M Tech EP

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSI
RAIGAD -402 103
Mid Semester Examination – March - 2019

Branch:M.Tech (EPS) **Sem.:- II**

Subject with Subject Code:- Power System Dynamics and Control MTEPS 201 **Marks : -20**

Date:- 11/03/2019 **Time:- 1 Hr.**

Q1. Attempt any one of the following. (08 Marks)

a) Draw the functional block diagram of excitation system and explain all the elements in detail

b) Derive stator equations for small signal stability analysis of single machine infinite bus System.

Q2. Attempt any three of the following. (12 Marks)

a) What is power system stabilizer? Draw block diagram and explain briefly

b) Explain in detail the effect of AVR on synchronizing and damping torque components.

c) Write the Swing equation and explain all the terms involved in it.

d) What are the different states of operation. Explain each one of them.

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Mid Semester Examination – 2019

Branch: M.Tech Electrical Power System (EPS) Sem.:- II

Subject with Subject Code: - Advance Power System Protection MTEPS202

Date: - Time: - 1 Hr. Max.Marks:20

Instructions: -

1. Solve any two.

2. Assume suitable data if it is necessary.

Q.No.1

Derive the general equation for two input phase comparator. (10)

Q. No. 2

What is basic principal of Time-overcurrent relays? Draw and explain Definite Time Overcurrent Relay. (10)

Q. No. 3

What is Sampling Comparator? Analyze Realization of reactance and MHO relay using sampling comparator. (10)

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – MARCH-2019

Course: M. Tech in _EPS **Sem: II**

Subject Name: Smart Grid Design and Analysis **Subject Code: MTEPS203-2**

Max Marks: 20 **Date:-13th MARCH 2019** **Duration:- 1 Hr.**

Instructions to the Students:

1. **All questions are compulsory**
2.
3.
4.

		Marks
Q. 1	**Solve Any One of the following.**	**08**
(A)	Explain Wide area monitoring system .	
(B)	Explain the various technologies of smart grid.	
Q.2	**Solve Any Three of the following.**	**12**
(A)	Explain "Key challenges in smart grid" ..	
(B)	Give the function of smart grid components.	
(C)	Write a note on general view of the smart grid market drivers.	
(D)	What is the role of stakeholders?	

***** End *****

M.E ES

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103
Mid Semester Examination – March - 2019

Branch: M.Tech (EPS) **Sem.:- I**

Subject with Subject Code:-M & SPES **Marks: 20**

Date:- **Time:- 1 Hr.**

Instructions:- **All The Best (if any)** **(Marks)**

Q.No.1 **Attempt any one of the following.** **(08)**

a.) Explain single phase rectifier with R-L load. Draw Simu link model of same.

b.) State and explain challenges in computer simulation.

Q.No. 2 **Attempt any three of the following:** **(12)**

a.) Explain trapezoidal method of integration for time domain analysis.

b.)Compare circuit oriented simulator with equation solver.

c.)Draw circuit and simu link model of single phase inverter.

d.) Draw symbols and schematic representation of SCR,IGBT,MOSFET,Diode.

(short answer questions 4 marks each)

M.Tech EC

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Mid Semester Examination – March - 2019

Branch: M.Tech (EC) **Sem.:- II**

Subject with Subject Code:- ADSP (MTEEC201) **Marks: 20**

Date:- 11/03/2019 **Time:- 1 Hr.**

Instructions:- **(Marks)**

1. **Check whether you have got correct question paper.**
2. **Assume suitable data if necessary.**
3. **Figure to right indicates full marks.**

Q.No.1 Solve the following **(06)**

1) In cascade form of realization, how many bits should be used to represent the FIR filter coefficients in order to avoid the quantization effect on filter coefficients?

a. 5 to 10 **b.** 12 to 14 **c.** 20 to 24 **d.** 28 to 40

2) Which among the following has/have a provision to support an adaptive filtering mechanism?

a. IIR **b.** FIR **c.** Both a and b **d.** None of the above

3) Which function has a provision of determining the similarity between the signal and its delayed version?

a. Auto-correlation Function **b.** Cross-correlation Function
c. Both a & b d. None of the above

4) What does the spectral density function of any signal specify?

a. Distribution of energy or power
b. Consumption of energy or power
c. Conservation of energy or power
d. Generation of energy or power

5) Padding of zeros increases the frequency resolution.

a. Tru **b.** False

6) Time shifting of discrete time signal means

a. y[n] = x[n-k] **b.** y[n] = x[-n-k]

c. y[n] = -x[n-k] **d.** y[n] = x[n+k]

Q.No. 2 Attempt any Two of the following: (06)

a.) Explain adaptive interference mitigation in radar systems.

b.) Derive the expression for computing kalman gain.

c.) Explain feed forward control system.

Q.No. 3 Attempt any One of the following: (08)

a.) Any process that can be factored is call as regular process. Justify this statement and describe the properties of regular process.

b.) Explain operation for wiener filter and derive an expression for the minimum mean square error.

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Mid Semester Examination – March - 2019

Branch: M.Tech. (Electronics Engineering) **Sem.:- II**

Subject :- NanoElectronics **Subject Code:- (MTEEC202)**

Time:- 1 Hr. **Marks: 20**

Date:- 12/03/2019

Instructions:- Assume suitable data

Q.No.1 Attempt following Questions **(6)**

1) In CVD high temperatures ---------are used to develop thin films.
A) 300~350°C B) 400~550°C C) 600~90°C D)100~150°C

2) Laser printing method is sometimes called planographic printing since the image and non-image areas are in the same plane.
A) True B) False

3) In Diffractometer, the identification of a component of the sample from its powder diffraction pattern is based upon the _____ of lines and their relative _____.
A) Number, length B) Number, intensity C) Position, length D) Position, intensity

4) Tunnel diode has a very fast operation in_____
A) gamma frequency region B) ultraviolet frequency region
C) microwave frequency region D) radio frequency region

5) In MESFET, an applied signal at the gate modulates the electron carriers; this produces _____ in the FET.
A) voltage amplification B) voltage attenuation C) electron multiplication
D) electron recombination

6) What is scanning tunneling microscopy reveals periodic structure with atomic dimentions? What exactly seen
A) The atomic lattice B) electronic density of states modulations associated to the atomic lattice
C)Fermilevel modulations associated to the atomic lattice
D) the electron diffraction pattern associated to the atomic lattice

Q.No. 2 Attempt any two of the following: **(3x2)**

a) Find the number of Hexagon per unit cell and radius of 11,10 ZigZag nanotube.

b) Illustrate the design structure for ferroelectric FET.

c) What are the types of Superconductor? Describe it.

Q.No.3 Attempt any one of the following **(08)**

a) Describe following properties of Carbon Nanotubes
i) Electrical Properties ii) Vibrational Properties iii) Mechanical Properties

b) List the type of Etching and Describe Wet and Dry etching

M. ECT

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Mar 2019

Course: M. Tech in F.Y. (ECT) **Sem: II**

Subject Name: Advanced Biomedical Signal Processing **Subject Code:MTEEE244**

Max Marks: 20 **Date:- 14/03/2019** **Duration:- 1 Hr.**

Instructions to the Students:

1. Check question paper correct or not.
2. Draw net and labeled signals.

		Co level	Marks
Q. 1	**Attempt following questions**		6
1	What is diagnostically useful frequency range? a)0.025 to .05Hz b).05 to 150 Hz c)150 to 200 Hz d).05 to 150 MHz	1	
2	The SA node fires at a rate of ---- a)60-100 bpm b)40-60 bpm c)80-90 bpm d)60 -80 bpm	1	
3	What area of Heart forms the QRS part of an ECG? a)Purkinje fibers b)left and right bundles. c)AV node d)SA node	1	
4	----- is a signal of low amplitude and low frequency content a)QRS complex b)R-R interval c)ST segment d) T-P interval	1	
5	**From instrument point of view ,heart is a ---- system** a) Hydraulic b) pneumatic c) electronic d) electrical	1	
6	Source of Biomedical potential is ----- in nature a)Electronic b)electric c)Ionic d) mechanical	1	
Q.2	**Solve Any Two of the following.**		3 X 2
(A)	What are the objectives of biomedical signal analysis	1	
(B)	Explain computer Aided diagnosis	1	
(C)	How cocktail party problem is applied to EEG signals	3	
Q. 3	**Solve Any One of the following.**		8
(A)	Explain PCG with three channel simultaneous record of PCG,ECG and carotid with neat sketches of the genesis of heart sound.	2	
(B)	Explain generation of QRS detection signal in ST/AR HP system	1	

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Mid Semester Examination – March - 2019

Class: M. Tech (Electronic Engg.)
Sem.:- II

Subject:-Optical Fiber Communication (MTEEE233) **Marks: 20**

Date:- 13/03/2019 **Time:- 1 Hr.**

Instructions: Assume suitable data if required.

(Marks)

Q.No.1 Attempt any six of the following: (06)

a.) Define Acceptance angle.
b.) Give the classification of fibers.
c.) What is Fresnel reflection?
d.) State the requirements of fiber materials.
e.) List the draw backs of fibers.
f.) Define critical angle.
g.) What is Meridional Ray?
h.) Define Numerical Aperture.

Q.No. 2 Attempt any two of the following: (06)

a.) Discuss OVD technique of fiber fabrication.
b.) A silica fiber has core RI=1.50, cladding RI=1.47. Calculate (i) Critical angle (ii) NA (iii) Acceptance angle
c.) Derive modal analysis of graded index fiber.

Q.No.3 Attempt any one of the following: (08)

a.) Discuss Ray analysis of optical fiber.
b.) What is splice? State its types and explain any one splicing technique.

M.Tech. Mech

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – May 2019

Course: M. Techin _Manufacturing Engineering_____Sem: II

Subject Name: Casting and Moulding TechnologySubject Code: MMF202Max

Marks: 20 Date:-12/03/19 Duration:- 1 Hr.

Instructions to the Students:

1. **Assume suitable data wherever required.**
2. **Draw figure wherever necessary.**
3. **Figure to right indicates full marks.**

		(Level/ CO)	Marks
Q 1	**Solve all the Multiple Choice Questions**		**1 X 6=6**
	1During melting process flux is added to react with impurities to form a) Cavity b) Slag c) Cold shut d) Blow holes	**CO2**	**1**
	2.Defects caused by the chilling of the casting are known as a) Hot spots b) Hot tears c) Shrinkage cavity d) Swell	**CO2**	**1**
	3. When the molten metal is put into the mold, what is that temperature called? a) Melting temperature b) Vapourising temperature c) Pouring temperature d) Room temperature	**CO1**	**1**
	4._____ which are made of two or more different materials combining the advantages of each material. a) Permanent molds b) Expendable molds c) Composite molds d) none of the mentioned	**CO1**	**1**
	5Which of the following characteristics is mainly considered for the solidification of castings? a) Appearance b) Crystal structure c) Moulding capacity d) Surface finish	**CO3**	**1**

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – May 2019

Course: M. Techin _Manufacturing Engineering_____Sem: II

Subject Name: Casting and Moulding TechnologySubject Code: MMF202~~Max~~

Marks: 20 Date:-12/03/19 Duration:- 1 Hr.

Instructions to the Students:

1. **Assume suitable data wherever required.**
2. **Draw figure wherever necessary.**
3. **Figure to right indicates full marks.**

	(Level/ CO)	Marks
Q.1 **Solve all the Multiple Choice Questions**		**1 X 6=6**
1During melting process flux is added to react with impurities to form a) Cavity b) Slag c) Cold shut d) Blow holes	**CO2**	**1**
2.Defects caused by the chilling of the casting are known as a) Hot spots b) Hot tears c) Shrinkage cavity d) Swell	**CO2**	**1**
3. When the molten metal is put into the mold, what is that temperature called? a) Melting temperature b) Vapourising temperature c) Pouring temperature d) Room temperature	**CO1**	**1**
4._____ which are made of two or more different materials combining the advantages of each material. a) Permanent molds b) Expendable molds c) Composite molds d) none of the mentioned	**CO1**	**1**
5Which of the following characteristics is mainly considered for the solidification of castings? a) Appearance b) Crystal structure c) Moulding capacity d) Surface finish	**CO3**	**1**

M.Tech Mech

	DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE **Mid Semester Examination –March 2019** **Course: M. Tech in Manufacturing** **Sem: II** **Subject Name: Metal Forming Processes** **Subject Code: MME21** **Max Marks: 20** **Date:- / 03 /2018** **Duration:- 1 Hr.**		
	Instructions to the Students: 2. All question are compulsory 2. Assume suitable data, if necessary		
		(Level/CO)	Marks
Q. 1	**Solve following**		**1X6**
	1.Define four high Rolling process	1	
	2. Define upsetting type of forging process	1	
	3. Explain the plasticity	1	
	4.Enlist defects in wire drawing components	2	
	5. Explain the direct extrusion	2	
	6.What is upper bound theorem ?	2	
Q.2	**Solve Any Two of the following.**		**3 X 2**
(A)	Explain the yield criterion applied for forming processes	1	
(B)	Explain pressure distribution in rolling process	2	
(C)	Explain the wire drawing process in detail.	3	
Q. 3	Solve Any One of the following.		8
(A)	Derive an equation for total forging force in case of disc forging	1	
(B)	Explain the rolling process, derive an equation for state of stress in equilibrium position.	2	
	*** End ***		

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – March 2019

Course: M. Tech in -Manufacturing Engineering **Sem: III**

Subject Name: Elective-III- Management Information Systems

Subject Code: MME23D **Max Marks: 20**

Date:- **Duration:- 1 Hr.**

Instructions to the Students:

1. **Assume suitable data wherever required.**
2. **Draw figure wherever necessary.**
3. **Figure to right indicates full marks.**

		(Level /CO)	Marks
Q. 1	**Solve all the Questions**		**1 X 6=6**
	1. What is Management & Information System ?	**1**	
	2. What are the fundamentals of strategic advantage ?	**1**	
	3. What is Telecommunication & Networks ?	**1**	
	4. What is system Software ?	**1**	
	5. Enlist the components Management of Information System ?	**1**	
	6. What is Computer System management?	**2**	
Q.2	**Solve Any Two of the following.**		**3 X 2=6**
(A)	Explain the use of Information System in Business.	**2**	
(B)	Explain in detail Networked Enterprise.	**3**	
(C)	Write a note on Changing environment and its impact on Business.	**1**	
Q. 3	**Solve Any One of the following.**		**1X 8=8**
(A)	Explain the different Components of Information System in detail.	**1**	
(B)	Explain data resource management in detail.	**2**	
	***** End *****		

M. Mech

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Mar 2019

Course: M. Tech in Manufacturing Engineering **Sem: II**

Subject Name: Ele-IV , World Class Manufacturing Subject Code: MME24F

Max Marks: 20 **Date:-**

Duration:- 1 Hr.

Instructions to the Students:

1. **Assume suitable data wherever required.**
2. **Draw figure wherever necessary.**
3. **Figure to right indicates full marks.**

		(Level/ CO)	Marks
Q. 1	**Solve any six of the following:**		1 X 6=6
	a) What is Benchmarking?	CO2	
	b) What is bottleneck?	CO2	
	c) Define challenges in world class manufacturing?	CO2	
	d) List the best practices in World Class Manufacturing.	CO2	
	e) What are the systems and tools used for world class manufacturing?	CO2	
	f) Explain Giving example Toyota Production System.	CO2	
	g) What is Lean Production?	CO3	
Q.2	**Solve Any Two of the foliowing.**		3 X 2=6
(A)	Explain the concept of FMS. Classify FMS	CO3	
(B)	How to Improve Product & Process Design through Rapid Prototyping?	CO3	
(C)	How to apply 5-S system in Industry?	CO3	
			1X 8
Q. 3	**Solve Any One of the following.**	CO3	
(A)	What are the Models for manufacturing excellence?	CO1	
(B)	What is Total Productive maintenance? How it can be implemented?	CO3	
	***** End *****		

M. Tech Civil

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – March 2019

Course : M. Tech in Structural Engineering **Semester : IV**

Subject Name: Theory of Plates and Shells **Subject Code: CVSE201**

Max Marks: 20 **Date: 11th March 2019** **Time: 3 pm to 4 pm** **Duration: 1 Hour**

Instructions to the Students:

1. Assume suitable data wherever necessary and State it clearly.
2. Figures to Right Indicate full Marks.
3. C1 indicate remembering Level, C2 indicates understand Level & C3 indicates Apply Level, C4 indicates Evaluate Level, C5 indicates Synthesize level

	QUESTIONS	(CO/ Level)	Marks
Q. 1	Attempt following Questions (6 Marks)		6
	1. State the boundary conditions for clamped edge rectangular plate.	CO 2, C2	
	2. Define thick plate bending.	CO 1, C1	
	3. State Governing differential equation for rectangular Plate.	CO 1, C1	
	4. State Navier's assumption for transverse load and deflection of beam for uniformly distributed load.	CO 2, C1	
	5. State Levy's assumption for boundary condition of plate.	CO 2, C1	
	6. State the relationship between Moment and curvature for rectangular plate.	CO 1, C1	
Q.2	**Solve Any TWO of the following.**		6
(A)	Sketch the free body diagram of a circular plate element representing lateral loads, Moments and Shears.	CO3, C2	
(B)	Using Navier's method find maximum deflection for a square plate of side 3m, thickness 120 mm and load 3 KN/ m^2	CO2, C2	
(C)	Using Navier's method find particular coefficient q_{mn} of the series.	CO2 , C2	
Q. 3	**Solve ANY ONE of the following.**		8
(A)	Discuss Navier's solution for simply supported rectangular plate subjected to sinusoidal loading. Hence find the expression for transverse deflection of plate.	CO 2, C3	
(B)	Derive Governing Differential equation for circular plate.	CO 3, C3	
	*** End ***		

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY
LONERE, RAIGAD, 402 103
Mid Semester Examination – March 2019

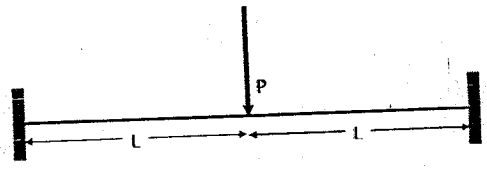
Branch: M. Tech. (Structural Engineering) 2018 – 2019 Semester II
Subject: Finite Element Methods Marks 20
Subject Code: CVSE-202
Date: _____ - 2019
Time: 1 hour

Instructions: 1. The first question is compulsory
2. Show your computations upto the fourth place of decimal.

Q. 1 Answer any two: 2 x 4
(a) What are different steps of an FEM.
(b) Derive the shape functions of a spring element.
(c) Explain Galerkin method in brief.

Q. 2 Solve $\phi'' + \phi' - 2\phi = 0$, with $0 \leq x \leq 1$ with boundary conditions $\phi(x = 0) = 0, \phi(x = 1) = 1$, by using the least square method. 12

Q. 3 Analyse the beam shown in the following figure by using FEM, where the product of elasticity E, and the moment of inertia I is a constant. 12



DR.BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,LONERE

Mid Semester Examination- March 2019

Course: FY -M.Tech-Structural Engineering Sem: II

Subject Name: El-IV- Design of Tall Buildings **Subject Code:** CVSE-E4-01

Max.Marks:20 **Date:** 14/03/19 **Duration:** 1 Hr.

Instructions to the Students:

1. Illustrate your answers with neat sketches, diagrams etc. where ever necessary.
2. Necessary data is given in the respective questions. If such data is not given, it means that the knowledge of that data is a part of the examination.

		CO	Level	Marks
Q. 1	**Attempt any three of the following Questions.**			**2*3**
1.	Define Tall Building and Dead load acting on RCC structures.	CO1	C1	
2.	Enlist major factors of Design criteria for wind Load.	CO1	C3	
3.	Enlist live load reduction criteria	CO1	C1	
4.	Enlist the assumptions made in the approximate analysis of the structures	CO3	C2	
Q. 2	**Solve any Two of the following**			**3*2**
(A)	Write a short note on Buckling analysis	CO3	C2	
(B)	Explain load transfer mechanism in braced rigid frame structures	CO2	C1	
(C)	Write a short note on Gravity load acting on structures	CO1	C1	
Q. 3	**Solve any One of the following**			**8**
(A)	Explain when dynamic analysis is needed to be carried out for structures as per IS 875 Part III. State different methods to perform dynamic wind analysis of structures	CO3	C2	
(B)	Explain with figure working of out trigger truss structural system	CO3	C2	

END

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – March 2019

Course: M.Tech. in Structural Engineering Sem: IV

Subject Name: Retrofitting of Structures Subject Code: CVSE-E3C

Max. Marks: 20 Date: 13/03/2019 Duration:- 1 Hr

Instructions to the Students:

1. All questions are compulsory.
2. Respective marks for question are indicated at right. All sub-questions carry equal marks.

		/CO)	Marks
Q.1	Answer the following.		06
	1. What is the effect of pozzolanas in concrete?	/CO1	
	2. What are the dis-advantages of having less cover to the reinforcement in concrete?	/CO2	
	3. Define coefficient of thermal expansion.	CO1	
	4. What are the effects of dampness in the structure?	/CO2	
	5. What are the factors against which a steel structure is considered as weak?	/CO1	
	6. What are the common materials of masonry?	CO2	
Q.2	Attempt any two of the following:		06
	1. What is the need for quality assurance?	/CO1	
	2. What are the causes of dampness in the structure?	/CO2	
	3. Compare the rate of steel corrosion in Mumbai and Aurangabad.	CO3	
Q.3	Attempt any one of the following.		08
	1. Describe in details the shrinkage in concrete and remedial measures against that.	CO2	
	2. Write a short note on: (i) Rebound hammer test (ii) Ultrasonic pulse velocity test	CO1	

MTech SE

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – March 2019

Course: M. Tech (Computer Science & Engineering) **Sem: II**

Subject Name: Data Science **Subject Code: MTCE1201**

Max Marks: 20 **Date:- 11th March 2019** **Time:- 1 Hr.**

Instructions to the Students:

- Assume appropriate data if necessary
- Draw neat diagram wherever necessary

Q. 1 Attempt any one of the following

a) Different between linear and logistic regression

b) Is text mining the same as information extraction? Why?

Q.2 Attempt any Three of the following (12)

a) Apply single link or min hierarchical clustering on following (x,y) coordinates of 6 points.

Pont	x-coordinate	y-coordinate
P1	0.40	0.53
P2	0.22	0.38
P3	0.35	0.39
P4	0.26	0.19
P5	0.08	0.41
P6	0.45	0.30

b) How R-Squared value metric is used for linear regression model evaluation? Explain with example.

c) Would the cosine measure be the appropriate similarity measure to use with K-means clustering? Why or why not?

d) The 'database' below has four transactions. What association rules can be found in this set, if the minimum support (i.e coverage) is 2.

Trans_id	Itemlist
T1	{K, A, D, B}
T2	{D, A C, E, B}
T3	{C, A, B, E}
T4	B, A, D}

*****END*****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – March 2019

Course: M. Tech (Computer Science & Engineering) **Sem: I**

Subject Name: Software Architecture **Subject Code: MTCE1202**

Max Marks: 20 **Date: - 12th March 2019** **Time: - 1 Hr.**

Instructions to the Students:

I. Assume appropriate data if necessary
II. Draw neat diagram wherever necessary

Q. 1 Attempt any one of the following (08)

a) Identify the two important techniques that software engineering uses to tackle the problem of exponential growth of problem complexity with its size.

b) Identify three reasons for the necessity of developing a prototype during software development.

Q.2 Attempt any Three of the following (12)

a) Explain Decomposition style with reference to the terms: elements, relations and properties.

b) What does the term "balancing a DFD" mean? Give an example to explain your answer. Also, explain top down decomposition in the context of structured analysis?

c) List and explain the seven rules for documentation.

d) Represent the following relations among classes using UML diagram.

1. Students credit 5 courses each semester. Each course is taught by one or more teachers.

2. Bill contains number of items. Each item describes some commodity, the price of unit, and total on this price.

3. An order consists of one or more order items. Each order item contains the name of the item, its quantity and the date by which it is required. Each order item is described by an item type specification object having details such as its vendor addresses, its unit price, and the manufacturer.

*****END*****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE.

Mid Semester Examination – MARCH-2019

Course: M. Tech (Computer Science & Engineering) **Sem: II**

Subject Name: Mobile Computing **Subject Code: MTCE1204**

Max Marks: 20 **Date:- 14th Mar 2019** **Time:- 1 Hr.**

Instructions to the Students:

I. Assume appropriate data if necessary

II. Draw neat diagram wherever necessary

Q. 1 Attempt any one of the following **(08)**

a) With Suitable diagram Explain android activity lifecycle. Create an android application having TextView, EditText and Button.

b) State the challenges present in development of android application. Write an android application for performing basic arithmatic operations.

Q.2 Attempt any Three of the following **(12)**

a) What is intent ? Explain Explicit vs Implicit Intent with suitable program.

b) Describe in detail Adaptive Layout with suitable example.

c) Explain Categories of Activities in detail.

d) Enlist Different UI Elements in Android with description.

*****END*****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – March 2019

Course: M. Tech (Computer Science & Engineering) **Sem: II**

Subject Name: ELE-3 Software Testing **Subject Code: MTCE1203**

Max Marks: 20 **Date: - 13th March 2019** **Time: - 1 Hr.**

Instructions to the Students:

I. Assume appropriate data if necessary

II. Draw neat diagram wherever necessary

Q. 1 Attempt any one of the following (08)

a) List three challenges from the testing perspective for each of the following models:

I) Spiral Model

II) Waterfall Model

b) Explain Structure-based testing techniques.

Q.2 Attempt any Three of the following (12)

a) Compare & contrast between equivalence class partitioning & Boundary value analysis.

b) Which technique can be used to achieve input and output coverage? Whether, it can be applied to human input, input via interfaces to a system, or interface parameters in integration testing, Justify.

c) An input field takes the year of birth between 1900 and 2002.
What are the boundary values for testing this field?

d) Given the following code, which statement is true about the minimum number of test cases required for full statement and branch coverage?

```
Read p
Read q
IF p+q> 100
    THEN Print "Large"
ENDIF

IF p > 50
    THEN Print "p Large"
ENDIF
```

*****END*****