowable stresses at transfer and at For compression, f <sub>cc,all</sub> = - 18.0 N/mm <sup>2</sup> , For tension, f <sub>ct,all</sub> = 1.5 N/mm <sup>2</sup> .
Course Students	Outcomes (CO)  will be able to
1	Understand the material characteristics of structural materials, such as high strength concrete and high strength steel, etc.
2	Understand and apply the concept and terminology related to the prestressed concrete.
3	Analyze the beam sections carrying the prestressed force, external loads and time- dependant effects, such as creep, shrinkage and other losses.
4	Evaluate and interpret the use of different prestressing systems on the PSC beams.
5	Design prestressed concrete beams and slabs for flexure, shear and torsion.
6	Apply various provisions prescribed by IS 1343 to the design of prestressed concrete members.

RBT Classificat ion		Order Think (LOTS)	king Levels	Higher Order Thinking Levels (HOTS)			
RBT Level Number	L1	L2	L3	L4	L5	L6	
RBT Level Name	Remember	Understan ding	Applying	Analyzing	Evaluating	Creating	

#### Guru Nanak Dev Engineering College, Ludhiana Department of Civil Engineering Program B.Tech.(CE) Semester 8 Subject Code Pre-stressed Concrete DECE-14808 Subject Title Mid Semester Test (MST) No. Sukhwinder Singh Course Coordinator(s) Max. Marks 24 1 hour 30 minutes Time Duration Date of MST 4th May, 2018 Roll Number

Note: IS 1343 is permitted in examination.

Q. No.	Question	COs, RBT level	Marks
Q1	Discuss in detail about the load balancing approach used for the designing PSC members.	CO2, L2	2
Q2	Discuss and explain strain-compatibility method used in estimating the ultimate flexural capacity of the prestressed concrete members. Use some example to illustrate the procedural steps.	CO2, L3	2
Q3	An unsymmetrical I-section bridge girder has the following sectional properties. Area of cross-section = 777 x x10³ mm², second moment of area = 22 x x10¹0 mm⁴, width and thickness of top flange = 1200 and 360 mm respectively and thickness of web = 240 mm. The centroid of section located at 580 mm from the top. The girder is used over a span of 40 m. The tendons with cross-section of 700 mm² are parabolic with an eccentricity of 1220 mm at centre span and zero at the supports. The effective prestress in the wire is 800 N/mm². If the tensile strength of concrete is 4.5 N/mm², estimate the ultimate shear resistance of the section assuming to failure take place when the principal tensile stresses reaches a value equal to the tensile strength of the concrete.		4
Q4	A high tension cable comprising of 12 strands of 15 mm diameter (12 K15 of P.S.C. Freyssinet systems) with an effective force of 2500 kN is anchored concentrically in an end block of post-tensioned beam. The end block is 400 mm wide and 800 mm deep and the anchor plate is 200 mm wide by 260 mm deep. Design suitable anchoring zone reinforcement using Fe415 grade HYSD bars using IS 1343 code provisions.	CO5, L5	4
Q5	A concrete beam having a rectangular section 100 mm wide and 300 mm deep is prestressed by a parabolic cable carrying an initial force of 240 kN. The cable has an eccentricity of 50 mm at the center of span and is concentric at supports. If the span of the beam is 10 m and the beam supports a live load of 2 kN/m, estimate the short time deflection at the centre span Assuming E = 38 kN/mm² and creep coefficient = 2.0, loss of prestress = 20% of initial stresse after 6 months. Estimate the long time deflection at the center of span at this stage assuming that the dead and live loads are simultaneously applied after the release of prestress.		4

Q6	Design for the beam section section with $M_T = 434$ kN-m. The overall height of the beam is 914.4 mm. The effective prestress for steel = 862 n/mm <sup>2</sup> , and allowable stress for concrete under working load = -11.03 N/mm <sup>2</sup> .						
Course	e Outcomes (CO) its will be able to						
1	Understand the material characteristics of structural materials, such as high strength steel, etc.	gth concrete a	and high				
2	Understand and apply the concept and terminology related to the prestressed con	Understand and apply the concept and terminology related to the prestressed concrete					
3		Analyze the beam sections carrying the prestressed force, external loads and time- dependant effects					
4	Evaluate and interpret the use of different prestressing systems on the PSC beams.						
5	Design prestressed concrete beams and slabs for flexure, shear and torsion.						
6	Apply various provisions prescribed by IS 1343 to the design of prestressed condimembers.	rete					

RBT Classification	Lower Orde	r Thinking Level	(HOTS) Levels (LOTS) Higher Order Think			g Levels
RBT Level Number	L1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

# Guru Nanak Dev Engineering College, Ludhiana Civil Engineering Department

### Report

- With reference to office circular CE-2004 dated 28.02.2018, the meeting
  was held to scrutinize the quality of question papers for MST. Total 32
  different question papers as per study scheme were analyzed for semester
  Jan-Jun 2018.
- The subject expert ensured that the test was made according to the Bloom
  Taxonomy and template.
- 3. There were minor mistakes regarding providing the RBT Levels in Foundation Engineering and Earthquake Engineering Design of Masonry & RC Buildings
- 4. Later the corrections were made with the recommendations of Module Coordinator.

Prof. Inderpreet Kaur Deptt. NBA I/O

CC:

1. HOD for information

2. File Record

### Guru Nanak Dev Engineering College, Ludhiana **Civil Engineering Department**

### HOD

With reference to letter no. NBA/104/21 dated 21-02-2018, A department level committee of following members is constituted to scrutinize the quality of MST question papers.

Chairman: Dr K. S. Gill (Prof. and Head)

Deptt NBA I/C: Prof. Inderpreet Kaur (Convener)

Following faculty members are also a part of committee as Course coordinator, Subject Expert and Module Coordinators for the subjects listed below for session Aug – December 2018:

S. No.	ators for the subjects listed below  Subject	Semester	Course Coordinator	Subject Expert	Module
1.	Building Material & Construction	3	Prof. Gagandeep	Prof. Inderpreet	Coordinator Dr. Harvinder
2.	Fluid Mechanics-I		Kaur Grewal	Kaur	Singh
3.		3	Prof. Ajitpal Singh	Prof. Tanu	Prof. Prashant Garg
	Strength of Materials	3	Dr. H.S. Rai	Dr. Jagbir Singh	Dr. Harpal Singh
4.	Surveying  Rock Mechanics &	3	Prof. Pardeep Singh	Dr. B.S.Walia	Dr. B.S.Walia
5.	Engineering Geology	3	Prof. Tanpreet Singh	Prof. Bhupinder Singh	Dr. B.S.Walia
6	Environmental Engineering -I	5	Prof. Gagandeep Kaur Grewal	Prof. Pritpal Kaur	Dr. Puneetpal
7	Transportation Engineering -I	5	Prof. Charnjeet Singh	Prof. Pardeep	Singh Cheema Prof. Prashant
8	Structure Analysis -II	5	Prof. Amandeep Singh Gill	Singh Dr. Harvinder	Garg Dr. Jagbir
9	Geotechnical Engineering	5	Prof. Heena Malhotra	Singh Dr. B.S. Walia	Singh Dr. K.S. Gill
10	Design of Steel Structures-I	5	Prof. Sukhwinder Singh	Dr. Jagbir Singh	Dr. Harpal
11	Irrigation Engineering II	7	Prof. Sandeep	Prof. Pritpal Kaur	Singh Prof. Prashant
12	Design of Steel Structures-II	7	Maur Dr. Jagbir Singh	Dr. Harvinder	Garg Dr. Harpal
13	Elements of Earthquake Engineering	7	Prof. Tanpreet	Singh	Singh Dr. Harvinder
			Singh	Prof.Yuvraj Singh	Singh
14	Transportation Engineering-II	7	Prof. Pardeep Singh	Prof. Heena Malhotra	Prof. Prashant Garg
15	Hydrology and Dams	7	Prof. Sandeep Kaur	Prof. Gurpuneet	Dr. Gurdeepal
16	Earth and Earth Retaining Structures	7	Dr. Gurdeepak Singh	Singh Dr. K.S. Gill	Singh
17	Ground Improvement Techniques	7	Prof. Harjinder	Prof. Prashant	Dr. B.S. Walia
18			Singh	Garg	Dr. Gurdeepal Singh
	Pre-stressed Concrete  Matrix methods of Structural	7	Prof. Sukhwinder Singh	Prof. Amandeep Singh	Dr. Harvinder
19	Analysis Analysis	7	Prof. Amandeep Singh	Prof. Sukhwinder Singh	Singh Dr. K.S. Gill
20	Pavement Design	7	Prof. Prabhjot Singh	Prof. Prashant Garg	Dr. Gurdeepal Singh

# M.Tech (Geotechnical Engineering)

S. No.	Subject	C	Course		
1.	Geosynthetic Engineering	Semester	Coordinator	Subject Expert	Module Coordinator
		1	Prof. Charnjeet Singh	Dr. B.S. Walia	Dr. K.S. Gill
2.	Site Investigations	1	Prof. Prashant Garg	Prof. Prashant Garg	Dr. K.S. Gill
3.	Applied Soil Mechanics			Guig	Di. R.S. Gill
	Analysis of Settlement of Soils	1	Dr. B.S. Walia	Dr. B.S. Walia	Dr. Gurdeepak
4.	& Foundations	1	Prof. Amandeep	Prof. Prashant	Singh
5.	Earthen Embankment		Singh	Garg	Dr. B.S. Walia
42		1	Prof. Gurpuneet Singh	Dr. K.S. Gill	Dr. B.S. Walia
6. VI.Te	Ground Improvement ch (Structural Engineering)	3	Dr. Gurdeepak Singh	Dr. K.S. Gill	Dr. Gurdeepak Singh

S. No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
1.	Structural Dynamics	1	Prof. Inderpreet Kaur	Dr. Jagbir Singh	Dr. H.S. Rai
2.	Analysis of Plates, Shells and Grids	1	Dr. Harpal Singh	Dr. Harvinder	Dr. Harpal
3.	Advanced Solid Mechanics & Structural Analysis	1	Dr. Harvinder Singh	Singh Prof. Inderpreet Kaur	Singh Dr. Jagbir
4.	Finite Element Methods	1	Prof. Yuvraj Singh	Dr. Harpal Singh	Singh Dr. H.S. Rai
5.	Pre-stressed Concrete Structures	1	Prof. Sukhwinder Singh	Dr. Jagbir Singh	Dr. Harvinder
6.	High Rise Building ch (Environmental Science and E	3	Prof. Gurbir Kaur	Prof. Inderpreet Kaur	Singh Dr. Harpal Singh

S. No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
1.	Physico-Chemical Treatment Methods	1	Dr. Puneetpal Singh Cheema	Prof. Sukhwinderpal Singh	Dr. Puneetpal Singh Cheema
2.	Environmental Chemistry and Microbiology	1	Prof. Rajwinder Singh	Prof. Sukhwinderpal Singh	Dr. Puneetpal Singh Cheema
3.	Solid and Hazardous Waste Management	1	Prof. Rajwinder Singh	Prof. Sukhwinderpal Singh	Dr. Puneetpal Singh Cheemi
4.	Environmental Impact Assessment and Management	1	Prof. Sukhwinderpal Singh	Prof. Rajwinder Singh	Dr. Puneetpal Singh Cheema
5.	Industrial Waste Management	1	Prof. Rajwinder Singh	Prof. Sukhwinderpal	Dr. Puneetpal
6.	Environmental Systems Engineering	3	Dr. Puneetpal Singh Cheema	Singh Dr. Puneetpal Singh Cheema	Dr. Puneetpal Singh Cheema

ProOlnderpreet Kaur Deptt. NBA I/C (Convener)

### Guru Nanak Dev Engineering College, Ludhiana

#### **Department of Civil Engineering** Program M.Tech. (SE) 1 Semester Subject Code Pre-stressed Concrete Structures MTST- 16607 Subject Title Mid Semester Test No. Sukhwinder Singh Course Coordinator(s) Max. Marks 30 **Time Duration** 1 hour 30 minutes Date of MST

Roll Number

Note: IS 1343 is permitted in examination, Assume any relevant data if missing.

Sep, 2018

Q. No.	Question	COs, RBT level	Marks
Q1	An unsymmetrical I-section bridge girder has the following section properties: Width and thickness of the top flange = 1200 and 360 mm respectively, thickness of web = 240 mm, centroid of section located at 580 mm from the top, the girder is used over a span of 40 m, and the tendons (bonded) with a cross-section of 7000 mm² are parabolic with an eccentricity of 1220 mm at the centre of the span and zero at the supports. Given $f_{cu}$ = 45 MPa and $f_{pu}$ = 1700 N/mm², estimate the ultimate flexural strength of the centre-of-span section using IS 1343: 2012 provisions	CO4, L5	10
Q2	For the post-tensioned beam with a flanged section having top flange of 500 x 200 mm and bottom flange of 250 x 200 mm and web of 600 x 150 mm. The profile of cable is parabolic with 350 mm eccentricity at mid span and no eccentricity at ends. The Live load moment due to service loads at mid span is 648 kNm. The prestress after transfer (Po) is 1600 kN. Assume 15% loss at service. grade of concrete is M30. Evaluate the following quantities  a) Kern levels b) Cracking moment c) Location of pressure line at mid-span at transfer and at service. d) The stresses at the top and bottom fibres at transfer and at service. e) Compare the stresses with the following allowable stresses at transfer and at service. For compression, f <sub>ccall</sub> = -18.0 N/mm², For tension, f <sub>ctall</sub> = 1.5 N/mm².	CO2, L4	10
Q3	An unsymmetrical I-section bridge girder has the following sectional properties. Area of cross-section = 777 x x10³ mm², second moment of area = 22 x x10¹0 mm⁴, width and thickness of top flange = 1200 and 360 mm respectively and thickness of web = 240 mm. The centroid of section located at 580 mm from the top. The girder is used over a span of 40 m. The tendons with cross-section of 700 mm² are parabolic with an eccentricity of 1220 mm at centre span and zero at the supports. The effective prestress in the wire is 800 N/mm². If the tensile strength of concrete is 4.5 N/mm², estimate the ultimate shear resistance of the section assuming to failure take place when the principal tensile stresses reaches a value equal to the tensile strength of the concrete.		10

RBT Classification	Lower (	Order Thinking Levels	(LOTS)	Higher O	-l grome	
RBT Level Number	L1	L2	L3	T.A	rder Thinking Lev	els (HOTS)
RBT Level Name	Remembering	Understanding	Applying		L5	L6
			Applying	Analyzing	Evaluating	Creating

	Gui	ru Nanak Dev En	gineering College, Ludhia	na		
		Department	of Civil Engineering			
rogram		M.Tech.(SE)	Semester	2		
Subject C	ode	MTST-16503	Subject Title	Analys and Gr	sis of Plate, S rids	Shells
Mid Semo	ester Test (MST)	1	Course Coordinator(s)	Dr. Ha	rpal Singh	
Max. Ma	rks	30	Time Duration	1 hour	30 minutes	
Date of N	MST	Sept., 2018	Roll Number			
Note: At	tempt all questions			311111		
Q. No.		Ques	tion		COs, RBT level	Marks
Q1		If at section in a plate, the moments are $Mx$ , $My$ and $Mxy$ , find the expression for normal moment and twisting moment at an angle $\alpha x$ .				
Q2		of the bending m	oments acting on mutually	3 13	CO1, L5	5
Q3		nd reactions, if a) i	uniform load of intensity q. I ts edges are clamped b) its ed		CO2, L3	10
Q4			Langrenge's Equation for def uniform flexural rigidity.	lected	CO3, L6	10
	Outcomes (CO) ts will be able to					
1	Students will learn t	o Plate equation in Car	rtesian and polar coordinates	DE SECTION A		
2	Students will be abl	e analyze rectangular a	and circular plates with different bo	undary co	nditions and loa	ids
3	Students will be abl	e to apply the concept	s rectangular and circular plates wi	ith differer	nt boundary con	
4	Students will be ab	e analyze various grid	systems for roofing system and bri	dge decks		

RBT Classification		Thinking Levels	(LOTS)	Higher Order Thinking Levels (HOTS)			
RBT Level Number	L1	L2	L3	L4	L5	L6	
RBT Level Name	Remembering	Understandin g	Applyin	Analyzin	Evaluatin	Creating	

			ngineering College, Ludhia t of Civil Engineering			
rogram		B.Tech.(CE)	Semester	8		
Subject C	ode	BTCE-801	Subject Title		of Steel Stru	ictures-
Mid Sem	ester Test (MST)	1	Course Coordinator(s)	Dr. Ha	rpal Singh bir Singh	
Max. Ma	rks	24	Time Duration	×	30 minutes	
Date of N	MST	Sept., 2018	Roll Number	TAKES DO MANIEU		
	tempt all questions			1 1 1 1 1	English Control	
Q. No.			stion	17598	COs, RBT level	Mark
Q1	Write a short note	on columns, bear	ms and beam-column.		CO1, L2	2
Q2	section will have	nigher moment of	SMB-250 and ISMC-250. W resistance and why?		CO2, L2	2
Q3	an 8x1200 mm we assume that the co	ign flexural streng eb and 30x450 mr ompression flange	th of a plate girder which con in flanges. Use grade 410 steel is continuously supported	l and	CO2, L3	4
Q4	A welded plate gi	rder is fabricated web plate of grad	from two 600x35 mm flange le 410 steel. Determine the she	plates ear	CO3, L5	4
Q5	Calculate the des fy310 grade steel section was used a) Crane cap b) End clear c) Self weig	ign moments and for following des to move the crane pacity: 175 kN; We ance: 2m; Wheel I	crane: 2kN/m and 18m resna	tc: 5 kN	CO3, L6	4
Q6 Course Students	Design gantry g	irder given in prob	olem No. 5.		CO4, L6	8
1	Students will learn to	Consider various ani				
2	Students will be able	to plan the structural fra	ry loads, load combinations for obtainin aming of industrial buildings and bridge f structural design to obtain suitable more	g a worst de	sign load.	TO BE IN
4	Students will be able	to apply the concepts of	uning of industrial buildings and bridge f structural design to obtain suitable mer a sketches to the draftsman etc.	s from the g	iven data/design	constraint

RBT Classification	Lower Order Thi	nking Levels (LOTS)		Higher Order	Thinking Level	ls (HOTS)
RBT Level Number	Ll	L.2	L3	L4	LS	1
RBT Level Name	Remembering	Understanding	Applyin			Lo
			Applying	Analyzing	Evaluating	Creating

			ak Dev Engineering				
1			partment of Civil	Engineer	ing		
grai	m	B.Tech.(CE)	Semester		5		· · · · ·
Linc	Code	CE-14504	Subject Title		Transportati	on Engineer	ing-i
id Se	mester Test	1	Course Coordina		Charnjeet Si Tanu		p Kaur,
-	Carles	24	Time Duration		1 hour 30 m	inutes	
ax. M	larks	26/09/2018	Roll Number				
ate o	f MST	20/03/2010	Kon Humber				
ote: /	Attempt all qu	iestions	Question			COs,	
0.	Enlist the diff	ferent types of	f road patterns add	pted in I	ndia. Illustra	co1, I	.3 2
	Design parab	olic camber te a heavy rainfal	itable example of ci mplate for a two-la l area with recomme	BATCHERONGULUURU	inous concr nber of 1 in	ete 48. CO2, I	.6 2
	Draw neat ske	etch of camber special conside	template. rations to be taken	care whil	le alignment	of CO2, I	.2 4
23	highway in h	illy area.	paring strength of s	ubgrade 1	material in la	ab? CO3, I	.3 4
Q4 Q5	A falling gra highway with	dient of 1 in 8 n a design spee lowest point f	30 meets a rising grad of 80 kmph. Calcurate beginning of	radient of ulate leng the curve	th of the cur and minim	ve, um CO2, I	.5 4
Q6	Design all Specify the highway on constructed	geometric feats minimum sets inner side of . Assume leng	rough a plain terrain imum radius for de ures of this curve back distance from curve up to which th of curve greater	assuming centre li	ne of two la	ane CO2, I	.5 8
-	distance.	s (CO) Students	will be able to			d abara	cterize the
Co		The second secon	o of different mo	des of tr	ansportation	and Chara	CICITEC THE
1	road transp	design the g	eometry of paveme	ent as p	er Indian S	tandards ac	cording to
2	topography	,	ghway materials in l	aboratory		arious roads	pavement
3	Understand failure and	its maintenance	e.	project a	and outline	the sources	01 1118
5	financing.		a ductin	a traffic	survey and	1 describe	Circ .
6	characteris	tics, traffic safe	ta after conductine ty and traffic environ Thinking Levels (L	nment int	Higher Ord (HOTS)	ler Thinking	Levels
DI	assification		L2	L.3	L4	L5	L6
Cl	BT Level	L1					



	Gu	ru Nanak Dev Er	ngineering College, Ludhia	na	MAN ELANT.		
			of Civil Engineering	E E E		lui in	
Program	1	M.Tech.(SE)	Semester	2			
Subject	Code	MTST-16503	Subject Title	Analys and Gr	sis of Plate, S rids	hells	
Mid Sen No.	ester Test (MST)	2	Course Coordinator(s)	Dr. Harpal Singh			
Max. Ma	arks	30	Time Duration	1 hour	30 minutes		
Date of 1	MST	Nov., 2018	Roll Number				
Note: At	tempt all questions			1		HUN	
Q. No.		Quest	tion		COs, RBT level	Marks	
Q1	Obtain Navier's typ subjected to a unifo		mply supported rectangular oad.	plate	CO2, L2	5	
Q2 Q3	Derive the basic eq	uation for an ortho	otropic plate from first princ	iples.	CO2, L5	5	
	spaced 'h' in x-dire 'k' = 1.0m. Also es	ection and 'k' in y- stimate the cost of		and			
Q4	suitable system of	coordinates and de m wide and 600m	the grid shown below. Selectivelop the stiffness matrix. It m in depth E = 1200 kN/cm ted at O.	The	CO4, L6	10	
		6ta	0 1				
		5er	<b>A</b>				
			D 6m 6m				
	tcomes (CO) Il be able to			A			
	Students will learn to Plat	e equation in Cartesian	and polar coordinates				
	Students will be able anal	yze rectangular and circ	ular plates with different boundary	conditions	and loads		
	Students will be able to an	oply the concepts rectan	gular and circular plates with different	ent bounds	ry conditions an	d loads	
	Students will be able analy	yze various grid system	s for roofing system and bridge decl	KS.			

RBT Classification	Lower Order T	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
RBT Level Number	LI	L2	L3	L4	L5	L6	
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	

	Gu		ngineering College, Ludhia of Civil Engineering	na				
Progran	1	M.Tech.(CE)	Semester	3 <sup>rd</sup>				
Subject		The Control of the Co		Disaster Reduction Management				
Mid Ser No.	nester Test (MST)	2	Course Coordinator(s)	r(s) Manvinder Kingra,Sahibdeep Sin		(s) Manvinder Kingra,Sahibdeep Sing		Singh
Max. M	larks	30	Time Duration	1 hour	30 minutes			
Date of	MST	Nov, 2018	Roll Number					
Note: A	ttempt all questions							
Q. No.		Quest	ion		COs, RBT level	Marks		
Q1	Describe both posi disaster manageme		gative role of media in eff	fective	CO1, L2	5		
Q2			n structure during bhuj		CO3, L5	5		
Q3	Explain the follow	ring:- i) Disaster l	Risk Reduction		CO4, L3	10		
	ii) Remote Sensin	g						
Q4	What is the Conce	ent and Strategies	of Disaster Mitigation.		CO4, L6	10		

RBT Level Number	L1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

Guri	u Nanak Dev Eng	ineering College, Ludhian			
		of Civil Engineering	8		
ogram	B.Tech.(CE)	Semester	8 Design of Steel	Structures	8-
abject Code	BTCE-801	Subject Title	II	-	
loject		1 (0)	Dr Harpal Sin	gh	
Mid Semester Test (MST)	12	Course Coordinator(s)	Dr Jagbir Sing	311	
			1 hour 30 min	utes	4
No.	24	Time Duration	THOU		
Max. Marks	Nov., 2018	Roll Number	The state of the s		
Date of MST					
Note: Missing data, if any,	may be assumed s	uitably.			
Note: Missing data, if any,	s. IS: 800-2007, SI	P: 6(1) / steel table is allowed	COs	, M	larks
	Qu	estion	RBT	level	
Q. No.			COI	, L2	2
Down a skatch	showing various t	ype of mill bents.	CO	1, L2	2
Q1 Draw a sketch	ondings considered	in the design of foot bridge?  d timber flooring has the foll	awing CO	2, L3	4
Q2 What are the i	Oaulings Consider an	d timber flooring has the foll	lowing		
Q3 A foot bridge	having N giruci an	d timber flooring has the foll			
data:					
Effective spa	an = 18m	-3 5m			
c/c distance	between main girde	:18 = 3.5m			
LL =6 kN/n	n2	He welded connections	. 100		
Allowable	stresses as per IS co	des. Use welded connections			1
Design the	flooring.	1 1 - mans girder		CO3, L5_	4
For above	Foot Bridge Design	the the cross girder.  s and shears for the gantry girder, design constraints. A 75m	der using	CO3, L6	4
Q4 For above	the design moments	s and shears for the game, a 75m	m monorail		
Q5 Calculate	de steel for following	ng design constraints. A 75m	wilding.		
section W	vas used to move the	e crane along the width of a b	book etc. 5 kN		
	conscilly 1/1	The state of the s	HOOK Cic. 5 kg		
a) C	and clearance: 2m; V	Wheel base: 1.5m	- stimaly	190 3	
1 1 2	salf weight and span	of the crane. Zarving and ro	m respectively.		
1 0	ole enecing of suppo	orting columns: 6m		10011	5 8
( )	gantry girder given	in problem No. 5.		CO4, L	0 1 0
Q6 Design	O)				
Course Outcomes (Course Outcomes (Course Outcomes (Course Outcomes (Course))	0				Was I Fall
The state of the s		rious primary loads, load combinations	for obtaining a worst of	lesign load.	
	ts will learn to consider van	rious primary loads, load combinations structural framing of industrial buildin	gs and bridges from the	given data/d	esign constrain
2 Studen	the able to apply the	concents of structural design to obtain	I SUITUDIO IIIOINIO	sections.	
2   Studen	will be able to prepare and	deliver rough sketches to the draftsman	etc.		
4 And v	VIII OC HOLO OF PROPERTY				
		ng Levels (LOTS)	m. I - O - I - Thi L'	ng Lovele (Tit	OVES)
	T	Tarrella (II All'El	ERROGERAUTEGERALISISKI)	THE RESERVE OF THE PARTY OF THE	0 2 0 )

	Lower Order Thin	king Levels (LOTS)		Higher Order	Thinking Levels	(HOTS)
Classification RBT Level	L1	L2	L3	LA	L5	1.6
Number RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

			ineering College, Ludhian formation Technology	a		
	Gur	u Nanak Dev Eng	Germation Technology	5	1	
		Department of in	formation Technology Semester		of Steel Str-1	ritnal
rogram		B.Tech.(CIVIL)	OCINE	Curbit .	of Steel 3d 2 Jawanda, Am	ingh
Subject Co	de	BTCE-501	Course Coordinator(s)	77 - 11 V	SIIKIIV	JIII JIII
Mid Semes	ster Test (MST)	1	Course	1 hour	30 minutes	
No.			Time Duration	THOU		
Max. Mar		24	Roll Number			
Date of M	ST	0	Ronz			Manks
					COs,	Marks
Note: Att	empt all questions	Ques	tion		RBT level	-
Q. No.			The second secon		CO1, L1	2
		- IICEC bo	olts and bearing bolts			2
Q1	Write short no	otes on Hord bu	NCC PARTY		CO1, L4	4
				laced	CO2, L5	4
Q2	Explain prying a	russ consists of two	angles ISA 100 x 100 x 8 p tensile load of 800 kN and it	S	1 19 19 1	1 3 5 1
Q3	A member of a t	carries an ultimate	ensile load of 800 kN and in thick placed in between the tr	WO	12 100	
1	Dack to back. It	pusset plate 8 mm th	rensile load of booker nick placed in between the to ther of 18 mm diameter grad	le 5.6		
	connected leas.	Determine the num	nick placed in between ersolber of 18 mm diameter grad liber of 18 mm diameter grad like ultimate strength of plate	as 410		
	black holts real	uired at the joint. Ta	aber of 18 mm diameter great like ultimate strength of plate			4
	N/mm <sup>2</sup> .		os 45-10 mm with 12 mm	thick	CO2, L6	4
04	Design a fillet	weld to connect ISA	A 65x45x8 mm with 12 mm tensile load of 100Kn.			4
Q4	gusset plate. Li	ne member carries a	and two plates each 1	2 mm	CO2, L6	4
Q5	Decign a doub	le cover pair louir c	. I be transferred is	200 kN.		8
Q3	thick and 300	mm wide. The serv	for an and reaction of 250	) kN due	to CO4, Le	0
Q6	Desgn a brack	ket connection to the	from the girder acts as an ec	centricity	7	
1 40	factored load	s. The end reaction	Jump flange Design bolte	d joint		
	of 300 mm fr	rom the face of the	column flange. Steel is of g	rade4 Fe		
	connecting 1	Lee- Hange with the	COLUMN			
	410 and bolt	ts of grade 4.6.				
Co	urse Outcomes (C	0)				
Stu	dents will be able t	ed and annieciat	e various aspects of s	teel cor	nstruction I	ike differen
1	Understar	iteel sections				
	1 1 1 1000	and design various	s types of steel connecti	ons usin	ng rivets	
2 3 4	Design ba	is alamonts of a	s ctaal hillding like bear	18/		
3	Estimate	'design loads' fo	or a roof truss and the	n be at	ole to desig	in its vario
4	compone	ents like top chord	members			
5	THE RESERVE TO SELECTION OF THE PERSON OF TH	teel members subject	ted to tension and compress	ion		
	5					
		The state of the s				

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS			
RBT Level Number	L1	L2	L3	L4	L5	L6	

# Guru Nanak Dev Engineering College, Ludhiana Civil Engineering Department

### Report of committee

- The meeting was held to scrutinize the quality of question papers for MST. As per study scheme for semester July-Dec 2018, 38 courses were offered in the semester and same were analyzed.
- 2. Convener and the subject experts analyzed the papers and ensured that the papers were satisfying the norms of Bloom Taxonomy and template.
- 3. Minor mistakes were there in format of some question papers which were corrected according to the template format recommended. Also, there were mistake with the Learning level mentioned in Pre-stressed Concrete and Design of Steel Structures-II which were corrected before the examination.

Prof. Inderpreet Kaur Deptt. NBA I/O Civil Engineering Department

CC: HOD for information

CE-19/3403/A
Dated 28/01/2019

HOD

With reference to letter no. NBA/104/21 dated 21-02-2018, A department level committee of following members is constituted to scrutinize the quality of MST question papers.

Chairman: Dr K. S. Gill (Prof. and Head) and Deptt NBA I/C: Prof. Inderpreet Kaur (Convener)

Following faculty members are also a part of committee as Course coordinator, Subject Expert and Module Coordinators

S. No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
1.	Structural Analysis-I	4	Prof. Yuvraj Singh	Dr. Jagbir Singh	Dr. Harvinder Singh
2.	Fluid Mechanics-II	4	Prof. Sandeep Kaur	Prof. Pritpal Kaur	Prof. Prashant Garg
3.	Construction Machinery and Works Management	4	Prof. Sahibdeep Singh	Prof. Bhupinder Singh	Dr. Gurdeepak Singh
4.	Geomatics Engineering	4	Prof. Prabhjot Singh	Prof. Gurpuneet Singh	Dr. Gurdeepak Singh
5.	Irrigation Engineering -I	4	Prof. Sandeep Kaur	Prof. Pritpal Kaur	Prof. Prashant Garg
6.	Design of Concrete Structures-I	4	Prof. Mandeep Kaur	Prof. Ajitpal Singh	Dr. Inderpreet Kaur
7.	Design of Concrete Structures-II	6	Prof. Amandeep Singh	Dr. Inderpreet Kaur	Dr. Harvinder Singh
8.	Professional Practice	6	Prof. Manvinder Kingra	Prof. Bhupinder Singh	Prof. Gurpuneet Singh
9.	Foundation Engineering	6	Prof. Pardeep Singh	Prof. Heena Malhotra	Prof. Prashant Garg
10.	Environmental Engg. II	6	Prof. Rajwinder Singh	Prof. Sukhwinderpal Singh	Dr. Puneetpal Singh Cheema
11.	Reinforced Earth and Geotextiles	6	Prof. Pardeep Singh	Prof. Prashant Garg	Dr. Gurdeepak Singh
12.	Infrastructure Development and Management	6	Prof. Yuvraj Singh	Prof. Gurpuneet Singh	Dr. Gurdeepak Singh
13.	Numerical Methods in Civil Engineering	6	Dr. Inderpreet Kaur	Dr. Jagbir Singh	Dr. Harpal Singh
14.	Irrigation Engineering II	7	Prof. Sandeep Kaur	Prof. Gurpuneet Singh	Prof. Prashant Garg
15.	Design of Steel Structures-II	7	Dr. Jagbir Singh	Dr. Harvinder Singh	Dr. Harpal Singh
13	Elements of Earthquake Engineering	7	Prof. Tanpreet Singh	Prof. Sukhwinder Singh	Dr. Harvinder
14	Transportation Engineering-	7	Prof. Prabhjot Singh Pannu	Dr. Bhupinder Singh	Singh Prof. Prashant
15	Hydrology and Dams	7	Prof. Gurpuneet Singh	Prof. Gurpuneet Singh	Dr. Gurdeepak
16	Earth and Earth Retaining Structures	7	Dr. Gurdeepak Singh	Dr. K.S. Gill	Singh Dr. B.S. Walia
17	Ground Improvement Techniques	7	Prof. Charnjeet Singh	Prof. Prashant Garg	Dr. Gurdeepak
18	Pre-stressed Concrete	7	Prof. Mandeep Kaur	Prof. Sukhwinder Singh	Singh Dr. Harvinder
19	Matrix methods of Structural Analysis	7	Dr. Harvinder Singh	Dr. Harpal Singh	Singh Dr. Harvinder
20	Pavement Design	7	Prof. Prashant Garg	Prof. Prashant Garg	Singh Dr. Gurdeepak

echnical Engineering)

ch (Geotechnical Engineering)	Semester	44 444	Subject Expert Prof. Prashant	Coordinator Dr. Gurdeepa
Subject  Design of Highway and Airport	2	Prof. Prashant Garg	Garg Prof. Heena	Singh Prof. Prashar
Pavements	2	Prof. Amandeep Singh	Malhotra  Prof. Heena	Dr. Gurdeepa
Soil Dynamics  Advanced Foundation Engg.	2	Prof. Charnjeet Singh	Malhotra  Dr. Inderpreet	Singh Dr. Gurdeepa
Research Methodology	2	Dr. Gurdeepak Singh	Kaur	Singh

rech	(Structural Engineering)	Semester	Course	Subject Expert	Dr. H.S. Rai
5.	Subject	Semester	Coordinator Dr. Harpal Singh	Dr. Jagbir Singh	Dr. H.S. Rai
0.	Bridge Engineering	2	Dr. Harpar ourg	Dr. Inderpreet	Singh
		2	Singh	Dr. Harvinder	Dr. Jagbir
2.	Research Methodology		Prof. Sukhwinder	Singh	Singh
	Plastic Analysis and Design of	2	Singh	Dr. Inderpreet	Dr. Harpal
3.	o -1 Christines	2	Prof. Gurbir Kaur	Kaur	Singh
4.	Earthquake Resistant Design of Masonry and RC Building	2	I A A Market		

Cech	(Environmental Engineering)		Course	Subject Expert	Module Coordinator
S.	Subject	Semester	Coordinator Prof. Rajwinder	Dr. Puneetpal	Dr. Puneetpal Singh Cheema
0.	Pollution Monitoring Techniques	2	Singh	Singh Cheema	Dr. Puneetpal
1.	Pollution Monitoring Team 1		Dr. Puneetpal	Prof. Sukhwinderpal	Singh Cheema
2.	Air Pollution and Control	2	Singh Cheema	Singh	Dr. Gurdeepal
۷.		2	Dr. Gurdeepak	Dr. Inderpreet Kaur	Singh
3.	Research Methodology		Singh	Prof.	Dr. Puneetpal
4.	Biological Treatment Methods	2	Dr. Puneetpal Singh Cheema	Sukhwinderpal Singh	Singh Cheem

Dr. inderpreet Kaur Deptt. NBA I/C (Convener)

		Danak Dev Engin	eering College, Ludhiana Civil engineering			
Progra	-		Semester Semester	4		
	t Code	B.Tech.(Civil) CE-14405 / 15375	Subject Title	Irrigatio	n engineeri	
Mid Se	emester Test (MST) No.	2	Course Coordinator(s)	Manvinder Kingra		IF,
Max. N	Marks	24	Time Duration	1 hour 3	0 minutes	
Date of	MST	25 <sup>th</sup> april, 2019	Roll Number			
Note: A	Attempt all questions					
Q. No.		Question			COs, RBT level	Mark
Q1	What is known by perched	Aguifers?			704, L1	2
Q2	What is meant by "Meand		what are its causes?		COS, L2	2
23	Explain the classification of	of Drains? Also ment	ion its maintenance.	-	06, L4	4
24	Write down the design con				06, L3	4
	A 30 cm diameter well per of pumping at 5000 litres policy lowered by 0.5 m and in a	er minute, the water	level in a test well at 100 i	m away is		
	transmissibility of the aquife		, the drawnown as a min	nat is the		
Q6	Data given below refers to bed level- 202 m, maximum of embankment – 2:1, Thic Determine the value of storloss). Draw a neat sectional	er? Bell's Bund: High F n scour depth – 9.5 r kness of stone Apron ne required per meter	lood Level – 206 m, low wan, Free board- 1.5 m, siden when Launched – 40 cm. length of shank (assume 2	ater C	CO5, L4	8
ourse (	Data given below refers to bed level- 202 m, maximum of embankment – 2:1, Thic Determine the value of stor	er? Bell's Bund: High F n scour depth – 9.5 r kness of stone Apron ne required per meter	lood Level – 206 m, low wan, Free board- 1.5 m, siden when Launched – 40 cm. length of shank (assume 2	ater C		8
ourse (	Data given below refers to bed level- 202 m, maximum of embankment – 2:1, Thic Determine the value of stor loss). Draw a neat sectional Outcomes (CO) will be able to	er? Bell's Bund: High F n scour depth – 9.5 r kness of stone Aproi ne required per meter view of bank with r	lood Level – 206 m, low wan, Free board- 1.5 m, siden when Launched – 40 cm. length of shank (assume 2 decessary dimensions.	ater C		8
ourse (	Data given below refers to bed level- 202 m, maximur of embankment – 2:1, Thic Determine the value of stor loss). Draw a neat sectional Outcomes (CO) will be able to	Bell's Bund: High F n scour depth – 9.5 r kness of stone Apro ne required per meter view of bank with r	lood Level – 206 m, low wan, Free board- 1.5 m, siden when Launched – 40 cm. length of shank (assume 2 necessary dimensions.	ater C		8
ourse (	Data given below refers to bed level- 202 m, maximum of embankment – 2:1, Thic Determine the value of stor loss). Draw a neat sectional Outcomes (CO) will be able to	Bell's Bund: High F n scour depth – 9.5 r kness of stone Aproi te required per meter view of bank with r ng of soil water plant in techniques and the re	lood Level – 206 m, low wan, Free board- 1.5 m, side when Launched – 40 cm. length of shank (assume 2 necessary dimensions.	ater C		8
ourse (	Data given below refers to bed level- 202 m, maximur of embankment – 2:1, Thic Determine the value of stor loss). Draw a neat sectional Outcomes (CO) will be able to  Identify the basic understanding Understand different irrigation.	Bell's Bund: High F n scour depth – 9.5 r kness of stone Aproi ie required per meter view of bank with r ng of soil water plant in techniques and the re ods to design lined and	lood Level – 206 m, low wan, Free board- 1.5 m, siden when Launched – 40 cm. Plength of shank (assume 2 necessary dimensions.	ater C		8
Course (	Data given below refers to bed level- 202 m, maximum of embankment – 2:1, Thic Determine the value of stor loss). Draw a neat sectional Outcomes (CO) will be able to Identify the basic understanding Understand different irrigation Apply different theories/meth	Bell's Bund: High F n scour depth – 9.5 r kness of stone Aproi te required per meter view of bank with r ng of soil water plant in techniques and the re ods to design lined and l using different form actures required for ef	lood Level – 206 m, low wan, Free board- 1.5 m, side when Launched – 40 cm. length of shank (assume 2 necessary dimensions.	ater slope		8

RBT Classification	Lower Order	Thinking Levels	(LOTS)	Higher Ord	er Thinking I	Levels (HOTS)
RBT Level Number	L1	L2	L3	L4	L5	1.6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

		I Desi Fi	ngineering College, Ludh	iana	NAME OF	
	G	uru Nanak Dev E	t of Civil Engineering			
		Departmen	Semester	4	· - Enginee	ring
rogr	am	B.Tech.(Civil)	Subject Title	Geomat	ics Enginee	ndeen
ubie	ct Code	CE-14401	Course Coordinator(s)	Prabhjo	ot Singh, Sa	mucch
Mid S	Semester Test	2	Course Coo	Kaur, N	Tilanpreet k	aui
	') No.		Time Duration	1 hour 3	30 minutes	
Viax.	Marks	24	Roll Number			
	of MST	22 <sup>nd</sup> , April, 2019	Roll Number			
NT-A-	: Attempt all question	ons			COs,	Marks
	Attempt an ques	Quest	ion		RBT	
Q. No					level	
NU					CO4, L3	2
Q1	Distinguish between	en spatial and non-s	patial data.		CO3, L1	2
Q2		Las Atmocranerii VI	THUOW ICEICII.		CO4, L2	4
Q2 Q3	What are the differ	rences in Raster and	Vector data models?		CO5, L3	4
Q4	TODO - TOPICO	2		THEFT	CO1, L2	4
Q5		concina obsert	vation plate forms?		CO5, L2	17.000
Q6	(i)Explain in detai (ii)What are sens sketch.	l the different comports? Explain diffe	onents of GPS segments? rent modes of scanning v	vith neat		8
Cou	rse Outcomes (CO	)				
Stuc			1 leastion	rolated nr	oblems.	
1	Demonstrate the u	ise of remote sensir	ng in resolving the location	related pr		THE SE
2	Explain and apply	the concept of pho	stogrammetry in the survey.	t the data	for survey.	
3	Detriore the infor	mation from remote	ely sellsed data and merpic	t tile data		
4	A -1-we and room	acontation of the ge	Oglapinear data.			
5	I Indonetand the h	asic concepts relate	d to GIS and GIS.	The second		
6	Apply the electro	onic technology for	surveying works.		Man .	NUMBER OF

		Thinking Levels	(LOTS)	Higher Ord	der Thinking	Levels (HOTS)
Classification		T D	L3	L4	L5	L6
RBT Level Number	L1	L2	Lo			Continu
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

		Guru Nanak Dev E	ngineering College, L	Udhlana				
		Departmen	t of Civil Engineering			-		
Progra	am	B.Tech.(CE)	Semester	8 <sup>th</sup>				
	ct Code	DECE-14815	Subject Title	Ground	Improveme ques	n		
Mid S	emester Test	1	Course Coordinator(s)		Charnjeet Singh  1 hour 30 minutes			
Monte	num Marks	24	Time Duration	1 hour				
Date	of MST	21 <sup>st</sup> February, 2019	Roll Number					
Note:	Attempt all ques	stions				The same of the sa		
Q. No.		Ques	tion		COs, RBT	Marks		
Q1		etween a sand drain preferred as per eco	and prefaricated dra pnomic part?	ain. Which	CO3, L2	2		
Q2	What do you		ompaction? How it is a	affected by	CO2, L5	2		
Q3	The second secon	ailure mechanism o	f the stone columns	with aid of	CO2, L3	4		
Q4		atil about the field c	ompaction procedure ent measurement.	s including	CO1, L2	4		
Q5	A CONTRACT OF THE PARTY OF THE	can cause marked	treatment in the form changes in the prope			4		
Q6	The second secon		and replacement ability for site with		-	8		
Cours	se Outcomes (C	0)						
Stude	ents will be able	to						
1	Evaluate the	existing characterist	ics of the soil to be in	nproved.				
2	Understand t	he mechanism of gr	ound improvement.					
3	Select a suita	able type of ground i	mprovement technique	ue consider	ing the exist	ing soil.		
4		us ground improvem						
5	Monitor the e	efficiency of ground i	mprovement method	S.				
6	Apply the sel	ected ground impro-	vement methods at s	ite.				

		Guru Nana	k Dev Engineeri	ing Conege	, Lucinana		TOWN THE REAL PROPERTY.	
1			partment of Civil	Engineer	Rth			
rogram		B.Tech.(Civil)	Semester		U	- Frag		
Subject		CE-14804	Subject Title		Transportation Dr. B.S. Wali	n Drabbie	ot Singh Par	nnu
Mid Sen	ester Test No.	1	Course Coordi		Dr. B.S. Wall	ia, Prabinje	or ombii	
Max. Ma	arks	24	Time Duration		1hr. and 30m	111.	THE REAL PROPERTY.	
Date of 1	MST	25/02/2019	Roll Number					
Note: At	tempt all questio	ns					COs,	Marks
Q. No.			Question				RBT level	
71	Turbu poriodicu	renewal of ballast	is necessary? Ho	w it is done	?		CO1,L1	2
Q1 Q2	A Meter Gaug	e track has a sleep find out number	per density of (M	+5). If the	track is laid w	rith rails	CO3,L6	2
Q3	Draw a typica	al cross-section of ious components	of a permanent v	way. Discu	ess in brief t	ne basic	CO2, L2	4
Q4	What is creep	? What are the remedial measure	causes and eff	fect of cre	eep? Explain	various	CO3, L2	4
Q5	Discuss differe	ent types of rail jo ed rail sections co	ints with the help	of neat ske	etches. What	ire the	CO1, L4	4
Q6	Determine the	length of transitions	on curve and draw	w the offse	t at every 151 k.	n. Given	CO3, L5	8
Course (	Outcomes (CO)							
Students	will be able to							
	Understand the	importance of rail	way infrastructure	e planning a	and design.			
		ctions of different						
}		technology to desi			ance of railwa	y track.		
		advanced internat					gineering.	
	Committee of the Commit	ortance of Airport						
		ajor issues and pro				ring.		
	ssification		hinking Levels (		Higher Ord		cing Levels	(HOTS)
	el Number	L1	L2	L3	L4	L5		L6
CB1 Lev	CILIBRATEDEL	44.4						

		Guru Nan	ak Dev Engineer	ring Colleg	e, Ludhiana			
1-		D	epartment of Civ	vil Enginee	ring			
program		B.Tech.(Civil)	) Semester		8 <sup>th</sup>			
Subject		CE-14804	Subject Title		Transportat	ion Engg	2	
	nester Test No.		Course Coord	linator(s)	Dr. B.S. Wa	lia, Prabh	jot Singh Pa	innu
Max. Ma		24	Time Duratio		1hr. and 301			
Date of I	MST	23/04/2019	Roll Number					
Note: At	tempt all questi	ons						
Q. No.			Question				COs, RBT level	Marks
Q1	What is throw	of switch and na	me different types	s of switche	es?		CO3,L1	2
Q2	Explain in bri	ef principle of MA	AGLEV tracks.				CO4,L2	2
Q3	Write a short	note on (i) Zoning	laws (ii) Clear ze	one (iii) Tu	rning zone.		CO5, L3	4
Q4	Explain briefl	y the different type nctioning and type	pes of station var	ds. With th	e aid of neat-	sketches,	CO3, L2	4
Q5	Briefly discus	s the major featur Block system.	es and working p	rocedure al	ong with neat	sketch	CO4, L4	4
Q6	from the heel	e required elemer of switch at an an curve tangential to	gle of 1°8'00" from	m a B.G. tr	ack and ends	at T.N.C.	CO3, L6	8
	conditions is atmosphere a gradient is 0.5	length required f 2500m. Aerodrom t aerodrome elev 5%, determine the	ne reference temp ration of 150m is	. is 25°C at s 14.025°C	nd that of the	standard	CO6, L5	8
	Outcomes (CO) will be able to						Hotel II	
I		e importance of rai	lway infrastructure	e planning a	and design			
)	Identify the fur	nctions of different	component of rai	lway track				
	Apply existing	technology to desi	on construction a	and mainten	ance of roll	vy two els	DE LOS	
	Apprehend the	advanced internat	ional technology b	peing used in	n the field of	y track.	days to	
	Outline the imi	portance of Airport	Infrastructure pla	inning and	design	anway eng	gineering.	
	Evaluate the m	ajor issues and pro	blems of current i	ntaract to a	resign.	du a		40000
	ssification	Lower Order T	hinking Levels (	I OTCI				100 No. 00
	el Number	L1	L2	L3	Higher Ord			
No. of Concession, Name of Street, or other Designation, Name of Street, Name	el Name	Remembering				L5		L6
			Onderstanding	Applying	Analyzing	Evaluatin	g Creatin	g

-		Departm	nent of Civil Engineering	1		1900
progra	am	B.Tech.(CE)	Semester	8 <sup>th</sup>		
	ct Code	DECE-14815	Subject Title	Ground Impr	ovement Tec	chnique
	semester Test	2	Course Coordinator	Charnjeet Sir		orningero
MARKA	num Marks	24	Time Duration	1 hour 30 mi		
The state of	of MST	25/04/2019	Roll Number	T HOUR OF THE	ridico	
	: Attempt all questions					
Q. No		Que	estion		COs, RBT	Marks
21			eation Grouting, Compa ting"? Illustrate the sketo	100	CO3, L2	2
22			aced perpendicular to the statement with neat		CO4, L5	2
Q3	Explain the effects of characteristics of soil		oils on bearing capacity	and settlement	CO5, L3	4
Q4	What is solution growns aspects of grouting		pes? Briefly explain with		CO6, L2	4
	operations.		chomodic dieng im	the grouning		
Q5		the part of the latest terms and the latest terms are the latest terms and the latest terms are the latest terms a	ne columns with neat sk	etches	CO5, L4	4
Q5 Q6	Explain the failure m A reinforced soil re properties of reinfor unit weight of reinfor backfill soil = 28°, surface is horizonta wall is 235 kN/m². system against the • Determine the of safety aga • Determine the reinforcement	etaining wall of ced fill are as an orced soil = 22 keep unit weight of al. The safe bear Perform the calculation following: The length of the painst sliding of 1. The factor of safe ant.	one columns with neat skip.  7 m height is to be congle of repose for reinforced soil and backfill soil: a backfill soil and backfill soil	etches Instructed. The reed soil = 36°, angle repose for an	CO4, L5	8
Q6	Explain the failure may be a reinforced soil reproperties of reinformunit weight of reinformunit weight of reinforcement wall is 235 kN/m². System against the betermine the of safety against the reinforcement wall is 235 kN/m².	etaining wall of ced fill are as an orced soil = 22 k unit weight of al. The safe bear Perform the calculation following: the length of the ainst sliding of 1. The factor of safe ant.	one columns with neat skip.  7 m height is to be congle of repose for reinforced soil and capacity of the externation.  7 m height is to be congleted and capacity and backfill soil: and	etches Instructed. The reed soil = 36°, angle repose for an	CO4, L5	1000
Q6	Explain the failure m A reinforced soil re properties of reinfor unit weight of reinfor backfill soil = 28°, surface is horizonta wall is 235 kN/m². system against the • Determine th of safety aga • Determine th reinforcement • Determine the Course Outcomes (CO)	etaining wall of ced fill are as an orced soil = 22 k unit weight of al. The safe bear Perform the calculation following: the length of the painst sliding of 1. The factor of safe ant. The bearing press students will be contact the same statement of the safe and th	one columns with neat skip.  7 m height is to be congle of repose for reinforced.  8N/m³ and backfill soil: a backfill soil = 19 kN/m² and capacity of the soil a culations for the external reinforced soil block to a style against overturning for the foundation so able to	etches instructed. The reed soil = 36°, angle repose for an	CO4, L5	1000
Q6	Explain the failure may be a reinforced soil reproperties of reinformunit weight of reinformunit weight of reinforcements and reinforcements are reinforcements.  Evaluate the existing the reinforcements are reinforcements.	etaining wall of ced fill are as an orced soil = 22 k unit weight of al. The safe bear Perform the calculation following: the length of the ainst sliding of 1. The factor of safe ant. The bearing press students will be the contact of the center of the ce	one columns with neat skip.  7 m height is to be congle of repose for reinforce.  18 kN/m³ and backfill soil: a backfill soil = 19 kN/m² and capacity of the soil acculations for the externation.  19 culations for the externation for the externation.  20 culations for the externation for the foundation so capacity against overturning for the soil to be improved the	etches instructed. The reed soil = 36°, angle repose for a bottom of RE at bottom of RE achieve a factor or this length of il.	CO4, L5	1000
Q6 C 1 2	Explain the failure may be a reinforced soil reproperties of reinformunit weight of reinformunit weight of reinforcement wall is 235 kN/m². System against the Determine the of safety aga Determine the reinforcement of the Determine the Dete	etaining wall of ced fill are as an orced soil = 22 k unit weight of al. The safe bear Perform the calculation following: the length of the ainst sliding of 1. The factor of safe ant. The bearing press students will be the condition of ground the condition of ground the same characteristic echanism of ground the conditions of ground the conditions are conditions of ground the conditions of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of ground the conditions are conditions as a condition of the conditions are conditional conditions are conditional conditions.	one columns with neat skip.  7 m height is to be congle of repose for reinforce.  18 kN/m³ and backfill soil: a backfill soil = 19 kN/m² and capacity of the soil acculations for the externation.  19 culations for the externation for the externation.  20 culations for the externation for the foundation so capacity against overturning for the soil to be improved the	etches instructed. The reed soil = 36°, angle repose for a bottom of RE at bottom of RE achieve a factor or this length of il.	CO4, L5	1000
Q6 C 1 2 3	Explain the failure may be a reinforced soil reproperties of reinformunit weight of reinformunit weight of reinforcements and reinforcements are reinforcements.  Evaluate the existing the select a suitable typesign various group of the properties of the select are reinforcements.  Evaluate the existing the select a suitable typesign various group of the properties of th	etaining wall of ced fill are as an orced soil = 22 k unit weight of al. The safe bear Perform the calculation following: the length of the painst sliding of 1. The factor of safe ant. The bearing press of the company of the property of t	one columns with neat skip.  7 m height is to be congle of repose for reinforce.  8N/m³ and backfill soil: a backfill soil = 19 kN/m² and capacity of the soil a culations for the external reinforced soil block to a soil and the foundation so able to so of the soil to be improved improvement.  9 provement technique cont techniques.	etches instructed. The reed soil = 36°, angle repose for a bottom of RE at bottom of RE achieve a factor or this length of il.	CO4, L5	1000
Q6	Explain the failure may be a reinforced soil reproperties of reinformunit weight of reinformunit weight of reinformunit weight of reinforcement wall is 235 kN/m². System against the Determine the of safety against the Potermine the of safety against the reinforcement of the Determine the Course Outcomes (CO)  Evaluate the existing Understand the meaning select a suitable to Design various group Monitor the efficient	etaining wall of ced fill are as an orced soil = 22 ke unit weight of al. The safe bear Perform the calculation following: the length of the ainst sliding of 1. The factor of safe ant. The bearing press of characteristic echanism of groupe of ground improvements of ground improvements of ground improvements.	one columns with neat skip.  7 m height is to be congle of repose for reinforced.  8N/m³ and backfill soil: a backfill soil = 19 kN/m² and capacity of the soil a culations for the external reinforced soil block to a soil against overturning for the soil and the soil against overturning for the soil to be improved and improvement.	etches instructed. The reed soil = 36°, angle repose for a bottom of RE at bottom of RE achieve a factor or this length of il.	CO4, L5	100

Gu	ru Nanak Dev En	gineering College, Ludhia	na
	Department	of Civil Engineering	
Program	M.Tech.(SE)	Semester	Plastic Analysis and
Subject Code	CS-14404	Subject Title	Design of Steel Structures
Mid Semester Test (MST)	2	Course Coordinator(s)	Sukhwinder Singh  1 hour 30 minutes
No. Max. Marks	30	Time Duration	1 Hour ou
Date of MST	26 <sup>th</sup> April, 2019	Roll Number	

Note: At	tempt all questions  Question	COs, RBT level	Marks
Q. No.		CO1, L2	5
Q1	Write a detailed note the minimum-weight design concept of steel structures.  Compute the downward deflection at C under the vertical load by Compute the downward form at A. The section is uniform throughout.	CO4, L4	5
Q2	assuming the last limige to the same is shown in figre.  The portal frame is shown in figre.  2/3L  1/3L		
	THE	CO3, L1	10
Q3	What are the different rules to tackle the shear force and local buckling of flanges and web? Explain it.  Design a continuous beam consisting of three spans of 10 m, 12 m and 8  Design a continuous beam consists of 14 kN/m of udl whereas the other spans	CO3, L6	10
Q4	Design a continuous beam consisting of three spans of 10 m, 12 Design a continuous beam consisting of three spans of 10 m, 12 Design a continuous beam consists of 14 kN/m of udl whereas the other spans m. The first span consists of 14 kN/m of udl whereas the other spans m. The first span consists of 14 kN/m of loading. Design a suitable single I-section for the consist of 21 kNm of loading. Design a suitable single I-section for the		
Course Student 1 2 3	Students will learn to concepts of plastic design  Students will learn plastic analysis techniques  Students will learn plastic analysis techniques  Students will be able to apply Secondary design considerations  Students will be able to analyze Problem of incremental: collapse  Students will be able to analyze Problem of incremental:		

4   3	Lower Order	Thinking Levels	(LOTS)	Higher Or	der Thinkin	g Levels (HOTS
Classification		L2	L3	L4	L5	L6
RBT Level Number RBT Level	Remembering	Understandin	Applyin	Analyzin	Evaluatin g	Creating

### Report

- 1. The committee constituted to scrutinize the quality of question papers for MST organized a meeting. There were 20 B. Tech courses and 4 courses for each branch of M.Tech were offered according to the study scheme, whose question papers were analyzed for semester Jan-June 2019.
- 2. The committee had analyzed the papers and discussed the minor mistakes of each subject to ensure that the papers were satisfying the norms of Bloom Taxonomy and template and the format mistakes are eliminated.
- 3. In subject of Transportation Engineering-II, the terms like define and explain were not satisfying the RBT levels. The modification was made before the examination with the help of Subject Expert.

Prof. Inderpreet Kaur Convener & Deptt. NBA I/C

CC:

- 1. HOD for information
- 2. File Record

08/08/19

Dated

#### HOD

With reference to letter no. NBA/104/21 dated 21-02-2018, A department level committee of following members is constituted to scrutinize the quality of MST question papers.

Chairman: Dr H S Rai (Prof. and Head) and Deptt NBA I/C: Dr. Inderpreet Kaur (Convener)

Following faculty members are also a part of committee as Course coordinator, Subject Expert and Module Coordinators for the subjects listed below for session July – December 2019:

### B.Tech (Civil Engineering)

No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
1.	Solid Mechanics	3	Prof. Savleen Takkar	Dr. Inderpreet Kaur	Dr. Harvinder Singh
2.	Disaster Preparedness & Planning	3	Prof. Pushpinder Singh	Prof. Bhupinder Singh	Dr. Harvinder
3.	Basic Electronics & applications in Civil Engineering	3	Prof. Tarandeep Singh	Prof. Gurjot Kaur Walia	Singh Prof. Harminder
4.	Surveying & Geomatics	3	Prof. Ajitpal Singh	Prof. Prabhjot	Raur Prof. Gurpuneet
5.	Civil Engineering-Introduction, Societal & Global Impact	3	Prof. Manmeet Kaur Panesar	Singh Prof. Yuvraj Singh	Singh Dr. Inderpreet
6.	Fluid Mechanics	3	Prof. Sandeep		Kaur
7.	Geotechnical Engineering	5	Kaur Prof. Amritpal	Prof. Ajitpal Singh Prof. Pardeep	Dr. Prashant Garg
8.	Design of Steel Structures-I	5	Raur Prof. Navneet	Singh Joia Prof. Sukhwinder	Dr. K.S. Gill
9.	Structural Analysis - II	5	Singh Prof. Mandeep	Singh	Dr. Jagbir Singh
10.	Transportation Engineering-I	5	Kaur Prof. Mandeep	Prof. Amandeep Singh	Dr. Harvinder Singh
11.	Environmental Engineering-I		Kaur	Prof. Heena Malhotra	Dr. Prashant Garg
12.	Design of Steel Structures-II	7	Prof. Balihar Singh	Prof. Sukhwinder pal Singh	Dr. Puneet Pal
13.	Elements of Earthquake Engineering	7	Dr. Jagbir Singh Prof. Tanpreet	Dr. Harpal Singh Prof. Sukhwinder	Singh Cheema Dr. Harpal Singh
14.	Irrigation Engineering-II	7	Singh	Singh	Dr. Jagbir Singh
15.	Transportation Engineering-II		Prof. Pritpal Kaur	Prof. Pritpal Kaur	Prof. Gurpuneet Singh
	Pavement Design	7	Prof. Pushpinder Singh	Prof. Prabhjot Singh	Dr. Prashant Garg
	Traffic Engineering	7	Dr. Prashant Garg	Dr. Prashant Garg	Dr. Gurdeepak
	Matri	7	Prof. Charnjeet Singh	Dr. Prashant Garg	Singh
	Analysis	7	Dr. Harvinder Singh	Dr. Harvinder	Dr. Prashant Garg
	Ground Improvement Techniques	7	Dr. Gurdeepak	Singh Dr. Gurdeepak	Dr. H.S. Rai
20.	Hydrology and Dams	7	Singh Prof. Gurpuneet	Singh	Dr. K.S. Gill
21.	Disaster Management	7	Singh Prof. Manvinder	Prof. Gurpuneet Singh	Dr. Gurdeepak Singh
Lech	(Geotechnical Engineering)		Kingra	Dr. Inderpreet Kaur	Dr. Gurdeepak
	The state of the s				

No.	Subject	Samo	Course	- cattl	Singh
1.	Subsurface Investigations &	Semester 1	Coordinator Prof. Chami	Subject Expert	
			- Inject		Coordinator Dr. K.S. Gill

Tino	trumentation		Singh	Singh	
10000	dvanced Soil Mechanics	1	Prof. Amandeep Singh	Prof. Heena Malhotra	Dr. K.S. Gill
F	nvironmental Geotechnology	1	Prof. Heena Malhotra	Dr. Gurdeepak Singh	Dr. Prashant Garg
+	Earth retaining structures	1	Prof. Amritpal Kaur	Prof. Prashant Garg	Dr. Gurdeepak Singh
+	Research Methodology and IPR	1	Dr. Gurdeepak Singh	Dr. Gurdeepak Singh	Dr. K.S. Gill Dr. Gurdeepak
-	Disaster Management	1	Prof. Manvinder Kingra	Dr. Inderpreet Kaur	Singh Dr. Gurdeepak
i.	Pavement Analysis and Design	1	Dr. Prashant Garg	Prof. Pushpinder Singh	Singh
7.	Ground Improvement	1	Prof. Gagandeep Kaur Grewal	Prof. Heena Malhotra	Dr. Prashant Garg
8.	Techniques Ground Improvement	3	Prof. Pardeep Singh	Prof. Heena Malhotra	Dr. Prashant Garg

M.Tech (Structural Engineering)

_	(Structural Engineering)	Semester	Course	Subject Expert	Module Coordinator
0.	Subject	1	Coordinator  Dr. Jagbir Singh	Dr. Harpal Singh	Dr. Harvinder Singh
	Advanced Structural Analysis	1	Prof. Sahibdeep	Dr. Inderpreet	Dr. Gurdeepak Singh
2.	Disaster Management	1	Singh Setia Dr. Inderpreet Kaur	Dr. Jagbir Singh	Dr. Harpal Singh
3.	Bridge Engineering	1	Prof. Sukhwinder	Dr. Harvinder Singh	Dr. H.S. Rai
4.	Structural Optimization	1	Singh Prof. Sahibdeep	Dr. Harvinder Singh	Dr. Jagbir Singh
5.		1	Singh Setia  Dr. Harpal Singh	Dr. Harpal Singh	Dr. H.S. Rai
6	Finite Element Method in Structural Engineering	1	Prof. Navneet	Dr. Inderpreet	Dr. Harvinder Singh
8	7. Research Methodology and IPR	1	Singh Prof. Tanpreet	Dr. Harvinder	Dr. H. S. Rai
1	8. High Rise Building	3	Singh	Singh	- Anna Carlo

M.Tech (Environmental Engineering)

S.	Subject Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator Dr. Puneet Pal
No.	Physico-Chemical Treatment	1	Dr. Puneet Pal Singh Cheema	Dr. Puneet Pal Singh Cheema	Singh Cheema
2.	Methods Environmental Change and	1	Prof. Avneet Kaur	Dr. Puneet Pal Singh Cheema	Dr. Puneet Pal Singh Cheema
3.	Sustainable Development Environmental Chemistry and	1	Prof. Balihar Singh	Dr. A. K. Sodhi	Dr. Puneet Pal Singh Cheema
4.	Microbiology  Research Methodology and IPR	1	Dr. Gurdeepak Singh	Dr. Inderpreet Kaur	Dr. Puneet Pal Singh Cheema
5		1	Prof. Manvinder Kingra	Dr. Inderpreet Kaur	Dr. Gurdeepak Singh Dr. Puneet Pal
1	6. Solid and Hazardous Waste Management	1	Prof. Sukhwinder pal Singh	Prof. Avneet Kaur	Singh Cheema
1	7 Environment System Engineering	3	Dr. Puneet Pal Singh Cheema	Prof. Sukhwinder pal Singh	Dr. Puneet Pal Singh Cheema

RB1 RBT

> Dr. Inderpreet Kaur Deptt. NBA I/C (Convener)

4			Guru	Nanak Dev Engir	neering College, I	dumana					
					Civil Engineering	5	15				
Progra		B.Tech.(		Seme			Environme	nt engg. I			
	t Code	BTCE - 1	14505		ect Title		Fr Gagand	eep Kaur Gre	wal, Er.		
	emester Test (MST)	1		Cours	se Coordinator(s)		Sukhwinde	rpal Singh and	d		
No.							Er. Balihar	Singh			
							Li. Danie				
Max. N	Marks	24	24 Time Duration 1 hour			Time Duration 1 hour					
	f MST	20-09-20	019	- Contract to	Number			1 hour 30 minutes			
						ALCOHOLD DE					
Note:	Attempt all questions					area granda de la companya de la co					
Q.				Question				COs,	Marks		
No.								RBT	1 3 19		
القيف								level			
Q1				termine the				CO3, L1	2		
-	b) Give the	maximum acc	eptable limit o	f the following for	the public drinkin	g water: i) Ni	trites ii) lead				
Q2	In a city having pop	ulation 40 lak	hs, seven fire b	oreakout in a day as	nd each fire stands	for 4 hours, cal	culate the total	CO1. L5	2		
(2)2	amount of water rec	uired as a fire	demand.								
Q3 Q4	What is an intake st	ructure? What	are its types?	What are the factor	rs which govern th	e location of an	intake structure?	CO1, L1	4		
<b>V</b> 4	what is an indicato	r organism? D	iscuss the char	acteristics of an ide	eal indicator.			CO3, L2	4		
	100000000000000000000000000000000000000										
									-		
Q5	Calculate the total p	opulation and	the total water	r requirement in the	e city X in the year	2016 whose pe	er capita requirement	CO2. L5	1 4		
	Calculate the total p	opulation and	the total water	r requirement in the	e city X in the year	2016 whose permethod.	er capita requirement	CO2, L5	4		
		opulation and	the total water	r requirement in the	e city X in the year	method.		CO2, L5	4		
	Calculate the total pof people is 150 lpc	opulation and	the total water	r requirement in the iven below. Use in	cremental increase	2016 whose permethod.	er capita requirement	C02, L5	4		
	Calculate the total pof people is 150 lpc	opulation and	the total water	r requirement in the iven below. Use in 1951	1961	method.	1981		4		
Q5	Calculate the total pof people is 150 lpc Year Population	opulation and d and populati 1931 858545	the total water ion data is as g 1941 1015672	requirement in the iven below. Use in 1951	1961 1691538	1971 2077820	1981 2585862		4		
Q5	Calculate the total pof people is 150 lpo Year  Population  The table below go	opulation and d and population 1931  858545	the total water ion data is as g 1941 1015672	requirement in the iven below. Use in 1951 1201553	1961 1691538	method. 1971 2077820	1981 2585862		4		
Q5	Calculate the total pof people is 150 lpc Year  Population The table below granteres and mm). L	opulation and d and population 1931 858545 ves the values sing the net p	the total water ion data is as g 1941 1015672 s of monthly in	requirement in the iven below. Use in 1951 1201553	1961 1691538 on, pan evaporatio	method. 1971 2077820 n and demand	1981 2585862 in a city (in hectera-	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population The table below granteres and mm). L	opulation and d and population 1931 858545 ves the values sing the net p	the total water ion data is as g 1941 1015672 s of monthly in	requirement in the iven below. Use in 1951 1201553	1961 1691538 on, pan evaporatio	method. 1971 2077820 n and demand	1981 2585862 in a city (in hectera-	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year Population The table below gometres and mm). Lote pan evaporation	opulation and d and population 1931  858545  ves the values sing the net p	the total water ion data is as g 1941 1015672 s of monthly in tool area as 400	requirement in the iven below. Use in 1951 1201553	1961 1691538 on, pan evaporation useful storage ca	method.  1971  2077820  n and demand i pacity of the res	1981 2585862 In a city (in hectare-servoir provided that	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year Population The table below granetres and mm). Lote pan evaporation instead as per the prior	bopulation and d and population and 1931   858545   ves the values sing the net p coefficient is water rights.	the total water ion data is as g 1941 1015672 of monthly in tool area as 400 0.8 and 40 % there is require	requirement in the iven below. Use in 1951 1201553 1201553 of lows, precipitation the of the rainfall has the ment of refease of	1961 1691538 on, pan evaporatio a useful storage castready reached the 5 hectare-metre po	method.  1971  2077820  n and demand i pacity of the res	1981 2585862 In a city (in hectare-servoir provided that	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year Population The table below gometres and mm). Lote pan evaporation	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 c of monthly in tool area as 400 0.8 and 40 % there is required inflow.	requirement in the iven below. Use in 1951 1201553 1201553 1201553 of the rainfall has ment of refease of Precipitation	1961 1691538 on, pan evaporatio useful storage calleady reached the 5 hectare-metre pro	method.  1971  2077820  In and demand i pacity of the rese stream in the month of wall paratice.	1981 2585862 In a city (in hectare-servoir provided that	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year Population The table below gimetres and mmi). Lote pan evaporation instead as per the prior Winste.	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 s of monthly in 001 area as 400 % there is required inclow (i.e., m)	requirement in the iven below. Use in 1951 1201553 1201553 of lows, precipitation the of the rainfall has the ment of refease of	1961 1691538  on, pan evaporatio suseful storage ca aiready reached the 5 hectare-metre per call the c	method.  1971  2077820  In and demand i pacity of the rese stream in the month of wall paratice in)	1981 2585862 In a city (in hectare- cervoir provided that past. Further assume	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year Population The table below granetres and mm). Lote pan evaporation instead as per the prior	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 s of monthly in 001 area as 400 % there is required inclow (i.e., m)	requirement in the iven below. Use in 1951 1201553 1201553 of lows, precipitation the rainfall has sment of release of Precipitation (man)	1961 1691538 on, pan evaporatio useful storage calleady reached the 5 hectare-metre pro	method.  1971  2077820  In and demand i pacity of the rese stream in the month of wall paratice in)	1981 2585862 In a city (in hectare- cervoir provided that past. Further assume	C03, 1.5	4		
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Q5	Calculate the total pof people is 150 lpc Year  Population  The table below granetres and mmi, total pan evaporation institutes per the prior least as per the p	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 s of monthly in ool area as 400 % there is require inflow (3a-m) 0 1.3 3.1 4.6	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 120155555 120155555 120155555 1201555555 12015555 12015555 12015555 12015555 120155555 1201555555	1961 1691538  on, pan evaporatio c useful storage castready reached the 5 hectare-metre position of the control	method.  1971  2077820  In and demand i pacity of the rese stream in the paratice in mondi of wall poratice in mondi of wa	2585862 in a city (in hectare-servoir provided that past. Further assume cr.  Decaused  8 10.5	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population  The table below gometres and mm), total pan evaporation in at as per the prior below.  Man Apr	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g  1941  1015672  s of monthly in the cool area as 400 to 0.8 and 40 % there is required inflow (tan-m)  0  1.3  3.1	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 120155555 120155555 120155555 120155555 12015555 12015555 12015555 12015555 120155555 12	1961 1691538  on, pan evaporatio c useful storage ca siready reached the 5 hectare-metre po particular in the storage can in th	method.  1971  2077820  In and demand i pacity of the rese stream in the mondi of wall portation in the stream in	2585862 in a city (in hectare- cervoir provided that past. Purther assume cer.  Desputed	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population  The table below gometres and mm), total pan evaporation in the pan evaporation in the people with	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 s of monthly in ool area as 400 (0.8 and 40 % there is require inflow (3a-m) 0 1.3 3.1 4.6 18.7	requirement in the iven below. Use in 1951  1201553  inflows, precipitation of the rainfall has ement of release of Precipitation (man)  12  17  24  30  41	1961 1691538  on, pan evaporatio cuseful storage castready reached the 5 hectare-metre per cuseful storage castready reached the 5 h	method.  1971  2077820  In and demand i pacity of the rese stream in the month of water porraffice in)  0  5  7  5  5  2	1981  2585862  In a city (in hectareservoir provided that past. Purther assume er.  Desaund  8  10.5  10  17.5  22.5  50	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population  The table below granteres and mm). Lote pan evaporation lates a per the prior lates as per the prior	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g  1941  1015672  s of monthly in ool area as 400 (0.8 and 40 % there is required inclow (3.8 mm)  0  1.3  3.1  4.6  18.7  52.6	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 120155555 120155555 120155555 1201555555 12015555 12015555 12015555 12015555 120155555 1201555555	1961 1691538  on, pan evaporatio e useful storage ca aiready reached the 5 hectare-metre per control of the con	method.  1971  2077820  In and demand i pacity of the rese stream in the month of wall paratice in the stream of the stream in t	1981  2585862  In a city (in hectareservoir provided that past. Purther assume cr.  Desaund  8  10.5  10  17.5  22.5	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population  The table below granteres and mm), total pan evaporation lates and mm), total pan evaporation in the	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 s of monthly in 001 area as 400 0.8 and 40 % there is require inflow (ha-m) 0 1.4 3.1 4.6 18.7 52.6 68.9	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 120155555 12015555 120155555 120155555 120155555 1201555555 12015555555 1201555555 1201555555 120155555 12015555555 1201555555 120155	1961 1691538  on, pan evaporatio cuseful storage castready reached the 5 hectare-metre per cuseful storage castready reached the 5 h	method.  1971  2077820  In and demand i pacity of the rese stream in the mondi of wall portation in the stream in	1981  2585862  In a city (in hectareservoir provided that past. Purther assume er.  Desaund  8  10.5  10  17.5  22.5  50	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population  The table below granteres and mm). Lote pan evaporation in the pan evaporatio	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672 s of monthly in ool area as 40% there is require liftow (ta-m) 0 13 3.1 4.6 18.7 52.6 68.9 45.1	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 120155555 12015555 120155555 120155555 120155555 1201555555 12015555555 1201555555 1201555555 120155555 12015555555 1201555555 120155	1961 1691538  on, pan evaporatio c useful storage ca siready reached the 5 hectare-metre po particular in the storage ca siready reached the 5 hectare-metre po particular in the storage ca siready reached the 5 hectare-metre po particular in the storage can siready reached the 5 hectare-metre po particular in the storage can siready reached the storage can be stor	method.  1971  2077820  In and demand i pacity of the rese stream in the mondi of water por affect in)  0  5  7  5  5  1  5  1  5	1981  2585862  In a city (in hectare-servoir provided that past. Purther assume ex.  Desauted  8  10.5  10  17.5  22.5  50  32	C03, 1.5	4		
Q5	Calculate the total pof people is 150 lpc Year  Population  The table below grametres and mm). Lote pan evaporation in the pan evaporatio	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015553 120155553 1201555555 1201555555 12015555555 12015555555 1201555555555 12015555555555	1961 1691538  on, pan evaporatio a useful storage car already reached the 5 hectare-metre per period of the control of the con	method.  1971  2077820  n and demand i pacity of the rese stream in the month of water poration in the control of the rese stream in the contr	1981  2585862  In a city (in hectare-servoir provided that past. Purther assume cr.  Desauted  8  10.5  10  17.5  22.5  50  32  17.5	C03, 1.5	4		
Q5 Q6	Calculate the total pof people is 150 lpc Year  Population  The table below granteres and mm). Lote pan evaporation in the pan evaporatio	opulation and d and population 1931  858545  ves the values sing the net p a coefficient is water rights.	the total water ion data is as g 1941 1015672	requirement in the iven below. Use in 1951 1201553 12015553 12015553 12015553 12015553 12015553 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 12015555 120155555 12015555 120155555 120155555 120155555 1201555555 12015555555 1201555555 1201555555 120155555 12015555555 1201555555 120155	1961 1691538  on, pan evaporatio a useful storage car stready reached the 5 hectare-metre point of the control	method.  1971  2077820  In and demand i pacity of the rese stream in the mondi of water por affect in)  0  5  7  5  5  1  5  1  5	1981  2585862  In a city (in hectare-servoir provided that past. Purther assume cr.  Desputed  8  10.5  10  17.5  22.5  50  32  17.5  10	C03, 1.5	4		

Identify different types of water demands and select suitable source of water.  Predict future population and estimate for the suitable source of water.	
2 Product system of water demands and select suitable course of	
Predict future population and estimate future water demands     Demonstrate a firm and estimate future water demands	
Demonstrate a firm understanding of various water quality parameters.  Design different water treatment units to meet the drinking water quality standards and criteria.  Plan and design the water transportation, pumping stations and a criteria.	
5 Assign directin Water treatment units to meet the delays	
Plan and design the water transported in a making water quality standards and only	E Comment of the Comm
5 Plan and design the water transportation, pumping stations and pipe network  6 Design low cost water treatment techniques to the contract the contract transportation.	
6 Design low cost water treatment techniques in the rural areas,	
That areas,	

RHT Level Number	Lower Order Thinking Levels (LOTS)	
RBT Level Name	Li Higher Oud on	
The state of the s	Remembering Understanding Applying LA	
	Analyzing Evaluating	L6
	Creating	La company of the second

	Gı	iru Nanak Dev En	gineering College, Ludhia	na		
			of Civil Engineering			
Progran	1	B.Tech.(CIVIL)	Semester	5		
Subject		BTCE-501	Subject Title	Desig	esign of Steel Str-1 urbir wanda,,Sukhwinder ingh,Navneet Singh	
No.	nester Test (MST)	1	Course Coordinator(s)	Gurbi		
Max. M		24	Time Duration	O TOTAL CONTRACTOR	r 30 minutes	
Date of 1	MST		Roll Number			
Note: A	ttempt all questions		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
Q. No.		Question				Marks
Q1	What are the advan	tages of steel as a si	CO1, L1			
Q2	Define ultimate stre				COI, LI	2
Q3	Design a double co	ver butt joint to con			CO1, L4	2
	and 300mm wide.	The service load to l	nect two plates each 12 mn be transferred is 200kN.	n thick	CO2, L5	4
Q4	Design a fillet weld 100mm x 75mm x sile load is 410kN.	to join a tension m 8mm to a 12 mm th	ember consisting of 2 ISA ick gusset plate. The factor	ed ten-	CO2, L6	4
Q5	a) Lap joint	Calculate the strength of 20mm diameter bolt grade 4.6 for the cases when the main plates to be jointed are 12mm				
Q6	Design a bolted bra because of the factor the end reaction is grade 4.6. Thickness	cket connection to	support an end reaction of a by the beam. The eccentrised is of grade Fe 410. Use	100kN city of	CO4, L6	8

Course Outcomes (CO)
Students will be able to

Understand and appreciate various aspects of steel construction like different types of steel sec-

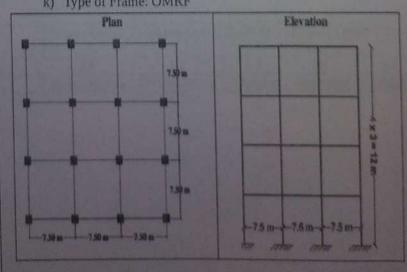
	Guru Nanak Dev	Engineering College, Ludhiana	
Program	B.Tech.(CE)	ent of Civil Engineering Semester	7
Subject Code	CE-14802	Subject Title	Elements of Earthquake Engineering
Mid Semester Test (MST) No.	2	Course Coordinator(s)	Sukhwinder Singh Tanpreet Singh
Max. Marks	24	Time Duration	1 hour 30 minutes
Date of MST	13/11/2019	Roll Number	

Note: A	ttempt all questions	CO DOT	Manken
Q. No.	Question	COs, RBT level	Marks
01	Define Floor Diaphragm Action?	CO2, L2	2
02	What is Strong Column-Weak Beam Analogy?	CO2, L2	2
Q1 Q2 Q3	Detail and sketch the longitudinal reinforcement and transverse reinforcement of beam section confirming IS13920- 2016.	CO3, L5	4
Q4	Describe the various seismic strengthening arrangements recommended for masonry building as per IS 4326	CO3, L1	4
Q5	Derive the equation of motion for damped-forced vibrations with SDOF system.	CO3, L4	4
Q6	A four storey reinforced concrete frame building as shown in figure is situated in Zone III. Determine the total base shear as per IS 1893: 2016. Distribute the base shear along the height of the building. Thickness of	CO5, L4	8

a) Live load =  $3 \text{ kN/m}^2$ 

slab 150 mm

- b) Thickness of outer walls with plaster = 120 mm
- c) Density of brick masonry = 20 kN/m<sup>3</sup>
- d) Density of concrete = 25 kN/m<sup>3</sup>
- e) Size of column = 450 x 450 mm
- f) Size of Beams =  $250 \times 250 \text{ mm}$
- g) Type of foundation = Isolated footing
- h) Soil Strata under 1.5 m = Medium
- i) Seismic Zone = III
- j) Use Sa/g= 2.5
- k) Type of Frame: OMRF



				g College, Ludhiana				
	below it i		epartment of Civil	Engineering				
rogram M. Tech (CE) Semester 1								
	Code	MEV - 111	Subject Title	Environmental Chemistry and Microbiolog				
	mester Test	2	Course	Er. Balihar Singh				
MST)			Coordinator(s)					
Aax. N		30	Time Duration	1 hour 30 minutes				
CONTROL STATE SHAPE	f MST	15-11-2019						
THE RESERVE AND PERSONS NAMED IN	Attempt all qu	estions			CO's, RBT	Marks		
Q.	Question					17.405		
No.	F 1: DOD	- 1 COD :- 4b-4		oter Discuss the similarities	CO6, L1	5		
Q1	end dissimile	rities in both the t	erms by giving their	ater. Discuss the similarities permissible limits for waste				
	water dischar	ge into environme	ent	permission				
Q2	What is cult	ure mixed cultur	e and media for the	e microorganism. Enlist the	CO4, L2	5		
Q2	various cultu	ral characteristics			CO5, L3	10		
Q3	What are aquatic microorganisms and categories them according to different					10		
	zones. Also	discuss the role	of aquatic microbial	ecosystem with the help of		E STATE		
	hiological tr	ansformations				10		
Q4	Discuss in o	letail various wast	e water treatment pro	ocesses. Also explain the role	A CONTRACTOR OF THE PARTY OF TH	10		
	of microorg	ganism in the pot	able water quality ar	nd waste water treatment by				
	giving an ex	xample.	- ill have the obility	to:				
Cou	irse Outcome	s (CO's): Students	s will have the ability	il dimente aquilibrium	acid base rea	ections an		
1	Understand	the interactions	between air, water,	soil sediments, equilibrium,	acid base rec			
		ater quality param						
2	Solve redo	x reactions and to	understand various he	eavy metals in waste water.				
11/2								
3	The second second			outdoor air pollution.				
4	Identify va	arious microorgani	sm and their importar	nce.				
		and bination	of microorganisms at	nd microbiology of aquatic ec	osystem.	<b>*************************************</b>		
5						1		
6	Know the	role of microorga	nisms in waste water	treatment processes.				

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RBT Classification	Lower Order	Higher Order Thinking Levels (HOTS)				
	11	1.2	L3	L4	L5	L6
RBT Level Number	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
RBT Level Name	Remembering	Understanding	ripplying	1	Charles and the Control of the Contr	

	Gu	ru Nanak Dev Er	ngineering College, Ludhian	na	
		Department	of Civil Engineering		
Program		M.Tech.(CE)	Semester	1	
Subject Code		MRM-101	Subject Title	Research Methodology an IPR	
Mid Sem No.	ester Test (MST)	1	Course Coordinator(s)		
Max. Ma	ax. Marks 30		0 Time Duration	1 hour 30 min	utes
Date of 1	MST	16.9.2019	Roll Number		
Note: At	ttempt all questions				
Q. No.			Ouestion		Marks
Q1	What do you mea	n by research? Ext	plain its significance in mode	rn times?	5
Q2	Explain how to de	evelop a research p	proposal?		5
Q3	blem	10			
Q4	Write short note (a) How to w	on: vrite a technical rep for collecting the d			10

	Gu	ru Nanak Dev Er	ngineering College, Ludhian	na	
		Department	of Civil Engineering		
Program		M.Tech.(CE)	Semester	1	
Subject Code		MRM-101	Subject Title	Research Methodology a	
No.	ester Test (MST)	1	Course Coordinator(s)	Dr. Gurdeepal	Singh Kler,
Max. Marks		30	Time Duration	Navneet Singh 1 hour 30 minutes	
Date of N	MST	16.9.2019	Roll Number	1 Hour 50 min	utes
	tempt all questions				
Q. No.			Question		
Q1	What do you mea	n by research? Ext	plain its significance in mode		Marks
Q2	Explain how to de	evelop a research p	proposal?	rn times?	5
Q3	Write short note of	on :	stoposat;		5
	(c) Scope and	l objectives of Res	earch of solutions for research pro		10
Q4	Write short note	on:	of solutions for research pro	blem	
	(c) How to w	rite a technical report collecting the d	port ata		10

			-imporing College, Ludhia	na	
	Gi	uru Nanak Dev E	ngineering College, Ludhia		
	REPUBLISHED.	Departmen	t Of Civil 13-8	1 1 Ch.	mistry
		M. Tech (CE)	Semester	Environmental Cho	cillisa
Program	a do	MEV - 111 Subject Title		and Microbiology	
Subject C	ode		7: -tow(e)	Prof. Balihar Singh	1
-	rest (MCT)	1	Course Coordinator(s)		
	ester Test (MST)	*		1 hour 30 minutes	
No.		30	Time Duration	1 Hour 2	
Max. Ma		18 September, 20	019		
Date of N	AST	The second secon			Marks
Note: At	tempt all questions		Ouestion		
Q. No.			2		5
	1000	I matale and t	heir harmful effect.		5
Q1				ater.	10
Q2	Give a brief intro	duction to differen	r quality parameters in detail.		10
Q3	Explain physical	and chemical water	r quality parameters in detail.	y which the	10
Q4	(a) Explain indo	or pollution and als	U discuss ( mr -		
	concentration	ochemical smog an	d what are the conditions behi	ind its formation.	
The state of the s	(b) What is phot	ochemical smog an			

Gi	uru Nanak Dev E	ngineering College, Ludhia	na	
		CALL STREET, CALL	1	
	M. Tech (CE)	Hardyleitenbordstall	1	
Code	MEV - 111	Subject Title	Environmental Che and Microbiology	emistry
nester Test (MST)	1	Course Coordinator(s)	Prof. Balihar Singh	
arks	30	Time Duration	1 hour 30 minutes	
MST	18 September, 2	019		
ttempt all questions				
		Question		Marks
Discuss different	heavy metals and	their harmful effect		
Give a brief intro	duction to differen	t microorganisms pragent in		5
Explain physical	and chemical water	r quality parameters is 1 . The	vater.	5
(c) Explain indoo	or pollution and als	diames and diames in detail.		10
COMCUNITATION	EULLAUUH NEIHTINET	acea		10
	nester Test (MST)  arks MST  ttempt all questions  Discuss different Give a brief intro  Explain physical (c) Explain indoconcentration	Department M. Tech (CE)  Code MEV - 111  Dester Test (MST) 1  Discuss different heavy metals and Give a brief introduction to different Explain physical and chemical water (c) Explain indoor pollution and also concentration of radon is influented.	Department of Civil Engineering  M. Tech (CE) Semester Code MEV - 111 Course Coordinator(s)  arks 30 Time Duration MST 18 September, 2019  Itempt all questions  Question  Discuss different heavy metals and their harmful effect. Give a brief introduction to different microorganisms present in v  Explain physical and chemical water quality parameters in detail.  (c) Explain indoor pollution and also discuss various conditions to concentration of radon is influenced.	M. Tech (CE) Semester  Code  MEV - 111  Subject Title  Environmental Che and Microbiology  nester Test (MST)  Course Coordinator(s)  Prof. Balihar Singh  Time Duration  1 hour 30 minutes  MST  18 September, 2019  Itempt all questions  Question  Discuss different heavy metals and their harmful effect.  Give a brief introduction to different microorganisms present in water.  Explain physical and chemical water quality parameters in detail.  (c) Explain indoor pollution and also discuss various conditions by weekind a parameter of the conditions by the condi

	Gui		ngineering College, L			
		Departmen	t of Civil Engineering			
rogram		B.Tech.(CE)	Semester	7		TT
ubject C	Code CE-14804 Subject Title Transportat				ion Engineering - II	
Aid Seme	ester Test (MST)					pinder
No.			Coordinator(s)	Singh		
Max. Ma		24	Time Duration	1 hour 30 m	imutes	
Date of N	IST	Sep 2019	Roll Number			
Note: Att	tempt all questions					20 1
Q. No.		Que	stion		COs, RBT level	Marks
Q1	What do you unde	rstand by negativ	e super elevation?	3, L2	2 2	
Q2	Determine the number of sleepers required for the construction of 2000 2, L5 m of BG track, with a sleeper density of N + 7.					
Q3	What is Ballast?	What is Ballast? What are the different types and enumerate the requirements of Good ballast?				
Q4			2, L2	4		
Q5	What is conning	hat is creep of rails? List the various theories related to creep.  hat is conning of wheel and tilting of rails? Explain the behaviour of a land wheel on curved track.				4
Q6	Calculate the stransition length maximum sanct	super elevation, for a 3.2° curve ioned speed of	maximum permissib on a high-speed BG 101 kmph. Assume to ked speed of the goods	section with a he equilibrium		8
The second second	nts will be able to					
1			way infrastructure plan			
2			component of railway			
3	Apply existing	technology to desi	ign, construction and m	aintenance of ra	ilway track.	
4	Apprehend the engineering.	e advanced inter	national technology b	peing used in	the field o	of railwa
5	Outline the imp	oortance of Airpor	t Infrastructure plannin	g and design.		
6	Evaluate the m	ajor issues and pro	oblems of current intere	est to airport end	incoring	

RBT Classification	Lower Order T	Thinking Levels	(LOTS)	Higher Order Thinking Levels (		
RBT Level Number	L1	L2	L3	L4	1.5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

	Gur	u Nanak Dev E	ngineering College, Lu	dhiana		
		Departmen	t of Civil Engineering			Malle A
ogram		B.Tech.(CE)	Semester	7		
bject Co	ode	CE-14804	Subject Title	Transportat	ion Engineer	ing - II
d Seme	ster Test (MST)	2	Course	Prabhjot Sir	ngh and Push	pinder
			Coordinator(s)	Singh		1000
ax. Mar	rks	24	Time Duration	1 hour 30 m	ninutes	
ite of M	IST	Nov 2019	Roll Number			
ote: Att	empt all questions					
). No.		Que	stion		COs; RBT level	Marks
1	Write short notes of	on TACV track.			4; L2	2
2	How markings are	provided in airpo	orts for landing direction	indication?	5; L4	2
3	Explain the follow (a) Turntable	ring railway statio (b) Triangle	on equipments:		2; L2	4
4	per IRS method). the following databetween the TNC m; crossing angle	Determine the letta. Heel divergent and the tangent $t = 3^{\circ}25'40''$ and $t = 3^{\circ}25'40''$	t BG track with a 1 in 1 and and radius for the trace d = 113 mm; the suppoint of the crossing curs witch angle = 1°8'20".	rn out, given traight length ve, h = 1.325	3; L5	4
5	station along wit	h some suitable sk	als according to their lo		3; L2	4
6	The runway length required for landing at sea level in standard atmospheric conditions is 3200 m. Runway length required for takeoff at sea level in					8
	se Outcomes (CO) ents will be able to					
1	Understand the	importance of rail	way infrastructure plann	ing and docion		
1 2 3	identity the fun	ctions of different	component of railway to	ack		
3	Apply existing	technology to des	ion construction and		ilizare two cl	
4	engineering.	e advanced inter	national technology be	eing used in	the field o	f railwa
5	Outline the im	portance of Airpor	t Infrastructure planning	and decign		
	77	1000000	oblems of current interes	mid design.		

			0.10	ier i ninking	Levels (HOTS)
1	L2	L3	L4	L5	L6
bering	Understanding	Applying	Analyzing	Evaluating	
	bering		100	13 14	15 L4 L5

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

effective disaster management.

	Gur	u Nanak Dev Er	ngineering College, I	udhiana		
		Department	of Civil Engineering	2		
Progran	n	B.Tech.(CE)	Semester	3		
Subject	Code	PCCE-104	Subject Title	Planni	er Preparedne ng	
	MST) No. Course Course Course Singh				Shupinder Singh and Prof. Pushpinder	
Max. M	larks	24	Time Duration	1 hour	30 minutes	
Date of		Sep 2019	Roll Number			
	ttempt all question					
Q. No.	Question				COs, RBT	Marks
Q1	Define (a)	physical	2, L2	2		
Q2	vulnerability.  Briefly explain t	2, L4	2			
	following a disas Discuss the cause	ter.	f a Tsunami		1, L2	4
Q3	How can we cla	types of	1, L1	4		
Q4	2 10					4
Q5	1 1-		Disaster preparedn		2, L4	4
Q6	What are the m Explain in detail	ain elements of	Disaster Managemen	nt cycler	2, L4	8
	e Outcomes (CO)					
Cours	·II ha abla to					
		types of disasters,	their causes, effects &	& mitigati	on measures.	
1	Demonstrate the	understanding of	various phases of dis-	aster mana	agement cycle	and
2	i deronalmorahi	ity and risk mans.				
3	Tr downtond the 1	ice of emergency	management system t	o tackle tr	effective disc	ctor
4			agencies and organiz			
5	Design early wa	gement.	understand the utiliza			
6	Compare differe	ent models for disa aster management	aster management and	plan & d	esign of infra	structure

RBT Classification		Thinking Levels	(LOTS)	Higher Ord (HOTS)	der Thinkinş	g Levels
RBT Level Number	Li	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

### Report

- The meeting was held to scrutinize the quality of question papers for MST. There were 21 B. Tech courses and total of 21 M. Tech courses were offered according to the study scheme, whose question papers were analyzed for semester July-Dec 2019.
- The committee analyzed the difficulty and quality level of question papers. Also, the Course Outcome matching with questions was evaluated that it was suitably placed or not.
- In subject of M. Tech (Structures), the question asked were too lengthy
  according to the time provided as discussed with the Subject Expert and
  Module Coordinator then a mix blend of short and long question was
  made satisfying the time constraint.

Deptt. NBA I/O

CC:

1. HOD for information

2. File Record

CE 20/108/1
Dated 24/01/2020

HOD

With reference to letter no. NBA/104/21 dated 21-02-2018, a department level committee of following members is constituted to scrutinize the quality of MST question papers.

Chairman: Dr H S Rai (Prof. and Head)

Deptt NBA I/C: Dr. Inderpreet Kaur (Convener)

Following faculty members are also a part of committee as Course coordinator, Subject Expert and Module Coordinators for the subjects listed below for session January – June 2020:

#### B.Tech (Civil Engineering)

S. No.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator
	Mathematics-III	4	Prof. Rajbir Kaur	Prof. Rajbir Kaur	Dr. D.S. Pathania
	Concrete Technology	4	Prof. Ajitpal SIngh	Prof. Yuvraj Singh	Dr. Harvinder Singh
3.	Material, Testing & Evaluation	4	Prof. Sukhwinder Singh	Dr. Harvinder Singh	Dr. Harvinder Singh
	Hydrology & Water Resources Engineering	4	Prof. Pritpal Kaur	Prof. Gurpuneet Singh	Dr. Gurdeepak Singh
5.	Transportation Engineering	4	Prof. Pushpinder Singh	Prof. Prabhjot Singh	Dr. Prashant Garg
5.	Environment Science	4	Prof. Gagandeep Kaur Grewal	Prof. Sukhwinder pal Singh	Dr. Puneet Pal Singh Cheema
7.	Foundation Engineering	6	Prof. Heena Malhotra	Prof. Pardeep Singh Joia	Dr. Prashant Garg
8.	Design of Concrete Structures-II	6	Prof. Amandeep Singh	Dr. Inderpreet Kaur	Dr. Harvinder
9.	Infrastructure Development and Management	6	Prof. Manmeet Kaur Panesar	Prof. Yuvraj Singh	Singh Dr. Inderpreet
10.	Numerical Methods in Civil Engineering	6	Dr. Inderpreet Kaur	Dr. Inderpreet Kaur	Dr. Harpal Singh
11.	Reinforced Earth and Geotextiles	6	Dr. Gurdeepak Singh	Dr. Gurdeepak Singh	Dr. Gurdeepak
12.	Professional Practice	6	Prof. Tanpreet Singh	Prof. Bhupinder	Singh Prof. Gurpuneet
13.	Environmental Engineering – II	6	Prof. Balihar Singh	Singh Dr. Puneet Pal	Singh Dr. Puneet Pal
14.	Design of Steel Structures-II	8	Dr. Jagbir Singh	Singh Cheema	Singh Cheema
15.	Transportation Engineering-II	8	Prof. Sahibdeep Singh Setia	Dr. Harpal Singh Prof. Prabhjot	Dr. Harpal Singh
16.	Disaster Management	8	Prof. Manmeet	Singh Prof. Manvinder	Dr. Prashant Gar Dr. Inderpreet
17.	Hydrology and Dams	8	Raur Panesar Prof. Gurpuneet	Ringra Prof. Gurpuneet	Kaur
18.	Traffic Engineering	8	Singh Prof. Pushpinder	Singh Prof. Charnjeet	Dr. Gurdeepak Singh
19.	Pavement Design	8	Singh Dr. Prashant Garg	Singh Prof. Pushpinder	Dr. Prashant Gar
20.	Elements of Earthquake	8	Prof. Tanpreet	Singh Prof. Sukhwinder	Dr. Gurdeepak Singh
21.	Irrigation Engineering-II	8	Singh Prof, Sandeep Kaur	Singh Prof. Pritpal Kaur	Dr. Harvinder Singh

(Tech (Geotechnical Engineering)

S. No.	Subject	anced Foundation Coor		Subject Expert	Module Coordinator
1.	Engineering			Dr. Gurdeepak Singh	Dr. Gurdeepak Singh
2.	Soil Dynamics	2	Prof. Heena Malhotra	Prof. Heena Malhotra	Dr. Prashant Garg
3.	Clay Mineralogy	2	Dr. Gurdeepak Singh	Dr. Gurdeepak Singh	Dr. Gurdeepak Singh
4.	Rock mechanics	2	Prof. Pardeep Singh Joia	Dr. Prashant Garg	Dr. Gurdeepak Singh
5.	Geotechnical Earthquake Engineering	2	Prof. Amandeep Singh	Dr. Gurdeepak Singh	Dr. Prashant Garg
6.	Geosynthetics Engineering	2	Prof. Charnjeet Singh	Prof. Heena Malhotra	Dr. Gurdeepak Singh

M.Tech (Structural Engineering)

o.	Subject	Semester	Course Coordinator	Subject Expert	Module Coordinator	
1.	Theory and applications of cement composites	2	Prof. Navneet Singh	Dr. Harvinder Singh	Dr. Harpal Singh	
2.	Design of Masonry Structures	2	Dr. Harvinder Singh	Dr. Inderpreet Kaur	Dr. Harpal Singh	
3.	Structural Dynamics	2	Dr. Harpal Singh	Dr. Harpal Singh	Dr. Harvinder Singh	
4.	Advanced Solid Mechanics	2	Prof. Sukhwinder Singh	Dr. Jagbir Singh	Dr. Harpal Singh	
5.	Design of High-Rise Structures	2	Prof. Sahibdeep Singh Setia	Dr. Harvinder Singh	Dr. Jagbir Singh	
6.	Pre-stressed Concrete Structures ech (Environmental Science and En	2	Prof. Sukhwinder Singh	Dr. Inderpreet Kaur	Dr. Jagbir Singh	

S. No.	Subject	Semester	Course Coordinator	Subject Expert	Module
1.	Biodegradation and Bioremediation techniques	2	Prof. Sukhwinder pal Singh	Dr. Puneet Pal	Coordinator Dr. Puneet Pal
2.	Urban Storm water Management	2	Dr. Puneet Pal Singh Cheema	Singh Cheema Prof. Sukhwinder	Singh Cheema Dr. Puneet Pal
3.	Air Pollution and Control	2	Prof. Balihar Singh	pal Singh Dr. Puneet Pal	Singh Cheema Dr. Puneet Pal
4.	Biological Treatment Methods	2	Prof. Avneet Kaur	Singh Cheema Dr. A. K. Sodhi	Singh Cheema Dr. Puneet Pal
W. San			Theet Rati	Dr. A. K. Sodhi	Singh Ch

Dr. Inderpreet Kaur Deptt. NBA I/C (Convener)

	Gu	ru Nanak Dev En	gineering College, Ludhia	ma		7	
		Department	of Civil Engineering				
Progran	1	B.Tech.(CE)	Semester	6			
Subject	Code	DECE-14608	Subject Title	Infrasti	ructure Deve	lopment	
Mid Sen No.	nester Test (MST)	1	Course Coordinator(s)		& Management Yuvraj Singh and Manmeet		
Max. M	arks	24		Kaur	Kaur		
Date of		Feb, 2020	Time Duration Roll Number	1 hour	30 minutes		
Note: A	ttempt all questions						
Q. No.	Transquestions	0 "					
Q1	Emmand 1	Questi			COs, RBT level	Marks	
			development in the Indian		CO1, L2	2	
Q2	As per World Ba	nk "Manage infra	astructure like a business,	not a	CO4, L4	2	
Q3	a) if agriculture at	od industry are read	and all the beautiful to the beautiful t	s of the	CO1, L2	4	
	b) Discuss in brief and highway sector	cuss in brief, the current scenario and malinities. Justify.					
Q4	How are adequate	infrastructura fo	CO1, L2	4			
Q5	Illustrate with the	w are adequate infrastructure facilities imperative for the socio- nomic development of a country? Discuss. strate with the help of a flowchart, the flow of resources in asportation infrastructure finance.					
Q6	a) Why is PPP (or	3P) vital for inform		irces in	CO2, L6	4	
	b) Discuss major	PPP modes 1		discuss	CO2, L4	(4+4)	
Course	Outcomes (CO)	maintenance (O&N	1) of road assets.	ment,		133	
1	s will be able to						
	Country	pact of infrastructu	re development on the ecor	anni t			
2	Strategies the poli	cy process for infra	structure development and	nomic de	velopment of	a	
3	Demonstrate the c	t. Onstruction compos	nents of war and	to choos	e the best fin	ancing	
4	Remember the ne	gas, power, telecon	nents of various infrastructi i, railway and irrigation. insights, perspectives and t	are sector	rs like highw	ay, ports	
5	infrastructure mos	- conceptual	misights, perspectives and a	he tools	required 6	.00	
5	Management	and the second Ho	m case studies in Internal				
6	Gather backgroun	d information and	research regarding various life cycle of an infrastructu	mal/Nati	onal project		
	discurrent the diff	Drawe of an artist	Various Various	in favor			

Classification RBT Level	o del	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)			
Number	L	1.2	1.3	14				
RBT Level Name	Remembering	Understanding	Anul		L5 L6  Evaluating Creating			
			repplying	Analyzing	Evaluating	Creating		

		Depart	ev Engineering Coll- ment of Civil Engine	eering		
Prog	ram	B.Tech.(CE)	Semester	6th		
	ect Code	DECE 14605	Subject Title		1 1 00	
	Contract of the second	412 1	Subject Tide	Numerical Method	is in Civil	
Mid	Semester Test (MST)	1	Course	Engineerring		
No.				Inderpreet Kaur		
	. Marks	24	Coordinator(s)			
	of MST	20/02/2020	Time Duration	1 hour 30 minutes		
		20/02/2020	Roll Number			THE STATE OF
Note	: Attempt all questions,	Make suitable	assumptions whereve	r necessary		
200		Qı	uestion	necessary,	60	
No.					COs,	Mark
Q1	Evaluate √12 to four of	r decimal places by Newton-Raphson method.			RBT level	
Q2	What are different	pes of errors common in numerical methods?			CO2, L5	2
	what are different typ	es of errors cor	nmon in numerical m	ethods?	CO1, L1	
Q3	The normal depth for	flow (d) in a			COI, LI	2
	volumetric flow rate of	of the fluid (C)	ectangular open char	inel is related to the	CO2, L3	4
	volumetric flow rate o	r the Huld (Q)	by the following equa	tion:	and L5	
	$d\left[\left(\frac{Wd}{W+2d}\right)^{\frac{2}{3}}\right] = \frac{fQ}{W\sqrt{s}}$	and bo				
	$\lfloor \lfloor W+2d \rfloor \rfloor W\sqrt{s}$					
	where s is the slope o coefficient. For W=10					
	coefficient. For W=10					
	coefficient. For W=10 flow by iterative meth	and Q- 10 m's	$1=0.01$ and $s=1 \times 1$	0 <sup>-3</sup> , find the depth of		
Q4	A simply supported	boom ' '				
	A simply supported functions, the shear al	CO2 12				
	functions, the shear all $V(x) = 20[(x-0)^{1} - ($	CO2, L3	4			
	$V(x) = 20[(x-0)^{1} - ($	and L4				
	by definition, the sing					
	$  x-a ^n  =  x-a ^n wh$					
	The same of the sa					
	Owhen	v <a< td=""><td></td><td></td><td></td><td></td></a<>				
	$  x-a ^n  = \left(  x-a ^n wh \right)$ Use a numerical moth	$X \le a$				
	Use a numerical meth	nod to find the p	ooint(s) where the she	ar equals zero		
	Use a numerical meth	$x \le a$ and to find the p	point(s) where the she	ar equals zero.		
	Use a numerical meth	nod to find the p	point(s) where the she	ar equals zero.		
	Use a numerical meth	nod to find the p		ar equals zero.		
	Use a numerical meth	nod to find the p	150 kinstr			
	Use a numerical meth	nod to find the p	150 kinstr	ar equals zero.		
	Use a numerical meth	nod to find the p	150 kinstr			
	Use a numerical meth	nod to find the p	150 kinstr			
	Use a numerical meth	nod to find the p	150 kip-ft 15			
Q5	Use a numerical meth	nod to find the p	150 kip-ft 15 15 15 15 15 15 17 17 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19			
Q5	Use a numerical meth	nod to find the p	150 kip-ft 15	kips		
Q5	Use a numerical meth	e matrix 2 1	150 kip-ft 15 150 kip-ft 150 k	kips	CO3, L5	4
	Find the inverse of the	e matrix 2 1	Fig. 1  by Gauss-Jordan	method	CO3, L5	4
	Find the inverse of the	e matrix 2 1	Fig. 1  by Gauss-Jordan	method	CO3, L5	4
	Find the inverse of the	e matrix 2 1 2 1 the following	Fig. 1  2' 1' 1' 1' 15  Fig. 1  2 air of simultaneous n	method		
Q5 Q6	Find the inverse of the Determine the root of	e matrix 2 1 2 2 1 2 the following	Fig. 1  2' + 1' + 1'  Fig. 1  2 air of simultaneous n  + y <sup>2</sup> = 15	method	CO3, L5	4 8
Q6	Find the inverse of the Determine the root of	e matrix 2 1 2 2 1 2 the following	Fig. 1  2' + 1' + 1'  Fig. 1  2 air of simultaneous n  + y <sup>2</sup> = 15	method		
Q6 Cou	Find the inverse of the Determine the root of Close approximations	e matrix 2 1 2 2 1 2 the following	Fig. 1  2' + 1' + 1'  Fig. 1  2 air of simultaneous n  + y <sup>2</sup> = 15	method		
Q6 Cour Studi	Find the inverse of the Determine the root of Close approximations rise Outcomes (CO)	e matrix 2 1 2 2 1 2 the following 1 xy x³ + 8 to the start wit	Fig. 1  2  150 kip-ft  15  15  15  15  15  15  15  15  15  1	method.	CO3, L.5	8
Q6 Cou	Find the inverse of the Determine the root of Close approximations rise Outcomes (CO)	e matrix 2 1 2 2 1 2 the following 1 xy x³ + 8 to the start wit	Fig. 1  2  150 kip-ft  15  15  15  15  15  15  15  15  15  1	method.	CO3, L.5	8
Q6 Cour Studi	Find the inverse of the Determine the root of Close approximations reconstructions will be able to Demonstrate the connumerical method.	e matrix 2 1 2 2 1 2 2 1 2 the following 1 xy x <sup>3</sup> + 3 to the start with cept of approximately appro	Fig. 1  2  1  by Gauss-Jordan  2  1  by Gauss-Jordan  2  1  by 4 3 = 0  h are given as (1,4).	method.	CO3, L5	8
Q6 Cour Studi	Find the inverse of the Determine the root of Close approximations reconstructions will be able to Demonstrate the connumerical method.	e matrix 2 1 2 2 1 2 2 1 2 the following 1 xy x <sup>3</sup> + 3 to the start with cept of approximately appro	Fig. 1  2  1  by Gauss-Jordan  2  1  by Gauss-Jordan  2  1  by 4 3 = 0  h are given as (1,4).	method.	CO3, L5	8
Q6 Cour Studi	Find the inverse of the Determine the root of Close approximations reconstructions will be able to Demonstrate the connumerical method.	e matrix 2 1 2 2 1 2 2 1 2 the following 1 xy x <sup>3</sup> + 3 to the start with cept of approximately appro	Fig. 1  2  1  by Gauss-Jordan  2  1  by Gauss-Jordan  2  1  by 4 3 = 0  h are given as (1,4).	method.	CO3, L5	8
Q6 Com Studi 1	Find the inverse of the Determine the root of Close approximations recommended to Demonstrate the communerical methods. Select an appropriate numerical methods.	e matrix 2 1 2 2 1 2 2 1 2 the following part of approximately solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution to an expension of the start with the solution of the start with the start with the solution of the start with the start with the solution of the start with the start w	Fig. 1  2' + 1' + 1'  Fig. 1  2 air of simultaneous n  + y² = 15  y + 3 = 0  h are given as (1,4).	method.  ion linear equations.	CO3, L5	8 ment o
Q6 Cour Studi	Find the inverse of the Determine the root of Close approximations recommendate the communical methods. Select an appropriate numerical methods. Execute the columnia.	e matrix 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 1 2 2 2 2 3 4 3 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	Fig. 1  2  2	method.  In the implementation dealing with the roots	CO3, L5	8 Oment of
Q6 Com Studi 1	Find the inverse of the Determine the root of Close approximations recommended to Demonstrate the communerical methods. Select an appropriate numerical methods.	e matrix 2 1 2 2 1 2 2 1 2 the following pay x3 + 3 to the start with solution to an emissing of problem	Fig. 1  2  2	method.  In the implementation dealing with the roots	CO3, L.5	8 Oment of

	Gu		ngineering College, Li t of Civil Engineering				
Program		B.Tech.(CE)	Semester	4 <sup>th</sup>			
Subject (		PCCE-108	Subject Title		on Engineeri	ng	
-	emester Test (MST) 1 Course			igh, Savleen			
Max. Ma	rks	24	Time Duration	1 hour 30 m			
Date of I	MST	18-02-20	Roll Number				
Note: At	tempt all questions						
Q. No. Question				COs, RBT level	Marks		
Q1	Enlist the classification of urban and metallic roads.					2	
Q2	What are the merits and demerits of Rail and Road transportation?				1, L2	2	
Q3	Explain the factors considered in determining the priority of elevated and underground corridors.					4	
Q4	What is WBM. D	What is WBM. Discuss the construction steps of WBM.				4	
Q5	Discuss the prob	lems related to t	he design and constru			4	
Q6	The area of a cer	tain district in Inc	dia is 15,600 sq. Km a ine the lengths of diffe istrict by the year 200	erent categories		8	
Course	Outcomes (CO)				- taking the r	and	
1	- I was a second and a second a		erent modes of transpor				
2	Alignment and g	geometry of paver	nent as per Indian Stan	uards according	5 to topograp		
3	The state of the s	which of highratou	materials ill laboratory			Man	
4	Understand the i	importance of rail	way infrastructure plan	track.			
5	Identify the fund	ctions of different	component of railway			I was	
6	Outline the imp	ortance of Airpor	I IIII dali detare.			PUSSES	

RBT	Lower Order T	Thinking Levels	(LOTS)	Higher Ord	ler Thinking	Levels (HOTS)
Classification		L2	L3	L4	L5	L6
RBT Level	L1	L2	Lo			
Number		Thedesetonding	Applying	Analyzing	Evaluating	Creating
RBT Level	Remembering	Understanding	116608			

was-		Departmer	nt of Civil Engineer	ing		
rogra		B.Tech.(CE)	Semester	8 <sup>th</sup>		
Subject Code		DECE-14810	Subject Title	Traffic Engineering		
Mid Semester Test (MST) No.		1	Course Coordinator(s)	Charnjeet Singh Pushpinder Singh		
	Marks	24	Time Duration 1 hour 30 minutes			
	of MST	18-02-2020	Roll Number			
	Attempt all questions					
). Vo.	Question				COs, RBT level	Marks
21	Define PCU. Why is it				1, L2	2
Q2	A vehicle moving of 5 length of skid mark w is known to be 0.65, d	as 14.4 m. If the a	average skid resistan	ce of the pavement	2, L5	2
Q3	Discuss in detail PIEV				1, L2	4
Q4	Dicuss the following  (a) Parking turno  (b) Space mean s  (c) 85 <sup>th</sup> percentile  (d) Level of servi	ver peed e speed			2, L2	4
QE	A vehicle of 250 stationary vehicle distance of 15 m.	ng resistance = (engine and putti d. Assume mass istance = 0.38 kg/n 0 kg skids a dist of 1800 kg weig Assuming coeffice	ng the gear at ne = 1360 kg, fronta	utral. Calculate the area = 2.15 m <sup>2</sup> , ore colliding with a both vehicle skid a	2, L5	4
	speed of the vehicle  (a) Explain in detail  Macroscopic mode  (b) The speed-den  flow is v = 75 -  capacity of road in	e. If the Speed-Flow- I. (6) Issity relationship (6) I. (75k where v is veh/hr. (2) I. (2) I. (2) I. (3) I. (4) I. (5) I. (6) I. (7) I. (8) I. (8) I. (9) I. (10) I. (	Density Relationship on a single lane roa in kmph and k in v OR traffic flow diagra	as per Greenshield' d with unidirectiona reh/km. Calculate th	2, L5	8
	conditions on road Course Outcomes (CO) Students will be able to	)	ed to road user, vehic	le, and traffic stream		
-	2 Conduct the vario	ous traffic studies t	o collect the data related to traffic regul pre-timed and traffic road safety audit.	ation and control.		
	4 Design the traffic	Signal ulling for				
		r Order Thinking		Higher Order Thir	nking Levels	(HOTS)

Guru Nanak Dev Engineering College, Ludhiana Department of Civil Engineering

RBT	Lower Order Thinking Levels (LOTS)			Higher Orde	her Order Thinking Levels (HOT	
Classification	Lower Order	L2	L3	L4	L5	L6
RBT Level Number	L1		Applying	Analyzing	Evaluating	Creating
The second secon	Remembering	Understanding	Applying	Timey		

### Report

- The meeting was held to scrutinize the quality of question papers for MST. There were 36 total B. Tech courses were offered according to the study scheme, whose question papers were analyzed for semester Jan-June 2020.
- 2. The convener had analyzed the question papers with the help of Module Coordinator and Subject Expert. Also, evaluated the difficulty level of the question paper whether it was too easy or too difficult. All the papers were a mixed blend of LOTS and HOTS.
- 3. All the papers provided were up to the mark and formatting were also correct. No modification was required in any of the subjects.

Deptt. NBA I/O

CC:

**HOD** for information

### **Department of Computer Science and Engineering**

# Guru Nanak Dev Engineering College, Ludhiana Department of CSE

Ref No.: <u>CSE/9</u>625

Date: 7-11-19

The Duty Chart for the 2<sup>nd</sup> Sessional test is enclosed herewith. Following instructions should be followed by all faculty members regarding the sessionals:

- The subject teachers should prepare the common sessional paper of the subject for all the sections of a class in the prescribed format.
- The question papers should be submitted to Er. Mandeep Kaur or Er. Kamaldeep Kaur by 08.11.2019.
- Faculty members on invigilation duty should follow the sitting plan of the students strictly.
- The person on external duty should collect the question papers, Sitting Plans and Attendance Sheets from Er. Mandeep Kaur or Er. Kamaldeep Kaur.
- It is the responsibility of the external to collect the answer sheets and hand it over
  to the concerned subject teacher(s) and submit the signed memos to the sessional
  coordinators on same day of the examination.
- The attendance sheets should be signed by the Internal and External examiner on duty.
- It is the duty of the teacher to provide replacement in case they are unable to give
- · duty due to some reasons.

### Paper Format:

B.Tech.

Paper duration: 1.5 hrs

Max. Marks: 24

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
01	2	LOTS
02	2	HOTS
03	4	LOTS
04	4	LOTS
05	4	HOTS
06	8	HOTS

### M.Tech.

Paper duration: 1.5 hrs

Max. Marks: 30

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
01	5	LOTS
O2	5	HOTS
O3	10	LOTS
04	10	HOTS

D

HOD (CSE)

### Distribution:-

- 1. Circulate to all staff members (CSE).
- 2. Office Copy



## Guru Nanak Dev Engineering College, Ludhiana Department of CSE

Ref No.: <u>CSE</u> 1533

Date: 12-2-19

The Duty Chart for the 1<sup>st</sup> Sessional test is enclosed herewith. Following instructions should be followed by all faculty members regarding the sessionals:

- The subject teachers should prepare the common sessional paper of the subject for all the sections of a class in the prescribed format.
- The question papers should be submitted to Er. Mandeep Kaur or Er. Kamaldeep Kaur by 15.02.2019.
- Faculty members on invigilation duty should follow the sitting plan of the students strictly.
- The person on external duty should collect the question papers, Sitting Plans and Attendance Sheets from Er. Mandeep Kaur or Er. Kamaldeep Kaur.
- It is the responsibility of the external to collect the answer sheets and hand it over
  to the concerned subject teacher(s) and submit the signed memos to the sessional
  coordinators on same day of the examination.
- The attendance sheets should be signed by the Internal and External examiner on duty.
- It is the duty of the teacher to provide replacement in case they are unable to give duty due to some reasons.

### Paper Format:

#### B. Tech.

Paper duration: 1.5 hrs

Max. Marks: 24

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
Q1	2	LOTS
Q2	2	HOTS
Q3	4	LOTS
Q4	4	LOTS
Q5	4	HOTS
Q6	8	HOTS

M.Tech.

Paper duration: 1.5 hrs

Max. Marks: 30

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
		LOTS
Q1	5	HOTS
Q2	10	LOTS
Q3	10	HOTS
04	10	HOTS

HOD (CSE)

### Distribution:-

1. Circulate to all staff members (CSE).

2. Office Copy

### Guru Nanak Dev Engineering College, Ludhiana Department of CSE

Ref No.: CSE/126

Date: 13-2-2020

The Duty Chart for the 1<sup>st</sup> Sessional test is enclosed herewith. Following instructions should be followed by all faculty members regarding the sessionals:

The subject teachers should prepare the common sessional paper of the subject for all the sections of a class in the prescribed format.

• The question papers should be submitted to Er. Mandeep Kaur or Er.Preeti Aggarwal by 14.02.2020

• Faculty members on invigilation duty should follow the sitting plan of the students strictly.

 The person on external duty should collect the question papers, Sitting Plans and Attendance Sheets from Er. Mandeep Kaur or Er.Preeti Aggarwal.

• It is the responsibility of the external to collect the answer sheets and hand it over to the concerned subject teacher(s) and submit the signed memos to the sessional coordinators on same day of the examination.

 The attendance sheets should be signed by the Internal and External examiner on duty.

• It is the duty of the teacher to provide replacement in case they are unable to give duty due to some reasons.

### Paper Format:

### B.Tech.

Paper duration: 1.5 hrs

Max. Marks: 24

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
Q1	2	LOTS
Q2	2	HOTS
Q3	4	LOTS
Q4	4	LOTS
Q5	4	HOTS
Q6	8	HOTS

M.Tech.

Paper duration: 1.5 hrs

Max. Marks: 30

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
01	5	LOTS
02	5	HOTS
03	10	LOTS
04	10	HOTS



HOD (CSE)

### Distribution:-

- 1. Circulate to all staff members (CSE).
- 2. Office Copy

## Guru Nanak Dev Engineering College, Ludhiana Department of Computer Science and Engineering

Dute: 13-2-2020

Ref. - CSE/189

Following is the committee constituted to scrutinize the quality of MST question papers. The MST question paper has to be scrutinized by the committee before using them for the test.

Chairman: Dr. Parminder Singh HOD (CSE)

Convener: UG (Dr. Vivek Thapar), PG (Dr. Sumeet Kaur Sehra)

Subject	Course Coordinator	Subject Expert	Module Coordinator
PCCS-103 Discrete Mathematics	Manpreet Kaur Mand, Prabhjot Kaur	Shailja Sharma	Manjot Kaur Gill
PCCS-104 Computer Architecture and Microprocessor	Preeti Aggarwal, Amit Jain, Gurjiwan Singh	Kapil Sharma	Sumeet Kaur Sehra
PCCS-105 Operating Systems	Amanpreet Singh Brar, Jaswant Singh	Supreet Kaur	Vivek Thapar
PCCS-106 Data Structures	Shailja Shrama, Supreet Kaur, Mandeep Kaur Khalsa	Gurjit Kaur	Manjot Kaur Gill
PCCS-107 Software Engineering	Priyanka Arora, Daljit Singh, Inderjit Singh	Sumeet Kaur Sehra	Sumeet Kaur Sehra
MCCS-101 Environmental Sciences	Palak Rehan, Kapil Sharma, Harkomalpreet Kaur	Mandeep Kaur	Sumeet Kaur Sehra
CS-14601 Theory of Computation	Parminder Singh, Kuljit Kaur	Manjot Kaur Gill	Manjot Kaur Gill
CS-14602 Advanced Database Systems	Gurjit Kaur, Mandeep Kaur	Amanpreet Singh Brar	Amanpreet Singh Brar
CS-14603 Software Engineering	Manjot Kaur Gill. Vivek Thapar, Jasdeep Kaur	Gurjit Kaur	Sumeet Kaur Sehra

Also

	Preeti Aggarwal, Jaswant Singh,	Goldendeep Kaur	Vivek Thapar
echnologies	Gurjiwan Singh		
DECS-14606 Artificial I	Supreet Kaur. Jasmine Kaur. Palak Rehan	Diana Nagpal	Manjot Kaur Gill
CS-14701 Advanced Computer Networks	Amandeep Kaur Sohal, Kapil Sharma	Jasbir Singh Saini	Amandeep Kaur Sohal
CS-14702 Compiler Design	Diana Nagpal, Harkomalpreet Kaur	Manjot Kaur Gill	Sumeet Kaur Sehra
CS-14703 Cyber Laws and IPR	Jasbir Singh Saini	Supreet Kaur	Gurjit Kaur
DECS-14706 Cloud Computing	Vivek Thapar	Inderjit Singh	Manjot Kaur Gill
DECS-14707 Big Data and Business Analytics	Hardeep Singh Kang	Vivek Thapar	Amanpreet Singh Brar
DECS-14709 Natural Language Processing	Goldendeep Kaur	Parminder Singh	Manjot Kaur Gill
DECS-14713 Soft Computing	Sumeet Kaur Sehra	Gurjit Kaur	Sumeet Kaur Sehra
MCS-103 Advance Algorithms	Manjot Kaur Gill	Shailja Sharma	Manjot Kaur Gill
MCS-104 Soft Computing	Sumeet Kaur Sehra	Kuljit Kaur	Sumeet Kaur Sehra
MCS-131 Cryptography	Amandeep Kaur Sohal	Daljit Singh	Amandeep Kaur Sohal
MCS-143 Natural Language Processing	Parminder Singh	Manjot Kaur Gill	Manjot Kaur Gill

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		Guru Nanak Dev Fno	gineering College, Ludhia	ana		
			iter Science and Enginee			
Pros	gram	B.Tech.(CSE)	Semester Seighter	7 <sup>th</sup>		
	ject Code	CS-14701	Subject Title	Advanc	e Computer N	etworks
Mid Semester Test (MST) No.  Course Coordinator(s)  Amandeep Kaur Priti Aggarwal				eep Kaur Soha		
Max	. Marks	24	Time Duration	1 hour 3	30 minutes	
Date	e of MST	16 <sup>th</sup> September 2019	Roll Number			
Not	e: Attempt all Q	Questions		•		
Q. N	0.	Questio	n		COs, RBT level	Marks
Q1	Compare S	traight through cable and Cros	ssover cable with diagram.	•	CO1,L2	2
Q2	2 Analyze th	e role of redirection message i	in ICMPV4.		CO2,L4	2
Q3	3 Illustrate th	ne working of DHCP including	g the message format.		CO3,L2	4
Q <sup>2</sup>	Q4 How ARP works in different cases. Compare it with RARP.					4
Q.	Explain the	CO1,L5	4			
Qe	,	cuss the three way handshakir		•	CO2,L6	5
	the the data	opose in a datagram, the M bit value of total length is 200 are number of the first byte and agram? Is this the last fragment grant?	nd the offset value is 200. If number of the last byte	What is in this	CO3,L6	3
	irse Outcomes lents will be abl					
1		wledge of various modes of co medium using various technol		blems of	f data commu	nication
2	Understand an	d utilize various communicatory of a stream of octets.		e reliable	e, ordered, ar	nd error-
3		nplement various algorithms raphical areas and evaluate the		ommunic	cation proble	ms over
4	of networks.	rent routing protocols and pro	_			
5		plementation of routing and tr w of data over different netwo		advance	d multi hop r	etworks
6	Utilize knowle networking der	edge of modern mobile Adhomands.	oc network techniques to	propose	solutions for	mobile

RBT Classification	Lower Order Th	inking Levels (LOT	Γ <b>S</b> )	Higher Order Thinking Levels (HOTS)			
RBT Level Number	L1	L2	L3	L4	L5	L6	
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	

	n	epartment of Con	ngincering College, Ludhian puter Science & Engincerin	σ		
Progra		B.Tech.(CSE)	Semester	5		
Subject		BTCS-14502	Subject Title	Computer Graphics		
	mester Test (MST) No.	2	Course Coordinator(s)	Dr. Parminder Singh, Ms. Manpreet Kaur Mand, Ms. Mandeep Kaur Khalsa		
Max. M	arks	24	Time Duration		30 minutes	
Date of		17 <sup>th</sup> Sep, 2019	Roll Number		72.1	
Note: A	ttempt all questions					
Q. No.	Question				COs, RBT level	Marks
Qİ	Find the refresh rate pixel is 200ns.	of 512*512 fram	e buffer, if its access time t	or each	L1,CO1, CO5	2
Q2	Justify the use of data glove and digitizer in computer graphics L5,CO5 applications.					
Q3		Compare Raster Scan and Random Scan devices.				
Q4	Explain basic 2D transformations with suitable examples. Classify them L2,CO3 as rigid and non rigid body transformation also.					4
Q5	Determine the coordinates of the pixels that lie on line segment having endpoints (20,10) and (30,18) using Bresenham's line drawing algorithm.					4
26	Discuss in detail Mid	d-Point circle dra	wing algorithm. Predict than and radius 6 by using this r	e circle nethod.	L6,CO2	8
ourse (	Outcomes (CO)	,			IV.	
	will be able to		, st			
	computer graphics.		dations and programming to			
	Compare and contrast v	arious computer g	raphic algorithms and their s	uitability	to real world	problems
	Design and develop mo	dels for transform	ation of 2D and 3D objects.			
	formations of geometric	cal objects.	to apply advance algorithm			anging t
	Apply mathematics and	physics in the des	ign and development of grap	hics appl	ications.	
	Discuss the application information visualization	n of computer g	raphics concepts in the de	velopme	nt of compu	ter game

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

# **Department of Electrical Engineering**

		Department of 1	Electrical Engineering			
Program		M.Tech.(Power)	Semester	4		
Subject (	Code		Subject Title			
Mid Sem	ester Test (MST)	1	Course Coordinator(s)			
No.						
Max. Ma	rks	30	Time Duration	1 hou	30 minutes	
Date of M	<b>AST</b>		Roll Number			
Note: Att	empt all questions					
Q. No.		Questio	on		COs, RBT level	Marks
Q1	The level of this que Taxonomy-RBT)	estion must be from	LOTS (as per Revised Blo	oms	CO1, L2	5
Q2	The level of this que Taxonomy-RBT)	estion must be from	HOTS (as per Revised Blo	ooms	CO3, L5	5
Q3	The level of this que Taxonomy-RBT)	estion must be from	LOTS (as per Revised Blo	ooms	CO4, L3	10
Q4	· ·	estion must be from	HOTS (as per Revised Blo	ooms	CO4, L6	10
Course C	Outcomes (CO)				•	
	will be able to					
1						
2						
3						
4						
5						
6						

Guru Nanak Dev Engineering College, Ludhiana

RBT	Lower Order T	Thinking Levels	(LOTS)	<b>Higher Order Thinking Levels (HOTS)</b>			
Classification							
RBT Level	L1	L2	L3	L4 L5 L6			
Number							
RBT Level	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	
Name	_						

Department of Electrical Technology								
Program		B.Tech.	Semester	4				
Subject (	Code		Subject Title					
Mid Sem	ester Test (MST)	1	Course Coordinator(s)					
No.								
Max. Ma	rks	24	Time Duration	1 hou	r 30 minutes			
Date of N	<b>IST</b>		Roll Number					
Note: Att	empt all questions							
Q. No.		Questio	on		COs, RBT level	Marks		
Q1	The level of this que	stion must be from	LOTS (as per Revised Blo	oms	CO2, L2	2		
	Taxonomy-RBT)							
Q2	The level of this que	stion must be from	HOTS (as per Revised Blo	ooms	CO2, L5	2		
	Taxonomy-RBT)							
Q3	The level of this que	CO2, L3	4					
	Taxonomy-RBT)							
Q4		stion must be from	LOTS (as per Revised Blo	oms	CO4, L2	4		
	Taxonomy-RBT)							
Q5	-	stion must be from	HOTS (as per Revised Blo	ooms	CO2, L6	4		
	Taxonomy-RBT)							
Q6	-	stion must be from	HOTS (as per Revised Blo	ooms	CO4, L6	8		
~ .	Taxonomy-RBT)							
	Outcomes (CO)							
Students	will be able to							
1								
2								
3								
4								
5								
6								

Guru Nanak Dev Engineering College, Ludhiana

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

# Department Of Electrical Engineering Guru Nanak Dev Engineering College

The following members are required to review the question papers of MST- I is per Blooms
Power Electronics Lab, 12 noon, 15/2/2019. The discrepancies in the papers
may be informed to the concerned teachers by 2 p.m, 15/2/2019.

- 1. Pf. Kuldeep Singh
- 2. Pf Harleen Kaur
- 3. Pf. Gagandeep kaur

Exam Coordinator

HOD

# GURU NANAK DEV ENGINEERING COLLEGE

# DEPARTMENT OF ELECTRICAL ENGINEERING

14. M. EG[1037

#### NOTICE

Date: 12/09

The committee consisting of

1. Pf. Shivani Abrol (Exam Coordinator)

2. Pf. Amrinder Kaur (Member, Academic Committee)

3. Pf. Kuldeep Kooner (O I/c, MSE conduct committee)

4. Pf. Gagandeep Kaur Gill (Member, MSE conduct committee)

constituted for the screening of MSE question papers and the below mentioned points will be

- Blooms testimony rules
- b. Checking of RBT levels
- Checking of LOT & HOT sequencing of questions
- d. Checking of numerical content wherever required

In thembers are required to be present in Computational Lab, PG, (Microprocessors Lab) at 11:00 a.m.

If healty members are requested to collect their question papers back from the sessional incharges by the corrections made and then take out the final prints of the papers.

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Eligitate to faculty
Principal for kind information
That Academies for kind information

h.o.b/m



# GURU NANAK DEV ENGINEERING COLLEGE, GILL ROAD, LUDHIANA (PUNJAB)

(An Autonomous College U/S [2(f) AND 12(B)] of UGC Act 1956) AICTE Approved, Punjab Govt. Aided Status .Affiliated to I.K.Gujral Punjab Technical University, Jalandhar, ISO: 9001:2008 Certified

No.M.Tech/01/ 36/3

DATED: 10.09.2019

NOTICE

All HODS

Sub: Regarding conduct of 1st Mid Semester Examinations of Open Elective subjects.

It is hereby informed that the 1stMid Semester Examination of Open Elective subjects for P.G. courses is scheduled as given below:-

Sr. No.	Program		Date		1
					1.3
1	PG (M.Tech	Course)	17.09.	.2019 ( 1	Morning)

Please note that 1st Mid Semester Examination of open elective subjects will be conducted by the respective department which has offered the subject according to its time slot.

The Department HODs are requested to prepare the date sheet and seating plan of above said MST by taking into consideration the above said dates.

Distribution:-

1. Principal (for information please)

2. All HODs

3. Student Section

4. RK/Office Copy

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# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

# ELECTRICAL ENGINEERING DEPARTMENT

: [ [ ] 70

Dated: /0/02/22

### NOTICE

IST-1 for January-May, 2020 session will be held from 17.02.2020, so all the faculty pers taking classes in EED are requested to submit the MST-1 question papers for their cts along with solutions in sealed envelopes latest by 12.02.2020 up to 2.00 PM (sharp). Kuldeep Singh or Pf. Gagandeep Kaur Gill in their respective office.

HOD (EE)

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# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

# ELECTRICAL ENGINEERING DEPARTMENT

Ref. No. & \$ / 221

Dated: 10/02/22

### NOTICE.

The following committee is constituted for the screening of MSE-1 (Session Jan-May, 2020) question papers:

- 1. Pf. Khusdeep Singh
- 2. Pf. Harmeet Singh Gill (Dy. Controller Evaluation)
- 3. Pf. Shivani Abrol
- 4. Pf. Kuldeep Singh (Exam Coordinator & OI/c. MSE conduct committee)
- 5. Pf. Gagandeep Kaur Gill (Member, MSE conduct committee)
- 6. Pf. Amrinder Kaur (Member, Academic Committee)

The below mentioned points will be scrutinized.

- a. Blooms Taxonomy Rules
- b. Checking of RBT levels
- c. Checking of LOT & HOD sequencing of questions
- d. Checking of numerical content (wherever required)

The members are required to be present in Electrical Machine Lab at 3.00p.m. on 13th Feb'2020 for the

Il faculty members are requested to collect their question papers back from the MSE incharges and mend the corrections made and then take out the final prints of the papers.

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# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

# ELECTRICAL ENGINEERING DEPARTMENT

NO. EE/235

Dated: 13 | 02 | 2020

### NOTICE

will be a meeting of all the faculty members at 9.00AM in Computational Lab. MST Attendance and MST Question Paper Screening. Please make it convenient allered the same.

		Guru Nanak De	Cynformation Act		Cor	ntrol Syst	eme
		Department	engineering of Information Tech Semester Ittle			vaniAbro	
-		B.Tech.(EE)	Semester Subject Title Course Coording	ator(s)	J.	vann tore	
Prog	ram	EE-14402	Course Coordin		1 ho	our 30 m	inutes
Subje	ect Code	2	n.ration			0 00	mates
Mid S	ect Code Semester Test (MST)		Time Duration Roll Number	0.0			
No		24	Roll Number			CO-	
	Marks of MST					COs	Mark
Date (	Attempt all questions	0	uestion			CO4,(L2)	2
						LI	_
Q. No.	).	2	Plots				
Q1	Define the following	Gain Margin for Po	iterion	1 1 1 1 N 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		CO6,(L1)	1 1-2
0.0400		Myounst Stating	neries			CO4(Lb)	Conta
	Last note on	Lead Compensator			1	00.00	L34
Q2	Write short in	us for unity feedback sys	stem			CO4/L6	-
Q3	Sketch the root lock	us for unity feedback sys $G(s) = \frac{1}{3} \left( \frac{1}{3} \right) \left( \frac{1}{3} \right)$	<u>s+3)</u>	and the first the		004,00	4
	Construct C	OF				U	
Q4	Draw Nyquist Plot fo	For $G(s)H(s) = \frac{2500}{(5+3)}$				00460	
	find con	Margin and Phase Marg	in.	plot of a system conta	ining	CO6/L3	4
	and determine Gain	eximation of the log ma	gnitude vs frequency	plot of a system conta		الما	
25	The asymptotic appro-	eros is shown. Obtain Its	s transfer fulletion		-		100
	only real poles and 2	eros is silovinat				1.00	100
		-40 dB I dec	Seminar in	60 dB l dec			
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	0.1	2 5	American Part of the Control of the Control of the	The state of the state of		COS/IA	1 8
	E Dan oles Total de la completa de la companya de l	e transfer function gives	n below and from the	e plot find gain crosso	over	COS, LA	1 8
	E Dan oles Total de la completa de la companya de l	e transfer function given	n below and from the	e plot find gain crosso	over	COS, L	8
	E Dan oles Total de la completa de la companya de l	sover frequency, gain m	n below and from the	e plot find gain crosso	over	COS/LA	8
	E Dan oles Total de la completa de la companya de l	sover frequency, gain m	n below and from the	The state of the state of	over	COS,LA	8
i	Draw bode plot for the frequency, phase cross	e transfer function gives sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$	n below and from the	e plot find gain crosso	over	COS, L	8
urse Ou	Draw bode plot for the frequency, phase cross utcomes (CO)	sover frequency, gain m	n below and from the	e plot find gain crosso	over	COS	8
ırse Ot	Draw bode plot for the frequency, phase cross	sover frequency, gain m	n below and from the	e plot find gain crosso	over	COS,LA	8
urse Ou	Draw bode plot for the frequency, phase cross utcomes (CO) will be able to	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$	n below and from the nargin and phase ma	e plot find gain crosso	over	COS, L	8
irse Oi	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Sy	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Fundamental statements of the second statement of the	n below and from the nargin and phase man ols) Cl+o·ls).	e plot find gain crosso rgin. Determent		L.	8
urse Ou	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Sy	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Fundamental series.	n below and from the nargin and phase man ols) Cl+o·ls).	e plot find gain crosso rgin. Determent		L.	8
urse Oulents will A	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematics and Evaluate the Transfer I	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using	n below and from the nargin and phase mand to ls) Cl+o·ls).  nction Models.  Block Diagram Recommendation	e plot find gain crosso		L.	8
urse Oulents will A	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematics and Evaluate the Transfer I	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Fundamental series.	n below and from the nargin and phase mand to ls) Cl+o·ls).  nction Models.  Block Diagram Recommendation	e plot find gain crosso rgin. Determent		L.	8
irse Outlents will E	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time and the control Time in the cont	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Systems	n below and from the nargin and phase man ols) Cl+o·ls).  nction Models.  Block Diagram Receptations.	e plot find gain crossorgin. Determent		L.	8
arse Oulents with A	Draw bode plot for the frequency, phase cross sutcomes (CO) fill be able to Analyze the Control Systematical Time design and construct the design and construct the control of the frequency of t	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Symptomic Frequency Response	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determent		L.	8
arse Oulents with A	Draw bode plot for the frequency, phase cross sutcomes (CO) fill be able to Analyze the Control Systematical Time design and construct the design and construct the control of the frequency of t	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Systems	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determent		L.	8
erse Oulents with A E E E D E E	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time and construct the valuate the Stability Analyze the Stability	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Symptonic Frequency Response Analysis of Control Systems	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determent		L.	8
erse Oulents with A E E E D E E	Draw bode plot for the frequency, phase cross sutcomes (CO) fill be able to Analyze the Control Systematical Time design and construct the design and construct the control of the frequency of t	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Symptonic Frequency Response Analysis of Control Systems	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determined	v Graph	1.	
E D De	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time design and construct the valuate the Stability A lesign various types of Lower Order The	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Symptonic Frequency Response Analysis of Control Systems	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determined	v Graph	1.	
E D De	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time design and construct the valuate the Stability A lesign various types of Lower Order The	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Symples Frequency Response Analysis of Control Systems of Compensators.	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determent	v Graph	n.	OTS)
ents with A E E D De De Gication	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time design and construct the valuate the Stability A lesign various types of Lower Order The	sover frequency, gain m $G(s) H(s) = \frac{10}{s(1+0)}$ ystems by Transfer Function Models using Response of Control Symples Frequency Response Analysis of Control Systems of Compensators.	n below and from the nargin and phase man to ls) Cl+o-ls).  nction Models.  Block Diagram Recoystems.  e of Control System stems.	e plot find gain crossorgin. Determined	v Graph	1.	OTS)
Irse Oulents with A E E D E E	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time in the Stability Analyze the Stability A	ystems by Transfer Function Models using Response of Control Synalysis of Control Systems for Compensators.  inking Levels (LOTS)	n below and from the nargin and phase man ols) Cl+o-ls).  nction Models.  Block Diagram Receives and control Systems.	e plot find gain crossorgin. Determined duction or Signal Flowers.  Higher Order Thin	v Graph	evels (HC	ots)
E Do Do fication	Draw bode plot for the frequency, phase cross sutcomes (CO) will be able to Analyze the Control Systematical Time in the Stability Analyze the Stability A	ystems by Transfer Function Models using Response of Control Synalysis of Control Systems for Compensators.  inking Levels (LOTS)	n below and from the nargin and phase man to ls) Cl+o-ls).  nction Models.  Block Diagram Recoystems.  e of Control System stems.	e plot find gain crossorgin. Determined duction or Signal Flowers.  Higher Order Thin	v Graph	n.	OTS)

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	0.0	Department of		8	11.20	
	.11	B.Tech.(EE)	Semester	FACTS	1.5	7 - 7 -
	m	DEEE-14808	Subject Title	Baljeet S	Singh	4
Progra	t Code	2	Course Coordinator(s)	2	1,00	
Subjec	t Code mester Test (MST)	2		1 hour 3	0 minutes	
Mia Se	illico	24	Time Duration	1 Hour 2	*3102.1.1	
No. Max. N	1arks	22/04/19	Roll Number			A. 1
Max. No	MST	22/04/19		P. C. Fill As J.	CARLES IN	
			the state of the state of the state of	31111711	<del>70</del>	36 .
- 1-1 A	ttempt all questions		tion and an arrangement		COs,	Marks
vote: A	Henry	Ques	tion		RBT level	
Q. No.		59	V Company	Sparter Profile	CO2,(L2)	2
	List some application	on of TCSC?			V	
21				12 12 27 15	CO2,(L4)	2
	Define principle op	eration of phase s	hifter?		76	
2				Maria de Caración	CO1, L2	4
	Emplain the congest	tion management	with the help of FACTS?	3 797	CO1, E2	
3 .	Explain the congest		4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· Martin Paris	CO4 (3)	4
	- I wander	stand by Thyristo	r Controlled Series Capacito	r? How	CO4, (2)	4
4	What do you under	ndle various prob	lems of power system?	X 114 - 4	19 to	
	E-7 ( 35-18)			Her but qu'		1 1/19/06
			matrical line is operated at	the rated	CO3,(L4	) 4
5	A 400 kV, 50 Hz, 6	500 km long sym	metrical line is operated at	Farmer & Eli	LS	5
	A series capaci	itor is connected	at the mid point of the line t	mH/km		
N.	the power tran	smitted. What is	its reactance? DATA: L=	IIII I/KIII,	- TEN 1. W	
	C=11.1* 10 <sup>-9</sup> F	/km. Dere	rmine		Sylvent Cong	
1	-				A Carrier And	
	What is the princip	le of operation of	f UPFC and also explains i	ts control	CO1,L6	8
5	what is the princip	ic or operation			LS	
	applications.				The state of	
	(00)		No. 1 and a second seco	A SANSE	es transiti	
	Outcomes (CO)	A STATE OF THE PARTY OF THE PAR				
dents v	will be able to		Comparing the service of the contract of the c	The second	*15 0 VIII 19	
	Retrieve the basics	of Power Transn	nission System	and the fact of the	William Committee	
	Understand the nee	d and principle o	f operation of FACTS dev	ices in Po	wer System	1.
	Understand the nee	d of Series and S	hunt Compensation.	de Dosen Ti		
			ystem Transmission capabi	lity enhai	ncement	Chief left
			monics mitigation.		Article (18	
			f FACTS controllers.		es est dence	
	Chacistana modeli	ing and control of	TACTS COMMUNICIS.	10.75	1	

RBT Classification		Thinking Levels	(LOTS)	Higher Ord	ler Thinking	Levels (HOTS)
RBT Level Number	L1	L2	L3	L4	L5	L6
BT Level	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

	= 5-1 - 1	Nalr Day E	ngineering College, Ludhian of Electrical Engineering	<u>na</u>		(C.
	Gu	ru Nanak Dev E.		6		
		B.Tech.(EE)	APILICATO.	Electric	Drives & Utiliz	zation
		EE-14602	Subject Title	Er. Rav	inder Kaur	1 7 14
Program	Code	2	Course Coordinator	100	a ben appropriate and a	T. Lating
Subject (	Code nester Test (MST)	2	18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 hour	30 minutes	S. Carlot
Mid Sen	lester	24	Time Duration		eWay shared	
-		24	Roll Number	La tar	that potenty that	
No. Max. Ma	MST	A 12.2	A PROPERTY OF A PROPERTY OF THE PARTY OF THE	10 10 10 10 10 10 10 10 10 10 10 10 10 1	THE STATE OF THE	ALLEN AT IN
Date of I	VIST		and the beginning to the state of the state		COs,	Marks
	ttempt all questions	One	estion		RBT level	e l'al
Note: A.	T	The state of the s	Stion	A Bur Ki	CO6, L2	2
Q. No.		Explain	annd catenary.	Partie Carrier	CO5, (12) L5	1000
	With the help of diag	gram discuss comp	ound cateriory	in 1917 1217 412 1		4
<u>Q1</u>	Explain practical uni	it of retrigeration.	ntages of the system of tracti	ion using	CO6, L1	10 12 13
Q1 Q2 Q3 wh	ADiscuss the advanta	tages and disadvan	nages		A STATE OF A STATE	700
Q3 Win	25kV, 50 Hz supply	y and DC series me	otor.	mpression	CO5,(L2) L1	4
	Emplain with the	help of diagram,	, the working of vapour con			A PART OF
Q4 /	Explain System	l.	· · · · · · · · · · · · · · · · · · ·	ours if the	CO4, L5	4
	How much aluminu	m will be produce	ed from aluminum oxide in 24 h	-ivalent		
Q5	Mow much and is 3	000A and current	efficiency is 92%, aluminum is	LTIVATORE	1 1 1 1 1 1 1	(1) (1) 30
	average current is	- 27 The chemical	l equivalent weight of silver is 1	07.98 and		1 3/11/2
	and atomic weight i	' langeited by 0	ne coulomb?	34.1		
	0.00111gm of silver	r is deposited by o	The Coulomb	10 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. CO3, L6	8
	Design the heat	ing element when t	the power and voltage of oven a	are known	90 A C	No. of the
Q6	The first commence of the second contract of	insimila of dielect	tric heating. Delive the man			
	b). Explain the pr	tinciple of dielect	in such process. Discuss appl	lications c	of	
	expression of	power consumed	In such process. Distance 11	along the	and making the	11.3
				ALCOHOLD IN 19	Apple of GDAS from the set	1 1

# Course Outcomes (CO)

dielectric heating.

Students will be able to

Diudei	ins will be dote to
1	Analyze different motor applications.
2	Design various illumination systems.
3	Evaluate different heating schemes for a given application
4	Understand process of electroplating.
5	Understand technology used in refrigeration and air conditioning.
6	Understand different schemes of electric traction and its main components.
1083	

RBT Classification	Lower Order T	hinking Levels	(LOTS)	Higher Ord	ler Thinking	Levels (HOTS
RBT Level Number	. L1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

_			Department of E		ineering	***** <u>-</u>	6	- 197
-	- agra	m	B. Tech.(EE)	Semester	ELEC	TRICA	L GENERAT	ION &
	Program Subject Co	ode	EE-14603	Subject Title	e	EC	ONOMICS ET SINGH GI	
	Tes	t (MST) No.		Course Coordin	iatoi		ur 30 minutes	LL State
Mid	Semester Test Max. Mar	et (MST) No.	24	Time Duratio		1 1100	If 30 minutes	
	- 11.2	CT	24 <sup>th</sup> April 2019	Roll Number	r	17.5		13 14
	: Attempt all	questions.		The state of the s	4.71	1000	CO. DDT	100
			Question				COs, RBT level	Marks
Q. No		some comp	anies put a pena	ilty for low p	ower factor	?	CO3, L1	2
Q1	- Siv	red costs are	different from o	operating cos	sts:		CO3, L4	2
Q2		the differen	it methods of loa	ading turbo g	generators.	100	CO5, L2	4
Q3 Q4	List the	e objectives a the tariffs f	that a utility for consumers. ation cost per k	should kept	in mina w		CO3, L1	4
	Capital of Interest Fuel con Fuel cost Other of Peak load face	nsumption = st = Rs1500/1 perating cos ad = 270MW ctor = 80%	5000per kW iation = 10%, = 0.750kg/kWh, 1000kg, st = 30%of fuel o		0.107		CO3, L5	4
06	characted Due to an unit is in the time erroneou	eristics C n instrument error by +2 of schedul us schedulin	ermal station h = 5000 + 450P ntation error the 2% and that of ling. Find the ag. Total load is	+ 0.5P <sup>2</sup> Rs/ he cost chara f the second extra opera	/hr acteristics o unit is by -2	of first 2% at	t CO6, L	25
	<b>Outcomes (</b> will be able			is of her	Parties Company	(2.3)		erresi Vi
15			e performance of c	conventional a	nd non-conver	ntional	energy sour	rces.
			and related factors					A De
10000			ysis of different ele	energy g	eneration teen	miques		
		generation pla		Y. Blank	and the second	374	The same of the	
P	lan optima	al method of le	oading turbo gener	rator.			THE WAR	0 -
10000		THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	thermal coordinat				THE PROPERTY	ALT IN
	ability the L	iceu or nyuro	thermal coordinate	IOIL.		7, 19		11
	RBT ification	Lower Ord	ler Thinking Lev	els (LOTS)	Higher Ord	ler Th	inking Lev	els (HO
RBT	Level mber	L1	L2	L3	L4	1	L5	L6
RBT	Level	Rememberin	ng Understanding	g Applying	Analyzing	Eval	luating	Creating

Remembering

Name

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/		Department of E		neering			1 0	$\overline{}$
		M.Tech.(Power Engg.)	Semester		2			
ogram		MTPEE-505	Subject Title		Power	System P	Proton	.:
Code	Test (MST)	2	Course Coor		Er Har	leen Kau	r	tion
ject Coter	Test (IVIS 2)	W. 1		(-)		ioon itau	.1	V 1- "
Seme		30	Time Duratio	on	1 hour	30 minu	tec	
Marks	2 - V V	24/04/2019	Roll Number			- Tilliu	ites	
CMST	100	General Print						
of MST	entions			100				
Attempt	all questions	Questio	n	Augi de Vise I	and the	COs,	Т	Marks
0.	all questions					RBT le		Marks
1	trate the term Ca	rrier Current Prote	ction.		K. 187	CO3, I	11.27356	5
Illus	use any one met	hod used for Bus-I	Bar protection	with a neat	sketch.	CO4, I	L6	5
Expl SF6	ain in detail the Circuit Breaker.	Give the characte	ristics of SF6	gas. Explain	any	CO1, I	L2,L	10
Cima	it Breaker. The	Capacitance to ea	HEALIO & DIES-	IM HILLING	a	t		
Circu Breal a	uit Breaker. The ker is 0.02 μF. I  Maximum vo	Capacitance to ea Evaluate:- Itage across conta	rth between al	ternator and Breaker.	a	t		
Circu Breal a b Avers	wit Breaker. The ker is 0.02 μF. I have been depicted by Maximum volumes of the large rate of rise mes (CO)	Capacitance to ea Evaluate:- Iltage across conta Coscillations. Of restriking volta	rth between al	ternator and Breaker.	a l Circui		r appl	ication
Circu Breal a b Avera e Outcom ats will be Apply Selec Desig system	uit Breaker. The ker is 0.02 µF. If Maximum volumes (Maximum volumes (CO) and the took with and model vary and simulate m.	Capacitance to ea Evaluate:- Iltage across conta Coscillations. Of restriking volta Circuit breakers to circuit components over current, dist	cts of Circuit ge upto first p suggest suita (like CT, CV ance and diffe	Breaker. eak.  T, and numerential protests	for a perical rection	articular elay) for schemes	prote	ection
Circu Breal a b Averse Outcom ats will be Apply Selec Desig system	wit Breaker. The ker is 0.02 µF. If Maximum volume (and the control of the contro	Capacitance to eace and is connected and	cts of Circuit ge upto first p suggest suita (like CT, CV ance and diffe	Breaker. eak. T, and numerential protection us	for a perical rection	articular elay) for schemes	for p	ection ower
Circu Breal a b Avera se Outcom ats will be Apply Selec Desig system Devel	wit Breaker. The ker is 0.02 µF. If Maximum volume (and the control of the contro	Capacitance to ea Evaluate:- Iltage across conta Coscillations. Of restriking volta Circuit breakers to circuit components over current, dist	cts of Circuit ge upto first p suggest suita (like CT, CV ance and diffe	Breaker. eak.  T, and numerential protection us	for a perical rection	articular elay) for schemes w techno	for pologie	ection loower es.
Circu Breal a b Avera se Outcom ats will be Apply Selec Desig system Devel ication evel	wit Breaker. The ker is 0.02 µF. If Maximum volume (and the control of the contro	Capacitance to eace and is connected and	cts of Circuit ge upto first p suggest suita (like CT, CV ance and diffe	Breaker. eak. T, and numerential protection us	for a perical rection	articular elay) for schemes w techno hinking	protes for pologies	ection power es. els (HC
Circu Breal a b Avers e Outcom ats will be Apply Selec Desig system Devel	it Breaker. The ker is 0.02 μF. Is (Maximum vo.) Maximum vo.) Frequency of age rate of rise mes (CO) able to y knowledge of and model vary and simulate m.  Lower Order	Capacitance to eacevaluate:- lage across contactorious components over current, distered schemes for po	cts of Circuit ge upto first p  o suggest suita (like CT, CV ance and difference	Breaker. eak.  T, and numerential protection us  Higher O	for a perical rection	articular elay) for schemes w techno	protes for pologies	ection loower es.

	Guru	Nanak Dev	Engineeri	ng College.	Ludhiana				
	San San San	Departmen	t of Electri	cal Engine	ering			1	
ram		(PE1-2/CE3	(5-4) Seme	ester	2 <sup>nd</sup>				
rogram ubject Code	To the second	ESC-18101	Subj	ect Title	Ba	sic E	Electrical		$\rightarrow$
ubject Coo	est (MST)	2 <sup>nd</sup>	Cou	rse rdinator(s)	l Er	gine Ars	ering shdeep Kaur		$\rightarrow$
Iid Sem	107.5	24	Tim	e Duration			20 1		
lax. Marks		24.04.2019		Number		lour	30 minutes		
A ALLIE		7-12-	7	· · · · · · · · · · · · · · · · · · ·	1.4				
Alt -	Louestions	Tulisty and by	30.5		and the first				
Note: Attempt al	I question	Qı	uestion				COs, RBT	1	<b>Aarks</b>
NO.		NAME OF THE OWNER, THE					level	l N	larks
1	acid cell n	naintains a c	onstant cu	rrent of 2A	for 15 ho	urs	CO1 I 1		2
before	its termina	i voitage iaii	is to 1.8 V	. what is t	ne capacity	of			
	- the term e	arthing. Wha	at is the nee	ed of earthi	ng?		CO2, L5		2
2 Explai	the differen	t starting me	thod of sin	gle phase in	nduction m	otor	CO2, L1(1	L2)	4
))	-lain any Ol	ne in defail.	a continue production	and the same of th	4				
and ex	cwitchgeat	rs and explai	n the vario	ous compon	ent used in	LT	CO5, L1	No.	4
7	-0	The state of the s						15/13	
SWITCH	gears?	the manager of the control	A CONTRACTOR OF THE PARTY OF TH	The second second	0 1	1.000	CO2, L5	16	4
	1 aventain	the torque	slip chara	acteristics	of three p	nase	( 002, 13	10	
	ion motor	the torque and mention	slip chara n the vari	ous operat	of three p ing region	nase s or	1 CO2, E3		Vigin de
Plot) a induct	ion motor	and mention	n the vari	ous operat	of three p	nase s or	CO5, L4		8
Plot) a induct same.	ion motor	and mention	n the vari	nsformer	ing region		CO5, L4		
Plot) a induct same.  (6 a. (Illi	ion motor  Ly  ustrate the lefine effici	osses occurriency and	n the vari	nsformer	ing region		CO5, L4		
Plot) a induct same.  (6 a. (Illi	ion motor	osses occurriency and	n the vari	nsformer	ing region		CO5, L4		
Plot) a induct same.  (6 a. Illib. De ma	ion motor  LU  ustrate the lefine efficient ef	osses occurriency and iciency.	ing in a tra	nsformer	ing region		CO5, L4		
Plot) a induct same.  6 a. (Illib.) De ma	ion motor  Ly  ustrate the lefine efficience (CO)  at left to	osses occurriency and	ing in a tra	nsformer. condition	for obta		CO5, L4		
Plot) a induct same.  26 a. Illib. De ma	ustrate the lefine efficiency (CO) able to	osses occurriency and iciency.	ing in a tra find the	nsformer. condition	for obta	inin	CO5, L4	5	8
Plot) a induct same.  (6 a. Illib. De ma	ustrate the lefine efficiency (CO) able to	osses occurriency and iciency.	ing in a tra find the	nsformer. condition	for obta	inin	CO5, L4	5	8
Plot) a induct same.  (b) a. (Illib) b. De ma	ustrate the lefine efficiency (CO) able to	osses occurriency and iciency.	ing in a tra find the	nsformer. condition	for obta	inin	CO5, L4	5	8
Plot) a induct same.  26 a. Illib. De ma  Course Outcon Students will be  Analy  Incula	ustrate the lastinum efficiences (CO) able to the the understant the understant the requirements.	osses occurriency and iciency.  vior of electerstanding a rement of tra	ing in a tra find the  rical and n bout the ac	nsformer. condition  nagnetic circ fundamer in transmis	for obta	inin	CO5, L4	5	8
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Plot) a induct same.  26 a. Illib. De ma  Course Outcon Students will be  Analy Realizand of Select	ustrate the last effine efficience (CO) able to extend the under the requirement of the type o	osses occurriency and iciency.  avior of electerstanding a rement of transition.  f generator /	ing in a tra find the  rical and n bout the ac ansformer  motor requal networks	nsformer. condition  nagnetic circ fundamer in transmis	for obta	inin	CO5, L4	5	8
Plot) a induct same.  26 a. Illib. De ma  Course Outcon Students will be  Analy Incula Realizand o	ustrate the last effine efficience (CO) able to extend the under the requirement of the type o	osses occurriency and iciency.  avior of electerstanding a rement of transition.  f generator /	ing in a tra find the  rical and n bout the ac ansformer  motor requal networks	nsformer. condition  nagnetic circ fundamer in transmis	for obta	inin istrib	cation.	5 ectric	8 c power
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Plot) a induct same.  Q6 a. Illib. De ma  Course Outcon Students will be  1 Analy 2 Inculo 3 Realizand o 4 Select 5 Analy 6 Reco  RBT Classification  RBT Level Number  RBT Level	ustrate the last rate the efficience efficience efficience efficience (CO) able to extend the requirement of the type of the type of the variagnize the vari	osses occurriency and iciency.  avior of electronic erstanding a rement of transition.  f generator / ous electrica arious measure.  Order Thinki	ing in a tra find the  rical and n bout the ac ansformer  motor requal networks uring instru	nsformer. condition  nagnetic circ fundamer in transmis  nired for a particular for a parti	for obtained for o	inin istrib ppli	cation.  Thinking L	ectric	c powers (HOT
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		MT	Depart	ment of	gineering ( Electrical )	Engine Lu	idhiana		
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all		MTP	EE - 615	Subi	ect Title	2 <sup>r</sup>			
gram bject Con Semes	de ter Test	11		Cour	rea	0	ptimization To	aal i	
pject	ter Test	A 3 1 1 1		Coor	36	E	r. Arshdeep K	echniqu	es
10-10	124.69	30	4 10 1	C001	rdinator(s)		Tushdeep K	aur	
ST) No.	0 110		/2019	I im	e Duration	1	have 20		
d Selle ST) No. ST) Mark	T	22/4	2019	Roll	Number		hour 30 minu	tes	
IST) No. IST) No. IST) No. IST) No. IST) No.	1		1.11	16				6	
ate or	11 ques	stions							
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te: A.	npt all ques	U		- · · · · · · · · · · · · · · · · · · ·			COs, RI	BT	Marks
/	bern	AN ANCES		- 11			level	• •	Marks
0 1	te a short	note on c	onjugate g	gradient i	method.	1.1	CO4,I(2)	1	- Lacer - NE
Wr	119	17		-				272	5
	i ing f(x	$) = x_1^2 + x_2^2 + x_3^2 + $	$2^{2}-2x_{1}-4x_{2}$	+ 5 usin	g steepest d	econt moth	-1 004 7/2	7/	
Mi	inimize 1(A				8 steepest ti	ccent metn	od. CO4, L(5	16	5
2	137440-1	intorno	ation met	thoda for					
W	nat are the	merpo	3 20-15	mous 10	r optimizati	on? Find	the CO2, L1	,L3	10
mil	nimum of f	$(x)=x^{2}$	X -20X+3	using cul	bic interpola	ation metho	od.		
	-neport c	ompany	ships truck	cload of	grains from	three silo	s to CO3, L6	,	10
4	110 11	IP UTOSS	SUDDIY HO	m silos a	and gross de	mand of m	ille		
for	given by th	o follow	ng table		Broop do	mana or m	7 de. Cariffa &		
is	given by th	e lollow.	1	2	12	1			
1	no managed at		1		3	4			
C	unnly from	silos	15	25	10		17 150 1		4
			5	15	15	15			
	The second of the second	anchortat	ion costs t	oer truck	load from i	silo to j <sup>th</sup> i	mill		
Th	ne grains un	ansporta	wing matr	ix		-Algeria			
are	e given by	the lollo	Willig Illaci	mi	lle .				
-11-	A Walter of	(E	mile to	1111	20	11	V 191. 75 7 7 7		
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	ethod.					3 (a. 8 ) 1 (c. 8)	1.47		
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# **Department of Information Technology Engineering**

# Guru Nanak Dev Engineering College, Ludhiana Department of Information Technology

Examination - I (Jan-May, 2019) (B.Tech. IT and MCA)

		uty.	examination duty.	Note that the care advised not to use Mobile phones during the	obile phones	ot to use M	advised n	ators are	noon	(monuay)
10	Harpreet Kaur (A:Avtar Singh)	Harjot Kaur	Rupinder Kaur	Amit Kamra	Kiran Jyoti	Kamaljit Kaur	Ranjodh Kaur	Pankaj Bhambri	10:30 am to 12:00	25 <sup>th</sup> february, 2019
	Yadvir Kaur (A: Kewal Singh)	Harpreet Kaur	Sachin Bagga	Dinesh Anand	Sidharth Jain	Sandeep Singla	Rupinder Kaur	Ranjodh Kaur	10:30 am to 12:00 noon	23 <sup>rd</sup> lebruary, 2019 Saturday)
9	(A: Navdeep Singh)	Sachin Bagga	Harpreet Kaur	Harjot Kaur	Kamaljit Kaur	Dinesh Anand	Gagandeep Kaur (CSE)	Yadvir Kaur	10:30 am to 12:00 noon	22 <sup>nd</sup> February, 2019 (Friday)
The same of the sa	(A: Sukhjinder Singh).	Hanit Karwal	Yadvir Kaur	Mohanjit Kaur (CC)	Dinesh Anand	Pradeep Jaswal	Harjot Kaur	Sachin Bagga	10:30 am to 12:00 noon	21 <sup>st</sup> February, 2019 (Thursday)
7	(A: Nath Singh)  Ranjodh Kaur	Sidharth Jain	K. S. Mann	Pankaj Bhambri	Amit Kamra	Jasbir Singh Saini (CSE)	Akshay Girdhar	Mohanjit Kaur (CC)	10:30 am to 12:00 noon	20 <sup>th</sup> February, 2019 (Wednesday)
	Duty Hanit Karwal		210	217	216	215	214	213	Time	Date
	External Duty & Attendant	219	ing Stall)	ach	(Teaching &	Mid Semester Examination DUTY CHART (Teach	nester Example DUT	Mid Sen		

Note 2: Invigilators must submit the answer sheets sorted according to the University roll Note 3: Foculty member must prepare the QP or feet the fourthead Department of the Company of t Note 1: Invigilators are advised not to use M

Department of Information Technolog

Suru Nanak Day Engg College

Suru Nanak Day Engg College

### Paper Format:

B. Tech.

Paper duration: 1.5 hrs

Max. Marks: 24

Ques No.	Marks	Level of question as per Revised Bloom's Taxonomy
QI	2	LOTS
Q2	2	HOTS
Q3	4	LOTS
Q4	4	LOTS
Q5	4	HOTS
Q6	- 8	HOTS

HOBIAT

### Guru Nanak Dev Engineering College, Ludhiana

### Department of Information Technology

No. 17/36/258 - 20/2/18

Dated: - 27-02-2018

### Principal

Vide Ref. No. NBA/104/21 dated 21.02.2018, following modules are formed for effective implementation of "Outcome Based Education Model" in the department. The Module Coordinator is supposed to coordinate and see that CO for different Subjects are mapping effectively with the identified PO of the department and accordingly, to take corrective action if feed arises and to guide the Course Coordinator in this regards.

Module – 1	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
Programming	Raninder Kaur	FCPIT	Ranjodh Kaur
		Advance Java	Sandeep Kumar Singla
		Agile S/W Development	Sandeep Kumar Singla
Module – 2	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
System Administration	Parminder Kaur	Operating System	Raninder Kaur Dhillon
and Maintenance	Wadhwa	Computer Architecture & Mocroprocessor	Parminder Kaur Wadhwa
Iodule – 3	Module Coordinator	Subjects (Theory &	Course Coordinator

Module – 3	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
Basic Science and Engineering	Inderjeet Singh	Probability and Statistics	Rupinder Kaur

Module – 4	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
Networking	Manpreet Singh	Data Communication & Computer Network	Manpreet Singh

Module – 5	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
Web System & Technologies	Kulwinder Singh Mann	Web Technologies	Akshay Girdhar

Module – 6	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
System Intergration and Architecture	Kamaljit Kaur	Software Engineering and Testing	A.nit Kamra

Module – 7	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator	
Information Assurance and Security	Amit Kamra	Information Assurance & Security	Lovepreet Kaur	
	7.000	E-Commerce Building	Kulwinder Singh Mann	

Module – 8	Module Coordinator	Subjects (Theory & Practicsl)	Course Coordinator
		Information Storage & Management	Pardeep Kumar Jaswa
		Big Data Analytics	Kiran Jyoti
Information Management	Kiran Jyoti Pardeep Kumar Jaswal	Management Information System	Inderjeet Singh Mohanjit Kaur Kang Pankaj Bhambri
		Corporate IT Management	Raninder Kaur
	4	Database Management System	Kamaljit Kaur

	Module Coordinator	Subjects (Theory &	Course Coordinator
Module – 9	Module Gos	Practicsl) Multimedia &	Mohanjit Kaur Kang
		Application Building Enterprise and	Kiran Jyoti
Human Computer	Pankaj Bhambri	Application  ICT in Agriculture &	Harjot Kaur
Interactioin		Rural Development Engineering	Pardeep Kumar Jaswa
		Enterpreneurship Bioinformatics	Pankaj Bhambri

1	Gardinator	Subjects (Theory &	Course Cool dillate
Module - 10	Module Coordinator	Practicsl)	Inderjeet Singh
	Inderjeet Singh	Majot Project	Muchiger
1 1 Courses	Indeffect sing		O .1

Distribution:

All Faculty Members of Deptt. (i)

Deptt. NBA File (ii)

# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA DEPARTMENT OF IT

Ref. No. 17/08/256

DUTY-CHART FOR 1st MST (5March. 2018 to 9March. 2018)

	ВС	Y-CHARL		216	217	218	(External Duty)
Room No.	213 `	214	215	216 ·	38	Parminder K	Jagraj Singh
5/03/2018 (Monday)	Akshay	Mohanjit Kaur	Amit Kamra	Harjot kaur	Raninder Kaur	Wadhway	
(10:30 - 12:00)	Girdhar	Hlang		Mohanii kaur	Pankaj Bhambri	Amit Kamra	Jagraj Singh
6/03/2018 (Tuesday) (10:30 - 12:00 )	K.S Mann	Parminder K Wadhwa	Inderjeet Singh	Mohaniit Kaur	Pankaj Bilamori	Q	
7/03/2018		1	Ranjodh Kaur	Rupinder Kaur	Kiran Jyoti	Raninder Kaur	Davinder Kaur
(Wednesday) (10:30 -12:00)	Pardeep Kumar	Kamaljit kaur			Res	Sandeep Singla	Davinder Kaur
8/03/2018	Manpreet	Lovepreet Kaur	Rupir der Kaur	Sachin Bagga	Pankaj Bhambri	Sandeep Single	
(Thursday) (10:30 - 12:00)	Singh	طل		Harjot Kaur	Sandeep Singla	Inderjeet Singl	Davinder Kaur
9/03/2018 (Friday) (10:30 - 12:00 )	Kiran Jyoti	Lovepreet Kau	Sachin Bagga	Harjot Kadi			

OD (IT) 100

CC: Circulation to all Staff Members (IT), Office Copy
Note: Students without Identity Card is not allowed to sit in exam

# MST 1 QUESTION PAPER

Program Subject C Mid Sem No.	Code	Department of I B.Tech.(IT)	gincering College, Ludhia Information Technology	1141		
Subject ( Mid Sem	Code	B.Tech.(IT)	morning recumology			
Mid Sem			Semester	5		
Mid Sem		IT-14501	Subject Title	-	ete Maths	
No.	ester Test (MST)	1	Course Coordinator(s)		anit Karwal	
		1	Course Coordinator(s)	Er. H	ann Karwai	
Max. Ma		24	Time Duration	1 hou	r 30 minutes	-
Date of N	MST	17 <sup>th</sup> Sep, 2018	Roll Number			
Note: 1. /	Attempt all questions	1				
Q. No.		Questi	on		COs, RBT level	Mark
Q1	Define Partial Order	Relation with exa	mnle		CO3, L1	2
Q2	Find Contrapositive	. Converse and Inv	erse of the statement "P".		CO4, L4	2
	of Yuvraj"	s whenever match	is played in Mohali, home to	wn	CO4, L4	2
Q3	h(x) = 5. Find (i)	defined by $f(x) = g \circ h \circ f(x)$ $f \circ g \circ h (x)$	$(x + 2, g(x) = 1/(x^2 + 1),$ (ii) $f^{-1} \circ g \circ f$ (iv) $g \circ f^{-1} \circ f$	(x) (x)	CO2, L3	4
Q4	both Science & Eng (a) Find how ma	ike both Maths & l lish, 8 like all three	least one of the three subject	ike	CO1, L3	4
Q5 (a) (b)	Sate Pegion Hole Pr	inciple. an the letters of the	e word "SPECIAL" be arrange	ged	CO5, L6	4
	Solve the Recurrence $S_n - 6S_{n-1} + 8S_{n-2} = 0$				CO5, L5	8
	utcomes (CO)					
	vill be able to					
	applied problems		et theory, Inclusion and Excl			olve
2	Determine the domai composition of funct of functions to applic	ions, find and/or gr ation problems.	ons, identify one-to-one function apply the inverse of a function	i, and a	apply the prop	
3	Apply conceptual knocomposition and clos	owledge of Relatio ure properties of re	on theory for identifying type elations and classifying the re Compatibility relations and P	elations	s into differen	
	Formulate convincing	arguments conce	eive and/or analyze basic mat	hamat	order relations	3

	discriminate between valid and unreliable arguments.
5	Study the various counting principle, permutation, and combination and recurrence relation and solve the related problems.
6	Identify, formulate and solve the complex engineering problems like shortest path and minimal spanning trees using properties and concept of graphs
7	Ability to discriminate and Identify the basic properties related to various algebraic entities

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
RBT Level Number	L.1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

# MST 1 QUESTION PAPER

	Gu	ru Nanak Dev Er	igineering College, Ludhia	na		
		Department of	Information Technology	1141		
Program		B.Tech.(IT)	Semester	5		
Subject Code		IT-14501	Subject Title	-	rete Maths	
	nester Test (MST)	1	Course Coordinator(s)	-	anit Karwal	
No.			Course Coordinator(s)	Er. H	anit Karwai	
Max. M		24	Time Duration	1 hou	r 30 minutes	
Date of	MST	17 <sup>th</sup> Sep, 2018	Roll Number		1	
Note: 1.	Attempt all questions	1				
Q. No.		Questi	ion		COs, RBT level	Mark
Q1	Define Partial Orde	Relation with exa	umple		CO3, L1	7
Q2	Find Contrapositive	Converse and Inv	verse of the statement "D"		CO4, L4	2
	Find Contrapositive, Converse and Inverse of the statement "P". P: "Indian team wins whenever match is played in Mohali, home town of Yuvraj"				CO4, L4	2
Q3	If f, g, h : R $\rightarrow$ R are defined by $f(x) = x + 2$ , $g(x) = 1/(x^2 + 1)$ , $h(x) = 5$ . Find (i) $g \circ h \circ f(x)$ (ii) $f^{-1} \circ g \circ f(x)$ (iv) $g \circ f^{-1} \circ f(x)$				CO2, L3	4
Q4	both Science & Eng (a) Find how ma	ike both Maths & l	least one of the three subjec	like	CO1, L3	4
Q5 (a) (b)	Sate Pegion Hole Principle.  In how many ways can the letters of the word "SPECIAL" be arranged in a row such that the vowels occupy only odd positions			ged	CO5, L6	4
Q6	Solve the Recurrence Relation for a general solution $S_n - 6S_{n-1} + 8S_{n-2} = 0$ ; $n \ge 2$ Given: $S_0 = 10$ and $S_1 = 25$				CO5, L5	8
Course (	Outcomes (CO)					
Students	will be able to					
ì	applied problems		et theory, Inclusion and Exc			olve
2	Determine the domai composition of funct of functions to applie	ions, find and/or gi ation problems.	ons, identify one-to-one func- raph the inverse of a function	i, and a	apply the prop	
3	Apply conceptual kn composition and clos	owledge of Relationary	on theory for identifying type elations and classifying the r Compatibility relations and P	elation	s into differen	
	Formulate convincing	g arguments, conce	eive and/or analyze basic ma	themat	ical pro-C-	3

	discriminate between valid and unreliable arguments.
5	Study the various counting principle, permutation, and combination and recurrence relation and solve the related problems.
6	Identify, formulate and solve the complex engineering problems like shortest path and minimal spanning trees using properties and concept of graphs
7	Ability to discriminate and Identify the basic properties related to various algebraic entities

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
RBT Level Number	L.1	L2	L3	L4	L5	L6
RBT Level Name	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating

# **Department of Mechanical Engineering**

# ME/35/4569

### Guru Nanak Dev Engineering College Ludhiana

# Date 11/09/19

### Department of Mechanical Engineering

#### Instructions for Conduct of MSE

- The subject teachers should prepare the common sessional paper of the subject for all the sections
  of a class in the prescribed format. Before submitting the question paper it must be checked by
  course coordinator for the quality purpose.
- The question paper should be submitted to Er. Satwant singh and Er. Jasvir Singh by 14.09.2019.
- Faculty members on invigilation duty should follow the sitting plan of the students strictly. It is the
  duty of the teacher to provide replacement in case they are unable to give duty due to some reasons.
- The attendance sheet should be signed by internal and external examiner on duty. It is the
  responsibility of the external to collect the answer sheets and hand it over to the Er. Jasvir Singh
  and Er. Satwant Singh.
- The person on external duty should collect the question papers, Sitting plans and attendance sheets from Er. Satwant Singh or Er. Jasvir Singh.

#### Question Paper Format:

#### B.Tech.

Paper duration: 1hr 30 mins

Max. Marks: 24

Question No.	Marks	Level of question as per Revised Bloom's Taxonomy
Q1	2	LOTS
Q2	2	HOTS
Q3	4	LOTS
Q4	4	LOTS
Q5	4	HOTS
Q6	8	HOTS

### M.Tech.

Paper duration: 1hr 30 mins

Max. Marks: 30

Question No.	Marks	Level of question as per Revised Bloom's Taxonomy
QI	5	LOTS
Q2	5	HOTS
Q3	10	LOTS
Q4	10	HOTS

Exam Coordinator (ME)

### Distribution:-

- 1. Circulate to all staff members(ME)
- 2. Office copy.
- 3. For soft template of question paper refer Exam Portal.

# ME/35/4569

### Guru Nanak Dev Engineering College Ludhiana

# Date 11/09/19

### Department of Mechanical Engineering

#### Instructions for Conduct of MSE

- The subject teachers should prepare the common sessional paper of the subject for all the sections
  of a class in the prescribed format. Before submitting the question paper it must be checked by
  course coordinator for the quality purpose.
- The question paper should be submitted to Er. Satwant singh and Er. Jasvir Singh by 14.09.2019.
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  and Er. Satwant Singh.
- The person on external duty should collect the question papers, Sitting plans and attendance sheets from Er. Satwant Singh or Er. Jasvir Singh.

#### Question Paper Format:

#### B.Tech.

Paper duration: 1hr 30 mins

Max. Marks: 24

Question No.	Marks	Level of question as per Revised Bloom's Taxonomy
Q1	2	LOTS
Q2	2	HOTS
Q3	4	LOTS
Q4	4	LOTS
Q5	4	HOTS
Q6	8	HOTS

### M.Tech.

Paper duration: 1hr 30 mins

Max. Marks: 30

Question No.	Marks	Level of question as per Revised Bloom's Taxonomy
QI	5	LOTS
Q2	5	HOTS
Q3	10	LOTS
Q4	10	HOTS

Exam Coordinator (ME)

### Distribution:-

- 1. Circulate to all staff members(ME)
- 2. Office copy.
- 3. For soft template of question paper refer Exam Portal.

### Department of Mechanical Engineering

All the Question Papers MSE-I Sept 2019 has to be Scrutinized by the committee before using them for the test.

Chairman -DR..P.S BILGA HOD(ME)

Convener-DR.. Jatinder Kapoor

Subject	Subject Course Teachers	Course	Subject Course	Module
		Coordinator	Expert	Coordinator
SOM- I	Er. Manmohan Singh Er.Sukhinderpal Singh Dr. Raman Kumar	Er.Sukhinderpal Singh	Er. Manmohan Singh	
EM	Er. Jaswinder Singh Er. Ramandeep Singh Dr. Harish Kumar	Er. Ramandeep Singh	Er. Jaswinder Singh	
M D & CAD	Er. Jasvir Singh Er. Gurwant Singh Er. Prem Singh Er. Satjot Singh Dhillon Er.Davinder Singh Bhogal Er. Chamkaur Jindal Er. Deepak Dhand Er. Bhupinder Singh Dhillon	Er. Jasvir Singh	Er.Davinder Singh Bhogal	
DEL (Design)	Er. Amrinder Singh Pannu Er. Pushpinder Singh Er. Manmohan Singh	Er. Pushpinder Singh	Er. Amrinder Singh Pannu	
DME – I	Er. Chatwant Singh Pandher Er. Amrinder Singh Pannu Dr.Harwinder Singh	Er. Amrinder Singh Pannu	Er. Chatwant Singh Pandher	Dr.Harwinder
CADM	Er. Satwant Singh Er. Lakhveer Singh Khana Dr.Harish Kumar	Er. Satwant Singh	Er. Lukhveer Singh Khana	Singh
MV	Er. Gulvir Singl:	Er. Pushpinder Singa	Er. Gulvir Singh	
EGD	Er. Deepinder Slagh Er.GurmeetKaar Er. Lakhveer Slagh Khana Er. Rupinder Singh Er. Gurpreet Singh Er. Shehbaaz S. Brar Er. Manpreet Singh Er.Jaswinder Singh Er.Jaswinder Singh Er. Harnam Singh Farwaha Er. Satwant Singh Er. Amrinder Singh Pannu	Er. Gurpreet Singh	Er. Deepinder Singh	



	Er.Sukhinderpal Singh Er. Sukhjeet Singh		
IEM	Er. Deepinder Singh Er. Gurwant Singh	Er. Gurwant Singh	Er. Deepinder Singh

THD	Dr.Harmeet Singh Er. JagjitKaur Er. Chamkaur Jindal	Er. JagjitKaur	Er. Chamkaur Jindal	o <b>-</b>
DEL (Thermal)	Er.Davinder Singh Bhogal Dr.Harmeet Singh Er. Satjot Singh Dhillon	Er. Satjot Singh Dhillon	Er.Davinder Singh Bhogal	Dr. Harmeet
RAC	Dr. Paramjit Singh Bilga Er. Prem Singh	Er. Prem Singh	Dr. Paramjit Singh Bilga	Singh
Automobile	Er. Balwinder Singh	Er.Sukhinderpal Singh	Dr. Harmeet Singh	
MP- I	Dr. JatinderKapoor Er. Manpreet Singh Er. Sukhjeet Singh	Er. Manpreet Singh	Dr. JatinderKapoor	
EMM	Er. Ardamanbir Singh Er.Gurmeet Kaur Er. Gurpreet Singh	Er.Gurmeet Kaur	Er. Ardamanbir Singh	Dr.
МММ	Er. Jasvir Singh Er. Rupinder Singh Er. Deepak Dhand	Er. Rupinder Singh	Er. Deepak Dhand	JatinderKapoor
IAR	Dr.Raman Kumar Er. Bhupinder S.Dhillon Er.Harnam S. Farwaha	Er. Bhupinder S.Dhillon	Er.Harnam S. Farwaha	
DEL (Manuf.)	Dr.Sehijpal Singh Er. Shehbaaz S. Brar Er. Chatwant Singh	Er. Shehbaaz S. Brar	Dr.Sehijpal Singh	



# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

(An Autonomous College w/s 2 (f) and 12 (B) of UGC Act 1956) MECHANICAL ENGG. DEPARTMENT

NO. ME 03 4862

8/11/2019

#### OFFICE ORDER

In reference to Notice No. NBA/0104/21 dated 21.02.2018. Following department level Scrutiny Committee for Quality of Question papers is constituted:-

- 1. HOD- Chairman
- 2. Concerned course coordinator- Member
- 3. Concerned Subject/Course Expert-Member
- 4. Concerned Module Coordinator-Member
- 5. Department NBA Incharge-Convenor

This committee will scrutinize the quality of MST question papers, external question papers or any other question papers related to the Academics and to ensure that the setting of the same will be as per the approved templates and using the revised Bloom's Taxonomy (RBT) standard terms (LOTS and HOTS) and related verbs/phrases. The Convenor shall conduct meeting/s before each MSTas well as end of End Semester Examinations during odd & even semester.

CC:

- 1. Controller of Examinations
- 2. Institutional Coordinator Accreditation (NBA)
- 3. Dean Academics
- 4. Principal for information

			anak Dev Engin					
	))	De	partment of Me	chanical Eng	gineering			
rogram	·		B.Tech.(ME)	Semester		5		
ubject (			ME-14501	Subject Title		Design of Machine Elements-I		ne
Aid Sem	ester Test	(MST) No.	1	Course Co	ordinator(s)	200	larwinder Si	
Max. Ma		(1.202)	24	Time Dura	ation	1 hou	ır 30 minute	S
Date of I			Sept. 16, 2019	Roll Numb	oer			
Note: A	ttempt all c	luestions					COs,	Marks
Q. No.			Question				RBT level	
Q1	How design	n and creativit	y are interrelated	with each oth	ner?		CO1, L1	2
Q2	Outling of	facts of stress	concentration.			) (D	CO2, L2	5
Q3(a)	(a) A 45 mm diameter shaft is made of steel with a yield strength of 400 MPa.  A parallel key of size 14 mm wide and 9 mm thick made of steel with a yield strength of 340 MPa is to be used. Find the required length of key, if the shaft is loaded to transmit the maximum permissible torque. Use maximum shear stress theory and assume a factor of safety of 2.						5	
(b)	A rotating complete bar is 31.	ig bar made of ly reversed ber 5N/mm <sup>2</sup> . Deter	of steel 45C8 (Sonding stress. The mine the fatigue s	corrected end strength of the	durance limit of bar for a life	of	CO3, L4	10
Q4	shaft tran of 40 M Assume crushing is 25% g	nsmitting 15 kV Pa. The worki that the same	ective type of case of at 200 r.p.m. and an ang stress in the batterial is used the value of its structure.	oolts should r for shaft an thear stress T	not exceed 30 and key and the maximum to	MPa. at the	L5, L6	
Cour	MPa. se Outcom	es (CO)			n			
Stude	nts will be		C shina da	eign and types	of design pro	cesses.	8	
1	Reme	mber the meani	ng of machine de lesign considerati	one like etrees	concentration	factor	and factor o	f safety.
2	Under	rstand various o	lesign considerati sic machine comp	onente under	different loadi	ng cor	nditions.	
3	Desig	n of various ba	sic machine com	Iding riveting	etc. for differe	nt appl	ications.	
4	Analy	se the fastening	processes like we embers like levers,	chafte orles 1	cevs counting	and cot	ters etc. as pe	r differe
5	Townson and	anto in the it	ndustry					I
	Creat		I suggest/apply sui		Higher Ord	er Thi	nking Levels	(HOTS
6	RBT	Lower Ord	er Thinking Leve	15 (LU13)	Inglier Ord			
1/1								
Clas	ssification BT Level Number	Ll	L2	L3	L4 Analyzing	T.	L5 aluating	L6 Creating

_	741	Guru Nanak	Dev Engineering College	, Ludhiana				
		Departm	ent of Mechanical Engin	reering				
rogra		B.Tech.(Mech)	Semester	. 3				
	t Code	ME 14305	Subject Title	MANUFAC	TURING PROCESSES	<u>i –l</u>		
	d Semester Test (MST) No. 1 Course Coordinator(s) Dr. Jatinder Kap				er Kapoor			
	Marks	24	Time Duration	1 hour 30	minutes			
ate o	f MST	September, 2018	Roll Number			,		
Vote:	: Attempt all questions				COs,	1		
Q. No.	Question					Marks		
Q1	What are the fundamen	tal requirements of	any metal casting proce	ess?	CO1, L1	2		
Q2	Why are allowances give	nation 2 Nation	me any five nattern allo	wances?	CO2, L2	2		
	Why are allowances give	en on a pattern  Nai	nie any nive pattern and		CO6, L4	4		
Q3	Explain with a suitable pressure die casting?	sketch the gravity	die casting process. Co	ompare this process				
Q4					CO3, L6	4		
Ψ.	What will be the solidi	fication time for a constant is 2.2sec/n	1100mm diameter and nm2	1 33 mm thoick cast	ing of			
Q5	Give the construction Cupolas and why?	of CUPOLA furnace	2. What types of meta	ls are generally mel	ted in CO2, L1,L3	4		
	*			,	601	8		
Q6	What are different vari	ants of centrifugal c	asting? Explain with ne	at sketch True and s	emi CO1, L5,L2			
Cou	urse Outcomes (CO)Student	s will be able to		for their practica	Lapplications			
	Use the Knowledge of	Fundamental princi	ples of Castings process	for performing the o	asting processes.			
1	Identify and suggest e	guipments, tools at	d accessor.					
1	Use the Knowledge of Fundamental principles of Castings processes for their processes.  Identify and suggest equipments, tools and accessories required for performing the casting processes.  Design the riser and gating system for casing processes using destructive and non-destructive means so as to							
2	Design the riser and	s Tort the products made by casting and welding pro-						
	Design the riser and	ade by casting and i						
3	Design the riser and S Test the products m appreciate their utility	ade by casting and s	welding electrodes and	d consumables for va	arious welding pro	cesses		
3	Design the riser and	ade by casting and s	welding electrodes and	d consumables for va	arious welding pro	cesses		

Understanding

RBT Level Number RBT Level Name

Remembering

### GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA (An Autonomous College u/s 2 (f) and 12 (B) of UGC Act 1956) DEPARTMENT OF MECHANICAL ENGINEERING

### Notice

Following Commttiee has been constituted to scrutinize the quality of both MST question papers (before using them for the test):-

- 1. HOD Dr. P.S.Bilga Chairman
- 2. Concerned Course Coordinator-Member
- 3. Concern Subject/Course Expert-Member
- 4. Concern Module Coordinator-Member
- 5. Deptt NBA I/c-Dr. Jatinder Kapoor-Convenor

All the faculty are requested to get their MST question paper approved from the aforesaid committee before handing it to the Examination Conduct Team. DF & Heat 21/9/18

CC:

- 1. Intitutional Coordinator Accreditation (NBA)
- 2. Dean Academics
- 3. Dr. Jatinder Kapoor to envence the meetings
- 4. Examination Conduct Team
  - Er.Gurmeet Kaur (a)
  - Er.Jasvir Singh (b)
  - Er.Satwant Singh (c)

### Department of Mechanical Engineering

All the Question Papers MSE-I Sept 2019 has to be Scrutinized by the committee before using them for the test.

Chairman -DR..P.S BILGA HOD(ME)

Convener-DR.. Jatinder Kapoor

Subject	Subject Course Teachers	Course	Subject Course	Module
		Coordinator	Expert	Coordinator
SOM- I	Er. Manmohan Singh Er.Sukhinderpal Singh Dr. Raman Kumar	Er.Sukhinderpal Singh	Er. Manmohan Singh	
EM	Er. Jaswinder Singh Er. Ramandeep Singh Dr. Harish Kumar	Er. Ramandeep Singh	Er. Jaswinder Singh	
M D & CAD	Er. Jasvir Singh Er. Gurwant Singh Er. Prem Singh Er. Satjot Singh Dhillon Er.Davinder Singh Bhogal Er. Chamkaur Jindal Er. Deepak Dhand Er. Bhupinder Singh Dhillon	Er. Jasvir Singh	Er.Davinder Singh Bhogal	
DEL (Design)	Er. Amrinder Singh Pannu Er. Pushpinder Singh Er. Manmohan Singh	Er. Pushpinder Singh	Er. Amrinder Singh Pannu	
DME – I	Er. Chatwant Singh Pandher Er. Amrinder Singh Pannu Dr.Harwinder Singh	Er. Amrinder Singh Pannu	Er. Chatwant Singh Pandher	Dr.Harwinder
CADM	Er. Satwant Singh Er. Lakhveer Singh Khana Dr.Harish Kumar	Er. Satwant Singh	Er. Lukhveer Singh Khana	Singh
MV	Er. Gulvir Singl:	Er. Pushpinder Singa	Er. Gulvir Singh	
EGD	Er. Deepinder Slagh Er.GurmeetKaar Er. Lakhveer Slagh Khana Er. Rupinder Singh Er. Gurpreet Singh Er. Shehbaaz S. Brar Er. Manpreet Singh Er.Jaswinder Singh Er.Jaswinder Singh Er. Harnam Singh Farwaha Er. Satwant Singh Er. Amrinder Singh Pannu	Er. Gurpreet Singh	Er. Deepinder Singh	



	Er.Sukhinderpal Singh Er. Sukhjeet Singh		
IEM	Er. Deepinder Singh Er. Gurwant Singh	Er. Gurwant Singh	Er. Deepinder Singh

THD	Dr.Harmeet Singh Er. JagjitKaur Er. Chamkaur Jindal	Er. JagjitKaur	Er. Chamkaur Jindal	o <b>-</b>
DEL (Thermal)	Er.Davinder Singh Bhogal Dr.Harmeet Singh Er. Satjot Singh Dhillon	Er. Satjot Singh Dhillon	Er.Davinder Singh Bhogal	Dr. Harmeet
RAC	Dr. Paramjit Singh Bilga Er. Prem Singh	Er. Prem Singh	Dr. Paramjit Singh Bilga	Singh
Automobile	Er. Balwinder Singh	Er.Sukhinderpal Singh	Dr. Harmeet Singh	
MP- I	Dr. JatinderKapoor Er. Manpreet Singh Er. Sukhjeet Singh	Er. Manpreet Singh	Dr. JatinderKapoor	
EMM	Er. Ardamanbir Singh Er.Gurmeet Kaur Er. Gurpreet Singh	Er.Gurmeet Kaur	Er. Ardamanbir Singh	Dr.
МММ	Er. Jasvir Singh Er. Rupinder Singh Er. Deepak Dhand	Er. Rupinder Singh	Er. Deepak Dhand	JatinderKapoor
IAR	Dr.Raman Kumar Er. Bhupinder S.Dhillon Er.Harnam S. Farwaha	Er. Bhupinder S.Dhillon	Er.Harnam S. Farwaha	
DEL (Manuf.)	Dr.Sehijpal Singh Er. Shehbaaz S. Brar Er. Chatwant Singh	Er. Shehbaaz S. Brar	Dr.Sehijpal Singh	



# GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

(An Autonomous College w/s 2 (f) and 12 (B) of UGC Act 1956) MECHANICAL ENGG. DEPARTMENT

NO. ME 03 4862

8/11/2019

#### OFFICE ORDER

In reference to Notice No. NBA/0104/21 dated 21.02.2018. Following department level Scrutiny Committee for Quality of Question papers is constituted:-

- 1. HOD- Chairman
- 2. Concerned course coordinator- Member
- 3. Concerned Subject/Course Expert-Member
- 4. Concerned Module Coordinator-Member
- 5. Department NBA Incharge-Convenor

This committee will scrutinize the quality of MST question papers, external question papers or any other question papers related to the Academics and to ensure that the setting of the same will be as per the approved templates and using the revised Bloom's Taxonomy (RBT) standard terms (LOTS and HOTS) and related verbs/phrases. The Convenor shall conduct meeting/s before each MSTas well as end of End Semester Examinations during odd & even semester.

CC:

- 1. Controller of Examinations
- 2. Institutional Coordinator Accreditation (NBA)
- 3. Dean Academics
- 4. Principal for information

			anak Dev Engin					
	))	De	partment of Me	chanical Eng	gineering			
rogram	·		B.Tech.(ME)	Semester		5		
ubject (			ME-14501	Subject Title		Design of Machine Elements-I		ne
Aid Sem	ester Test	(MST) No.	1	Course Co	ordinator(s)	200	larwinder Si	
Max. Ma		(1.202)	24	Time Dura	ation	1 hou	ır 30 minute	S
Date of I			Sept. 16, 2019	Roll Numb	oer			
Note: A	ttempt all c	luestions					COs,	Marks
Q. No.			Question				RBT level	
Q1	How design	n and creativit	y are interrelated	with each oth	ner?		CO1, L1	2
Q2	Outling of	facts of stress	concentration.			) (D	CO2, L2	5
Q3(a)	(a) A 45 mm diameter shaft is made of steel with a yield strength of 400 MPa.  A parallel key of size 14 mm wide and 9 mm thick made of steel with a yield strength of 340 MPa is to be used. Find the required length of key, if the shaft is loaded to transmit the maximum permissible torque. Use maximum shear stress theory and assume a factor of safety of 2.						5	
(b)	A rotating complete bar is 31.	ig bar made of ly reversed ber 5N/mm <sup>2</sup> . Deter	of steel 45C8 (Sonding stress. The mine the fatigue s	corrected end strength of the	durance limit of bar for a life	of	CO3, L4	10
Q4	shaft tran of 40 M Assume crushing is 25% g	nsmitting 15 kV Pa. The worki that the same	ective type of case of at 200 r.p.m. and an ang stress in the batterial is used the value of its structure.	oolts should r for shaft an thear stress T	not exceed 30 and key and the maximum to	MPa. at the	L5, L6	
Cour	MPa. se Outcom	es (CO)			n			
Stude	nts will be		C shina da	eign and types	of design pro	cesses.	8	
1	Reme	mber the meani	ng of machine de lesign considerati	one like etrees	concentration	factor	and factor o	f safety.
2	Under	rstand various of	lesign considerati sic machine comp	onente under	different loadi	ng cor	nditions.	
3	Desig	n of various ba	sic machine com	Iding riveting	etc. for differe	nt appl	ications.	
4	Analy	se the fastening	processes like we embers like levers,	chafte orles 1	cevs counting	and cot	ters etc. as pe	r differe
5	Townson and	anto in the it	ndustry					I
	Creat		I suggest/apply sui		Higher Ord	er Thi	nking Levels	(HOTS
6	RBT	Lower Ord	er Thinking Leve	15 (LU13)	Inglier Ord			
1/1								
Clas	ssification BT Level Number	Ll	L2	L3	L4 Analyzing	T.	L5 aluating	L6 Creating

_	741	Guru Nanak	Dev Engineering College	, Ludhiana				
		Departm	ent of Mechanical Engin	reering				
rogra		B.Tech.(Mech)	Semester	. 3				
	t Code	ME 14305	Subject Title	MANUFAC	TURING PROCESSES	<u>i –l</u>		
	d Semester Test (MST) No. 1 Course Coordinator(s) Dr. Jatinder Kap				er Kapoor			
	Marks	24	Time Duration	1 hour 30	minutes			
ate o	f MST	September, 2018	Roll Number			,		
Vote:	: Attempt all questions				COs,	1		
Q. No.	Question					Marks		
Q1	What are the fundamen	tal requirements of	any metal casting proce	ess?	CO1, L1	2		
Q2	Why are allowances give	nation 2 Nation	me any five nattern allo	wances?	CO2, L2	2		
	Why are allowances give	en on a pattern  Nai	nie any nive pattern and		CO6, L4	4		
Q3	Explain with a suitable pressure die casting?	sketch the gravity	die casting process. Co	ompare this process				
Q4					CO3, L6	4		
Ψ.	What will be the solidi	fication time for a constant is 2.2sec/n	1100mm diameter and nm2	1 33 mm thoick cast	ing of			
Q5	Give the construction Cupolas and why?	of CUPOLA furnace	2. What types of meta	ls are generally mel	ted in CO2, L1,L3	4		
	*			,	601	8		
Q6	What are different vari	ants of centrifugal c	asting? Explain with ne	at sketch True and s	emi CO1, L5,L2			
Cou	urse Outcomes (CO)Student	s will be able to		for their practica	Lapplications			
	Use the Knowledge of	Fundamental princi	ples of Castings process	for performing the o	asting processes.			
1	Identify and suggest e	guipments, tools at	d accessor.					
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2	Design the riser and	s Tort the products made by casting and welding pro-						
	Design the riser and	ade by casting and i						
3	Design the riser and S Test the products m appreciate their utility	ade by casting and s	welding electrodes and	d consumables for va	arious welding pro	cesses		
3	Design the riser and	ade by casting and s	welding electrodes and	d consumables for va	arious welding pro	cesses		

Understanding

RBT Level Number RBT Level Name

Remembering

## **Department of MCA**

Duted! - 06-11-2019

16.40:1746/10/MCA

## Guru Nanak Dev Engineering College, Ludhiana Department of Computer Applications

Question Paper checking panel is as under:-

5. No.	Sem.	Sub Code	Subject Title	Schem e	Name of Subject teacher	Name of Paper checker
1	3	DEMCA-15307	System Programming	2015	Prof. Satinder Singh	Prof. Jasbir Singh
2	3	MCA-15301	Database Administration	2015	Prof. Karamvir Kaur	Prof. Amit Jain
3	3	MCA-15302	Computer Based Optimization Techniques	2015	Prof. Rupinderjit Kaur	Prof. Amit Jain
1	3	MCA-15303	Software Engineering	2015	Prof. Dinesh Anand	Prof. Jasbir Singh
5	3	MCA-15304	Java Programming	2015	Prof. Amit jain	Prof. Dinesh Anand
5	5	DEMCA-15507	Network Security and Administration	2015	Prof. Jasbir Singh	Prof. Dinesh Anand
7	5	MCA-15501	Interactive Computer Graphics	2015	Prof. Dinesh Anand	Prof. Amit Jain
8	5	MCA-15502	Web Technologies	2015	Prof. Mandeep kaur	Prof. Dinesh Anand
9	5	MCA-15503	Object Oriented Analysis and Design with UML	2015	Prof. Karamvir Kaur	Prof. Jasbir Singh

Examination Coordinator

\$106 [11] 19.

	GI	Department o	ngineering College, Ludhia f Computer Applications	110	
		MCA	Semester	5 <sup>th</sup>	
Pro	ogram oject Code	MCA-15503	Subject Title	Object Oriented A and Design Using	UML
	Semester Test (MST)	2	Course Coordinator(s)	Er. Karamvir Kau	r
No		24	Time Duration	1 hour 30 minutes	
Max	x. Marks e of MST	16.11.2019	Roll Number		
	: Attempt all questions			DDT level	Marks
	: Attempt	Question		COs, RBT level	17161
Q.	In outside the			CO1 I 1	2
No	What is Singleton Des	sign Pattern?		CO1, L1 CO1, CO2, L2	2
21_	Write short note on A	rgo UML.	i i Ing	CO3, CO4, L3	4
22_ 23	List various UML dia	grams. Discuss th	e purpose of various UML	CO3, CO4, D3	
ĮS	diagrams			CO2 I 4	4
)4	Explain the use of class	s design. Discuss	the following in relation	CO3, L4	
14	to a class design: Use	cases and Refacto	oring.	COLIE	4
5	Share your views on P	leverse Engineeri	ng and Open source Tools	CO5, L5	
9	in IIMI.			COT COS IS	8
6	Elaborate on various lo	ogic modeling too	ols. Explain each in detail.	CO5,CO6, L6	1
ours	e Outcomes (CO)				
uden	ts will be able to				
100	Signify the fundament	al principles of O	bject Oriented Analysis and	Design.	
					emont
	Identify and analyze th	e key principles i	n Object Oriented analysis,	design, and develo	pinein.
	Determine the applicati	on of the Unified	l Modeling Language (UMI	1) towards amany	
-1	design.				
1		· Object O	inted design and impleme	entation	
	Adapt the common patt	erns in Object Of	riented design and impleme	madon.	
	Analysis of the develop	ment process as	a part of a business.		T R
	Simplify the developme		120		

RBT Classification	Lower Order Thinking Levels (LOTS)			Higher Order Thinking Levels (HOTS)		
RBT Level Number	L1	L2	L3	L4	L5	L6·
RBT Level	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating