

PRN NO

QP. CODE

W001

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY BTech
Course Code	01FYBSL101
Course Title	Applied Mathematics – I

Day & Date	Saturday 4-1-2025
Time	10.30am to 1pm
Max. Marks	70

**Instructions:**

- All questions are compulsory; assume suitable data if necessary and mention it clearly.
- Mobile phones and programmable calculators are strictly prohibited.
- Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	
1	Solve Any Two					
	a	Solve the equations $4x + 3y - z = 0, 3x + 4y + z = 0, 5x + y - 4z = 0.$	07	1,3	L1, L3	1.1.1
	b	Find eigen values and eigen vector for smallest eigen value of the matrix $A = \begin{bmatrix} 9 & -1 & 9 \\ 3 & -1 & 3 \\ -7 & 1 & -7 \end{bmatrix}$	07	1,3	L1, L3	1.1.1
	c	Find Eigen values of the matrix A and also find eigen values of (i) $A^{-1}$ (ii) adjoint A where $A = \begin{bmatrix} 2 & 3 & 4 \\ 0 & 4 & 2 \\ 0 & 0 & 3 \end{bmatrix}$	07	1,3	L1, L3	1.1.1
2	Solve Any Two					
	a	Arrange in powers of x by using Taylor's series $7 + (x + 2) + 3(x + 2)^3 + (x + 2)^4$	07	1,3	L1, L3	1.1.1
	b	Find all roots of the equation $x^4 + x^3 + x^2 + x + 1 = 0$	07	1,3	L1, L3	1.1.1
	c	Simplify $\frac{(1 + \cos\pi/9 + i\sin\pi/9)^{18}}{(1 + \cos\pi/9 - i\sin\pi/9)^{18}}$	07	1,3	L1, L3	1.1.1

3	Solve Any Two					
	a	Find $\sqrt[4]{12}$ by Secant Method	07	1,3	L1, L2	1.1.1
	b	Determine one root of the following equation by Newton Raphson Method $3x - \cos x - 1 = 0.$	07	1,3	L1, L3	1.1.1
c	If $u = \log(\tan x + \tan y + \tan z)$ prove that $\sin 2x \frac{\partial u}{\partial x} + \sin 2y \frac{\partial u}{\partial y} + \sin 2z \frac{\partial u}{\partial z} = 2$	07	1,3	L1, L3	1.1.1	
4	Solve Any Two					
	a	Find the rank of matrix by normal form $A = \begin{bmatrix} -3 & 4 & 6 \\ 5 & -2 & -3 \\ 3 & 1 & -4 \end{bmatrix}$	07	1,3	L1, L3	1.1.1
	b	Verify Cayley Hamilton's Theorem and find $A^{-1}$ for the matrix $A = \begin{bmatrix} 8 & -8 & -2 \\ 4 & -3 & -2 \\ 3 & -4 & 1 \end{bmatrix}$	07	1,3	L1, L3	1.1.1
c	Find all the values of $(1 - i\sqrt{3})^{1/4}$	07	1,3	L1, L3	1.1.1	
5	Solve Any Two					
	a	Evaluate $\lim_{x \rightarrow 0} \frac{e^x \sin x - x - x^2}{x^3}$	07	1,3	L1, L3	1.1.1
	b	Find one root of the equation by Bisection method $x^3 - 5x + 1 = 0.$ Find answer up to seven iteration.	07	1,3	L1, L3	1.1.1
c	If $u = \frac{4(x+y)}{x^2+y^2}$ find $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y}$ and $x^2 \frac{\partial^2 u}{\partial x^2} + 2xy \frac{\partial^2 u}{\partial x \partial y} + y^2 \frac{\partial^2 u}{\partial y^2}$	07	1,3	L1, L3	1.1.1	

PRN NO

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W002

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY-MCA	Day & Date	Saturday, 4-Jan-25
Course Code	01MCL101	Time	10:30am To 1:00pm
Course Title	Operating System	Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Answer the following	Marks	CO	BL	PI	Unit 4
1	Solve Any Two						1
	a	What are the types of operating system?	07	1	I	3.1.6	
	b	Estimate the life cycle of process state.	07	1	V	3.1.2	
	c	Explain details of inter-process communication.	07	1	II	2.4.3	
2	Solve Any Two						2
	a	Analyse the CPU Scheduling Algorithm in detail.	07	2	IV	3.3.2	
	b	What is bankers algorithm explain with example?	07	2	I	2.1.3	
	c	Define deadlock with its preventions.	07	2	I	3.1.6	
3	Solve Any Two						3
	a	Discuss memory management technique in details.	07	3	VI	4.1.1	
	b	Write a note on demand paging.	07	3	II	3.2.2	
	c	Determine file allocation method in detail.	07	3	V	4.1.1	
4	Solve Any Two						4
	a	Consider the hard disk having 199 tracks Currently head is on track number 53 and moving outside. Following is the queue of request kept in FIFO order. 98, 183, 37, 122, 53,14, 124, 65, 67. Calculate total time required to	07	4	III	2.1.2	

		move all these tracks by using following disk scheduling algorithms. 1)CSAN 2)LOOK 3)CLOOK					
	b	Design swap-space concept and management.	07	4	VI	5.1.2	
	c	Classify distributed OS with its definition & pros and cons.	07	4	IV	6.1.1	
Solve Any Two							
5	a	Classify the difference of process and thread.	07	1	II	2.2.4	1 - 4
	b	What is simulation concept in CPU scheduling?	07	2	I	3.3.2	
	c	Write a detail note on virtual memory.	07	3	II	4.1.1	
	d	Explain disk scheduling algorithm with its types.	07	4	II	5.1.1	

PRN NO

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W003

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	M.Tech Construction Management
Course Code	01CML501
Course Title	Project Evaluation & Financing

Day & Date	Saturday 4-01-2025
Time	10.30 am to 01.00 pm
Max. Marks	70

## Instructions:

- All questions are compulsory; assume suitable data if necessary and mention it clearly.
- Mobile phones and programmable calculators are strictly prohibited.
- Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 6	
1	Solve Any Two						
	a	Mr. Sharma opens a saving account by depositing Rs.1500 now and deposits Rs.1500 per year for 15 years. How much money will be in his account after last deposit, if $i = 12\%$ . How much money will be in is account if interest rate change to $14\%$ after 5 years.	07	1			1 & 2
	b	Compare various criteria used for financial appraisal of a project	07	2			
c	Explain Payback period. What are the limitations of payback period criteria of economic appraisal?	07	2				
2	Solve Any Two						
	a	What are the common techniques available for project risk analysis? Briefly explain any one.	07	3			3 & 4
	b	State the meaning, nature and importance of project finance.	07	4			
c	Evaluate merits and limitations of various sources of finance.	07	4				
3	Solve Any Two						
	a	Explain the need for the project managers for having knowledge of the accounting methods.	07	4			5 & 6
	b	How construction costs are classified & also explain their budgeting & control.	07	4			
c	Explain BOT & BOOT.	07	5				

Q.no.		Marks	CO	BL	PI	Unit 6
4	Solve Any Two					
	a	List basic economic factors and explain their use in economic analysis of projects.	07	1		1, 2 & 3
	b	Discuss the benefits of considering financial risks in appraisal process of construction projects.	07	2		
	c	Explain with example Break Even Analysis.	07	2		
5	Solve Any Two					
	a	What are components of working capital? Explain it's financing.	07	4		4, 5 & 6
	b	Explain record & reporting of construction site accounts.	07	4		
	c	Describe PPP model & its suitability in construction industry.	07	5		

PRN NO 24UIT001

QP. CODE W004

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FYBTech	Day & Date	6 <sup>th</sup> January, 2024
Course Code	01FYBSL103	Time	2:30 hrs
Course Title	Engineering Chemistry	Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q. no.		Marks	CO	BL	PI															
1	<b>Solve Any Two</b>																			
	a	Give composition, properties and applications of brasses.	7	1	1	2.1.3														
	b	Discuss principle, instrumentation and applications of gas liquid chromatography (GLC).	7	3	2	2.2.2														
	c	Give composition, properties and uses of fibre reinforced plastics.(FRP).	7	1	1	1.2.1														
2	<b>Solve Any Two</b>																			
	a	A sample of water on analysis was found to contain the following impurities; <table style="margin-left: 20px; border: none;"> <tr> <td></td> <td style="text-align: center;">Wt. mg/lit</td> <td style="text-align: center;">Mol. wt.</td> </tr> <tr> <td>Ca(HCO<sub>3</sub>)<sub>2</sub></td> <td style="text-align: center;">19</td> <td style="text-align: center;">162</td> </tr> <tr> <td>Mg(HCO<sub>3</sub>)<sub>2</sub></td> <td style="text-align: center;">17</td> <td style="text-align: center;">146</td> </tr> <tr> <td>CaCl<sub>2</sub></td> <td style="text-align: center;">15</td> <td style="text-align: center;">111</td> </tr> <tr> <td>MgSO<sub>4</sub></td> <td style="text-align: center;">20</td> <td style="text-align: center;">120</td> </tr> </table> Calculate carbonate, non carbonate and total hardness of water in ppm		Wt. mg/lit	Mol. wt.	Ca(HCO <sub>3</sub> ) <sub>2</sub>	19	162	Mg(HCO <sub>3</sub> ) <sub>2</sub>	17	146	CaCl <sub>2</sub>	15	111	MgSO <sub>4</sub>	20	120	7	3	2
	Wt. mg/lit	Mol. wt.																		
Ca(HCO <sub>3</sub> ) <sub>2</sub>	19	162																		
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MgSO <sub>4</sub>	20	120																		

	b	Following results were recorded in a Boy's gas calorimeter experiment. Volume of gas used= 0.9 m <sup>3</sup> Weight of water heated= 38.6 kg Temperature of inlet water= 21° C Temperature of outlet water= 40° C Mass of steam condensed = 0.05 kg. Calculate the gross and net calorific value of the fuel assuming that latent heat of condensation of water vapour as 587 kcal/kg.	7	3	2	2.1.3
	c	Give definition, significance and determination of acidity of water.	7	1	1,2	1.2.1
3	Solve Any Two					
	a	Define electrochemical corrosion. Illustrate hydrogen evolution mechanism with example.	7	1	1,2	2.1.3
	b	Define polymerisation. Discuss condensation polymerisation with example.	7	1	1,2	2.1.3
	c	What is hot dipping? Explain the process of tinning.	7	2	2	1.2.1
4	Solve Any Two					
	a	Derive an expression for Beer Lambert's law.	7	3	2	2.1.3
	b	Give composition, properties and uses Duralumin, Alnico and Nichrome.	7	1	1	2.1.3
	c	Write a brief note on reverse osmosis.	7	1	2	1.2.1
5	Solve Any Two					
	a	Discuss the characteristics of a good fuel.	7	1	1	1.2.1
	b	Distinguish between thermosoftening and thermosetting plastics.	7	1	1	2.2.4
	c	Write a note on cathodic protection.	7	2	2	1.2.1



PRN NO

24PMCO11

QP. CODE

W005

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	Fy MCA	Day & Date	Monday 06-01-2025
Course Code	01MCL102	Time	10:30 to 1:00
Course Title	Python Programming	Max. Marks	70

## Instructions:

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 4	
1	Solve Any Two						
	a	What is the Python, Explain the Build Process of Python Application.	07	CO1	LI	2.1.1	1
	b	Compare Interactive mode and Script mode.	07	CO1	LIV	2.2.4	
c	Build a Python Program accept a number from 1 to 7 and display the name of the day. Like 1 for Sunday, 2 for Monday.	07	CO4	L III	3.2.2		
2	Solve Any Two						
	a	Represent the Built-in Functions, Explain the types of String Functions.	07	CO3	L V	3.4.2	2
	b	Build a program which contains one function named as ChkNum(), which accept one parameter as number. If number is even then it should display "Even Number" otherwise display "Odd Number" on console.	07	CO4	L III	3.2.2	
c	Build a Python program which accept one number and display below Pattern. Ex. Input: 5 Output: 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	07	CO4	L III	3.2.2		

3	Solve Any Two						3
	a	Represent the sequence data type in python, Write the Note on <ul style="list-style-type: none"> <li>List</li> <li>Tuple</li> <li>Dictionary</li> </ul>	07	CO3	L V	3.4.2	
	b	Build a Python program you can create 2 empty set – set1 and set2. Using for loop you can add the elements in set1 and set2. Display the Union, Intersection, and relation between set1 and set2.	07	CO4	L III	3.2.2	
	c	Build a Python program which accept N number from user and store it into List. Return Minimum elements from that List. Ex. Input: Number of elements: 6 Input elements: 13 5 7 4 56 34 Output: 4	07	CO4	L III	3.2.2	
4	Solve Any Two						4
	a	Demonstrate the Object Oriented Programming in Python.	07	CO2	L II	3.4.2	
	b	Represent the I/O File Handling, Explain Three types File Handling.	07	CO4	L V	3.4.2	
	c	Represent the Packages Importing, Write the Note on <ul style="list-style-type: none"> <li>NumPy</li> <li>Pandas</li> </ul>	07	CO3	L V	3.4.2	
5	Solve Any Two						1 - 4
	a	Represent the Expression and Statement, Write the Note on <ul style="list-style-type: none"> <li>Python Compiler</li> <li>Python Virtual Machine(PVM)</li> </ul>	07	CO1	L V	3.4.2	
	b	Represent the String Functions, Explain the String operators: (+, *, in, not in, range, slice [n:m]).	07	CO3	L V	3.4.2	
	c	Build a Python Program to Create on module named as Arithmetic which contains 4 functions as add() for addition, Sub() for subtraction, Mult for multiplication and Div for division. All Functions accept two parameters as number and perform the operations.	07	CO4	L III	3.2.2	
	d	Represent the Exception, Explain the use of three keywords as try, except, finally in python.	07	CO3	L V	9.3.1	

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W006

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	M.Tech Construction Management	Day & Date	Monday 06-01-2025
Course Code	01CML502	Time	10:30 to 1:00
Course Title	Project Planning & Scheduling	Max. Marks	70

## Instructions:

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 6																												
1	<b>Solve Any Two</b>																																	
	a	Explain in detail the different phases of project management.	07	1		1 & 2																												
	b	Discuss Project Management Triangle in construction industry.	07	2																														
	c	From the table given below, draw the network and determine the Critical Path & Project duration.	07	2																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Activity</th> <th>10-20</th> <th>10-30</th> <th>10-40</th> <th>20-50</th> </tr> </thead> <tbody> <tr> <td>Duration</td> <td>4</td> <td>3</td> <td>5</td> <td>5</td> </tr> <tr> <td>20-60</td> <td>30-90</td> <td>40-70</td> <td>40-80</td> <td>50-60</td> </tr> <tr> <td>10</td> <td>4</td> <td>7</td> <td>2</td> <td>0</td> </tr> <tr> <td>60-100</td> <td>70-100</td> <td>80-90</td> <td>90-100</td> <td></td> </tr> <tr> <td>7</td> <td>9</td> <td>5</td> <td>6</td> <td></td> </tr> </tbody> </table>					Activity		10-20	10-30	10-40	20-50	Duration	4	3	5	5	20-60	30-90	40-70	40-80	50-60	10	4	7	2	0	60-100	70-100	80-90	90-100		7	9	5	6
Activity	10-20	10-30	10-40	20-50																														
Duration	4	3	5	5																														
20-60	30-90	40-70	40-80	50-60																														
10	4	7	2	0																														
60-100	70-100	80-90	90-100																															
7	9	5	6																															
2	<b>Solve Any Two</b>																																	
	a	What are the different cost associated with project? Explain Direct & Indirect cost.	07	2		3 & 4																												
	b	Enumerate the steps involved in network compression.	07	2																														
c	Explain in brief Earned value analysis.	07	2																															
3	<b>Solve Any Two</b>																																	
	a	Draw a typical site layout plan for any construction site.	07	3		5 & 6																												
	b	Why is Structuring required for construction company? Discuss different structures of construction company.	07	4																														
c	Explain in brief workmen's compensation act.	07	5																															

Q.no.		Marks	CO	BL	PI	Unit 6																								
4	<b>Solve Any Two</b>																													
	a	Explain with an example WBS in construction industry.	07	1		1, 2 & 3																								
	b	Distinguish between Gantt Bar chart & Milestone chart with an example.	07	2																										
	c	Table given below gives the data about durations & the cost of various activities of the network. The project overhead costs are Rs.2000/week. Determine the cost after second compression.	07	2																										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Activity</th> <th>Normal Duration In days (Tn)</th> <th>Crash Duration In days (Tc)</th> <th>Normal Cost (Cn)</th> <th>Crash Cost (Cc)</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>4</td> <td>2</td> <td>4000</td> <td>12000</td> </tr> <tr> <td>2-3</td> <td>5</td> <td>2</td> <td>3000</td> <td>7500</td> </tr> <tr> <td>2-4</td> <td>7</td> <td>5</td> <td>3600</td> <td>6000</td> </tr> <tr> <td>3-4</td> <td>4</td> <td>2</td> <td>5000</td> <td>10000</td> </tr> </tbody> </table>	Activity	Normal Duration In days (Tn)	Crash Duration In days (Tc)	Normal Cost (Cn)	Crash Cost (Cc)	1-2	4	2	4000	12000	2-3	5	2	3000	7500	2-4	7	5	3600	6000	3-4	4	2	5000	10000				
Activity	Normal Duration In days (Tn)	Crash Duration In days (Tc)	Normal Cost (Cn)	Crash Cost (Cc)																										
1-2	4	2	4000	12000																										
2-3	5	2	3000	7500																										
2-4	7	5	3600	6000																										
3-4	4	2	5000	10000																										
5	<b>Solve Any Two</b>																													
	a	What is network updating? Explain the importance of network updating in construction projects.	07	2		4, 5 & 6																								
	b	Explain Matrix organisation.	07	4																										
	c	Explain manpower planning. How recruitment is done in construction industry.	07	5																										

PRN NO

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W007

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	F.Y.B.Tech.
Course Code	01FYBSL102
Course Title	Engineering Physics

Day & Date	Tuesday 7/01/2025
Time	10:30 to 1:00 pm
Max. Marks	70

**Instructions:**

- All questions are compulsory; assume suitable data if necessary and mention it clearly.
- Mobile phones and programmable calculators are strictly prohibited.
- Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

**Physical constants:-**

- i) Avogadro's Number,  $N=6.02 \times 10^{26}$ / kg.atom      ii) Mass of electron=  $9.1 \times 10^{-31}$  kg  
 iii) Electronic charge,  $e = 1.6 \times 10^{-19}$  C      iv) Speed of light,  $C=3 \times 10^8$  m/s  
 v) Planck's constant,  $h=6.63 \times 10^{-34}$  J.s

Q.no.		Marks	CO	BL	PI
1	<b>Solve Any Two</b>				
	a Define resolving power of grating & obtain an expression it.	07	1,2	$K^1, K^2$	1.2.1
	b What is double refraction? Give Huygen's theory of double refraction. Distinguish between negative and positive crystals.	07	1,2	$K^1, K^2$	1.2.1
	c i) In a plane transmission grating, the angle of diffraction for the second order principal maximum for the wavelength $5000 \text{ \AA}$ is $30^\circ$ . Calculate the number of lines in 1cm of the grating.	04			
	ii) What should be the minimum number of lines in a grating which will just resolve sodium D lines in the second order? (Given: wavelength of $D_1$ line= $5890 \text{ \AA}$ & $D_2$ line= $5896 \text{ \AA}$ ).	03	3	$K^3$	2.1.2
2	<b>Solve Any Two</b>				
	a i) Explain the term stimulated emission	03	1,2	$K^1, K^2$	1.2.1
	ii) State and explain characteristics of Laser	04			
	b What is holography? Explain recording of hologram and reconstruction of image from hologram	07	1,2	$K^1, K^2$	1.2.1
	c With neat diagram explain construction and working of ruby LASER.	07	1,2	$K^1, K^2$	1.2.1

Q.No.		Marks	CO	BL	PI
	<b>Solve Any Two</b>				
3	a What is acoustics of buildings? State and explain basic requirements of acoustically good hall.	07	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
	b i) Explain the term reverberation	04	1,2	K <sup>1</sup> ,K <sup>2</sup> ,	
	ii) A cinema hall has volume of 7500m <sup>3</sup> . What should be the total absorption in the hall if the reverberation time of 1.5 sec. is to be maintained?	03	3	K <sup>3</sup>	1.2.1 2.1.2
	c What is top down and bottom up approach of synthesis of nanomaterial. Explain ball milling method.	07	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
4	<b>Solve Any Two</b>				
	a Define atomic radius and find its values for SC, BCC and FCC lattice.	07	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
	b What are Miller indices? Explain the rules for finding Miller indices of a plane. Write some important features of Miller indices.	07	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
	c i) Derive Bragg's law for X-ray diffraction	04	1,2	K <sup>1</sup> ,K <sup>2</sup> ,	1.2.1
	ii) The spacing between the principal planes in Sodium Chloride crystal is 2.82 Å. It is found that the first order Bragg reflection of a monochromatic beam of X-rays occurs at an angle of 10°; What is the wavelength of X-rays?	03	3	K <sup>3</sup>	2.1.2
	<b>Solve Any Two</b>				
5	a State de Broglie's hypothesis. Derive an expression for de Broglie wavelength. Express de Broglie wavelength in terms of kinetic energy of particle & derive expression for de Broglie wavelength associated with an electron accelerated through a potential difference V.	07	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
	b State and explain properties of matter wave.	07	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
	c i) State and explain Compton effect.	04	1,2	K <sup>1</sup> ,K <sup>2</sup>	1.2.1
	ii) Calculate the Compton shift for X-rays which undergo Compton scattering through 60°.	03	3	K <sup>3</sup>	2.1.2

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY BTech	Day & Date	Wednesday 08/11/2024
Course Code	01FYBSL105	Time	10:30 to 1:00 PM
Course Title	Basic Electronics Engineering	Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	
1	Solve Any Two					
	a	Explain PN junction diode with forward and reverse biasing and VI characteristics with suitable figure.	07	1	L2	1.1.1
	b	Explain full wave rectifier with circuit diagram and waveform. Differentiate HWR and FWR	07	1	L2	1.1.1
	c	Solve following i) $(2F7.A2)_{16}$ hexadecimal to decimal ii) $(893.25)_{10}$ decimal to binary iii) $(4AC.DE)_{16}$ hexadecimal to BCD	07	2	L3	2.1.3
2	Solve Any Two					
	a	Classify digital logic gates and explain derived gates with symbols, equations and truth tables	07	3	L4	1.1
	b	Evaluate working of all Logic gates using NAND gate.	07	3	L5	1.1
	c	Evaluate working of Half adder and Half Subtractor	07	4	L5	1.1
3	Solve Any Two					
	a	Compare Latches and Flip Flops	07	4	L4	1.2
	b	Evaluate working of 1:4 Multiplexer using K-map simplification	07	4	L5	1.2
	c	List the specifications of TTL logic family	07	5	L4	1.1
4	Solve Any Two					
	a	Plot a DC load line on output characteristics of the transistor.	07	1	L3	1.2

	b	Classify number system according to their radix and explain following  i) Decimal Number System  ii) Binary Number System iii) Octal Number System	07	2	L3	1.1
	c	Analyse D-Morgan's theorem with truth table and Logic diagram	07	3	L3	1.2
5	Solve Any Two					
	a	Solve following Boolean function implementation using MUX  i) $f(A,B,C) = \Sigma (1,2,4,6)$  ii) $f(X,Y) = \Sigma (0,1,3)$	07	4	L4	2.1.3
	b	Illustrate working modes of SR flip flop in detail	07	4	L4	1.3
	c	Demonstrate TTL NAND gate with truth table and circuit diagram	07	5	L5	1.2



PRN NO

QP. CODE

W009

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY MCA	Day & Date	Wednesday 8/01/2024
Course Code	01MCL103	Time	10-30 to 1-00pm
Course Title	Database Management System	Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 4	
1	Solve Any Two					1	
	a	Define the architecture of DBMS.	07	1	I		1.3.1
	b	Demonstrate the characteristics of DBMS and also define database users.	07	1	II		2.2.4
	c	Analyse Mobile database and cloud database.	07	2	IV		4.2.1
2	Solve Any Two					2	
	a	Illustrate Generalization and Aggregation	07	2	II		3.2.1
	b	Explain Data constraint.	07	3	V		4.1.1
	c	Define Normalization and its types.	07	4	I		3.2.2
3	Solve Any Two					3	
	a	Demonstrate NoSQL and its types	07	5	II		3.2.2
	b	Represent aggregate function, order by and group by clause.	07	3	V		4.2.2
	c	Analyse joins in SQL.	07	3	III		5.1.2
4	Solve Any Two					4	
	a	Define Lock Based Concurrency Control Protocol.	07	5	I		3.4.1
	b	Analyze Transaction and operations of Transaction	07	5	III		3.4.2
	c	Represent Properties of Transaction.	07	5	V		5.1.2
5	Solve Any Two					1 - 4	
	a	Demonstrate the Parallel and Distributed Database.	07	2	II		1.3.1
	b	Represent the characteristics of RDBMS and difference between DBMS and RDBMS	07	3	V		3.4.3
	c	Explain Set operations in SQL?	07	3	V		2.1.3
	d	Define Deadlock in transaction.	07	5	I		3.2.1



PRN NO

QP. CODE

W010

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY M. Tech. Civil (Construction Management)
Course Code	01CML503
Course Title	Construction Equipments & Methods

Day & Date	Wednesday 8/11/2025
Time	10:30 to 1:00 PM
Max. Marks	70

## Instructions:

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI
	Solve Any Two				
1	a	07	1	2	
	b	07	1	2	
	c	07	2	1	
	Solve Any Two				
2	a	07	3	2	
	b	07	3	2	
	c	07	4	1	
	Solve Any Two				
3	a	07	5	2	
	b	07	5	1	
	c	07	6	1	

4	Solve Any Two					
	a	Discuss the use of trenching machines in construction projects. Discuss the suitability of trenching machines in different soil conditions.	07	1	2	
	b	Enlist Various types of concrete mixers. Discuss shortly the suitability of any one mixer with a neat sketch.	07	2	2	
	c	Write a detailed note on rating of pile hammers.	07	3	2	
5	Solve Any Two					
	a	Explain the method of breakwater construction	07	4	2	
	b	State the importance of inspection of bridges. Explain the important points to be considered in bridge inspection	07	5	1	
	c	Write detailed note on preservation of structures in various climatic conditions.	07	6	2	

PRN NO

QP. CODE

W011

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FYBTech
Course Code	FYESL104
Course Title	Basic Electrical Engineering

Day & Date	Thursday 9/1/2024
Time	10:30am to 1:00 PM
Max. Marks	70

**Instructions:**

- All questions are compulsory; assume suitable data if necessary and mention it clearly.
- Mobile phones and programmable calculators are strictly prohibited.
- Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 5	
1	Solve Any Two						1 & 2
	a	State and explain Kirchhoff's Laws with suitable example.	07	1	K1	1.2.1	
	b	Two batteries A & B are connected in parallel across a load resistance of $6 \Omega$ . The emf & internal resistance of battery A & B are 32 volts, $4 \Omega$ and 36 volts, $6 \Omega$ respectively, using mesh or node analysis, Find (i) current in battery A, (ii) Current in battery B. (iii) Current in load resistance	07	2	K3	2.1.2	
	c	Obtain mathematical expression for series magnetic circuit for N number of materials.	07	1	K1	1.2.1	
2	Solve Any Two						3
	a	Derive current and power equation in pure inductance circuit	07	3	K4	2.1.1	
	b	Derive the expression for RMS value by analytical method	07	3	K4	2.1.1	
	c	A series R-L-C circuit connected across 200 volts, 50 Hz ac supply draws a current of 5 amp at unity power factor. If the capacitance is of 507 microfarad, Find (i) Resistance, (ii) Capacitive & Inductive Reactance, (iii) Power.	07	2	K3	2.1.2	

3	Solve Any Two					4	
	a	Prove that line voltage = $\sqrt{3}$ Phase Voltage in star connected circuit.	07	3	K4		2.1.1
	b	What are the advantages of 3 phase system over Single-phase system?	07	1	K1		1.2.1
	c	Explain the terms: Line voltage, Line current, Phase voltage, Phase current.	07	1	K1	1.2.1	
4	Solve Any Two					5	
	a	State the principle on which transformer works. Describe with a neat sketch constructional features of core type transformer.	07	3	K4		2.1.1
	b	State and Explain Power Losses occurred in Transformer	07	3	K1		1.2.1
	c	In a 50 KVA transformer the Iron Losses is 500W and the full load copper loss 800 W. and operates at 0.8 pf  i) Full load Efficiency ii) Half load copper loss iii) Half load efficiency	07	2	K3	2.1.2	
5	Solve Any Two					1 - 5	
	a	Define- i) Magnet ii) Magnetic flux density iii) Reluctance	07				
	b	Derive the Impedance and power equation of R-C series circuit	07				
	c	Derive the EMF equation of transformer.	07				

PRN NO

QP. CODE

W032

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

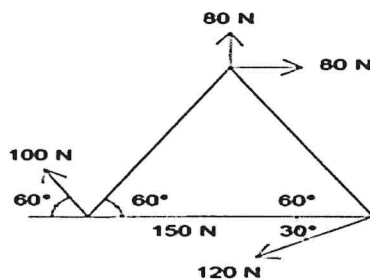
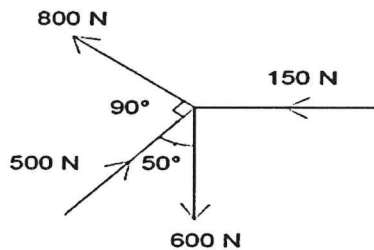
Class-Program	FY All
Course Code	01FYESL107
Course Title	Applied Mechanics

Day & Date	Friday 10/11/25
Time	10:30 to 1:00 pm
Max. Marks	70

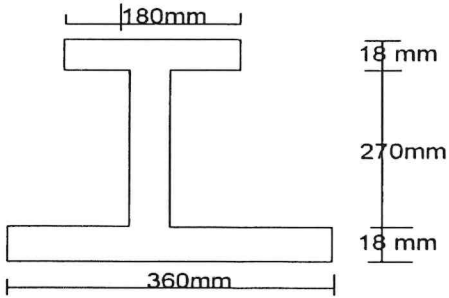
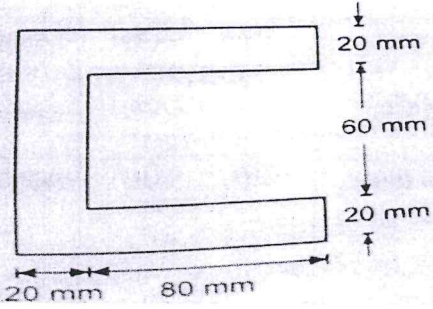
**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

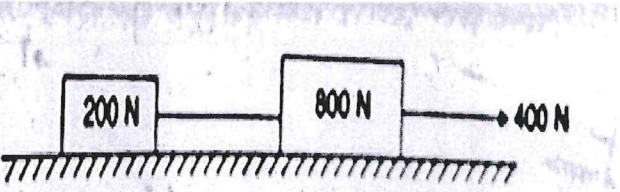
Q no	Solve Any Two	Marks	CO	BL	PI
1	a) I) State "Law of Parallelogram of Forces" and Draw a neat sketch. II) State the Law of transmissibility of forces and draw the neat sketch of it.	07	CO1	Understand	PI 1
	b) A system of four forces acting on a body as shown in figure. Determine the resultant.	07	CO1	Apply	PI 4
	c) Determine the resultant of non-concurrent force system as shown in figure	07	CO1	Apply	PI 4



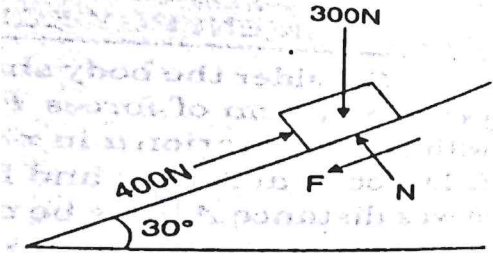
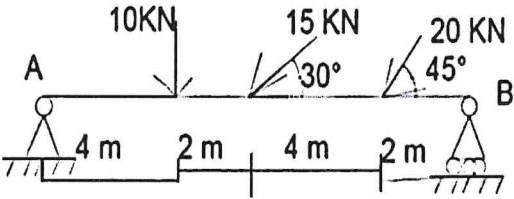
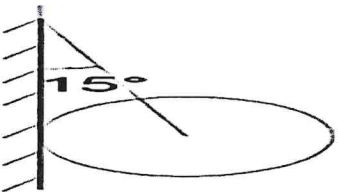
Solve Any Two

2	a	I) State & explain Parallel axis theorem with neat sketch. II) State & explain Perpendicular axis theorem with neat sketch	07	CO3 CO3	Understand Understand	PI 1 PI 1
	b	Find the moment of inertia @ centroidal axis as shown in figure. 	07	CO3	Apply	PI 4
	c	Find the moment of inertia @ centroidal axis as shown in figure 	07	CO3	Apply	PI 4

Solve Any Two

3	a	I) State Work Energy Principle with neat sketch & equation. II) State D'Alembert's Principle with neat sketch & equation.	07	CO4	Understand Understand	PI 1 PI 1
	b	Two weights 800 N & 200 N are connected by a thread and they move along rough horizontal plane under the action of a force of 400 N applied to the 800 N as shown in figure. The coefficient of friction between the sliding surface of the weights and the plane is 0.3. Using D'Alembert's Principle determine the acceleration of the weight tension in the thread. 	07	CO4	Apply	PI 4



	<p>A body weighing 300N is pushed up a 30° plane by a 400N force acting parallel to the plane. If the initial velocity of the body is 1.5 m/sec and coefficient of kinetic friction is <math>\mu=0.2</math>, what velocity will the body have after moving 6 m?</p> 	07	CO4	Apply	PI 4	
4	Solve Any Two					
	a	<p>Define the terms: 1. Line of impact 2. Central impact 3. Direct impact 4. Oblique impact</p>	07	CO5	Remember	PI 1
	b	<p>A 80 N body moving to the right with a velocity of 3 m/s and 10 N body moving to the left with a velocity of 10 m/s. The final velocity 10 N body is 4 m/s to the right. Calculate the coefficient of restitution and the final velocity of 80 N body.</p>	07	CO5	Apply	PI 4
c	<p>Direct central impact occurs between a 300N body moving to the right with a velocity of 6 m/s and 150 N body moving to the left with a velocity of 10 m/s. Find the velocity of each body after impact if coefficient of restitution is 0.8.</p>	07	CO5	Apply	PI 4	
5	Solve Any Two					
	a	<p>I) State Lami's theorem with neat sketch. II) State Varignon's theorem with neat sketch.</p>	07	CO2	Remember Remember	PI 1 PI 1
	b	<p>The beam AB of span 12 m shown in figure is hinged at A and is on rollers at B. Determine the reactions developed at A and B due to the loading shown in the figure.</p> 	07	CO2	Apply	PI 4
c	<p>A sphere weighing 100 N is tied to a smooth wall by a string as shown in the figure. Find the tension T in the string and the reaction R from the wall.</p> 	07	CO2	Apply	PI 4	



PRN NO

QP. CODE

W013

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY MCA
Course Code	01MCL104
Course Title	Software Engineering

Day & Date	Friday 10/11/25
Time	10:30 to 1:00
Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 4	
1	Solve Any Two						
	a	Explain waterfall model.	07	1	II	1.3.1	1
	b	Illustrate Software Development Life Cycle.	07	2	V	3.1.1	
	c	Develop RAD (Rapid Application Development) Model.	07	1	III	3.2.1	
Solve Any Two							
2	a	Explain Requirement analysis and fact finding methods.	07	2	II	4.3.1	2
	b	Evaluate SRS (Software requirement specification).	07	2	V	10.1.2	
	c	Develop decision analysis tool and explain decision table.	07	1	III	5.1.1	
	Solve Any Two						
3	a	Demonstrate the objective of input & output design and its validation.	07	3	II	3.1.6	3
	b	Analyse Coupling and Cohesion.	07	3	IV	5.1.1	
	c	Examine user interface design.	07	2	IV	3.2.3	
	Solve Any Two						
4	a	Discuss the programming principles and guide line of coding.	07	3	VI	4.1.1	4
	b	Identify Unit testing and Integration testing.	07	4	III	4.2.1	
	c	Examine Black and White Box Testing.	07	4	IV	4.3.1	
	Solve Any Two						
5	a	Discuss Spiral Model.	07	1	VI	7.1.1	1 - 4
	b	Develop Entity Relationship Diagram.	07	2	III	4.3.3	
	c	Determine GUI and its features.	07	3	V	5.3.1	
	d	Identify Alpha and Beta testing	07	4	III	4.2.1	
	Solve Any Two						



PRN NO

QP. CODE

W014

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY M. Tech. Civil (Construction Management)
Course Code	01CML504
Course Title	Construction Material Management

Day & Date	Friday 10/11/25
Time	10:30 to 1:00
Max. Marks	70

## Instructions:

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	
1	Solve Any Two					
	a	State objectives of material management.	07	1	2	
	b	Explain the purchase procedure in material management.	07	1	2	
	c	What is logistic management? Explain its stepwise process.	07	2	1	
2	Solve Any Two					
	a	Explain the process of assessment of performance of Supply chain.	07	3	2	
	b	Write detailed note on, Supply Chain Strategy.	07	3	2	
	c	What is Bull Whip effect & Just in Time?	07	4	1	
3	Solve Any Two					
	a	Discuss in detail ABC Inventory Control Technique.	07	5	2	
	b	What is VED in Inventory Control Technique? Discuss in detail.	07	5	1	
	c	What is Two Bin Technique? How it works?	07	6	1	
4	Solve Any Two					
	a	Describe the role of Inventory control related to civil engineering.	07	1	2	
	b	Write short note on, Codification and Standardization.	07	2	2	
	c	Explain the importance of supply chain management.	07	3	2	
5	Solve Any Two					
	a	Write note on, Designing supply chain network.	07	4	2	
	b	What is XYZ in Inventory Control Technique? Discuss in detail.	07	5	1	
	c	Explain in detail- Reorder Level & Lead time.	07	6	2	



PRN NO

QP. CODE

W015

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

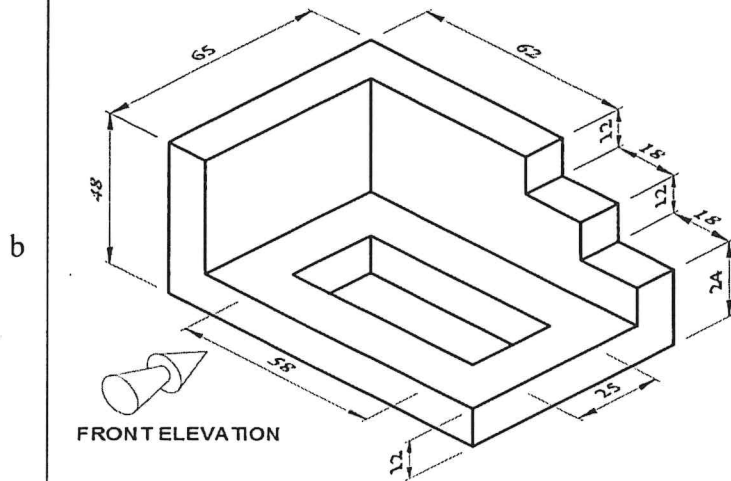
<b>Class-Program</b>	FY-Civil/Mechanical/ETC Engineering	<b>Day &amp; Date</b>	Saturday 11/11/2025
<b>Course Code</b>	01FYESL106	<b>Time</b>	10:30 to 1:30 PM
<b>Course Title</b>	Computer Aided Engineering Drawing	<b>Max. Marks</b>	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q N		Marks	CO	BL	PI	
1	Solve Any Two					
	a	Enlist types of lines and illustrate with neat diagram	07	CO1	Remember	PI-5
	b	Draw BIS sign conventions for any 5 materials.	07	CO1	Understand	PI-5
	c	Write the path for following modify commands: 1.Trim 2. Mirror 3. Move 4. Offset 5. Array	07	CO2	Remember	PI-1
2	Solve Any Two					
	a	A square lamina of 50 mm side rests on one of the corners on the HP. The diagonal through that corner makes $30^\circ$ to VP. The two sides containing this corner make equal inclinations with the HP. The surface of the lamina makes $45^\circ$ to the HP. Draw the TV and FV of lamina.	07	CO3	Apply	PI-2
	b	A regular pentagon ABCDE of side 30 mm has one of its edges parallel to VP and inclined at $30^\circ$ to the HP. The pentagon is inclined at $45^\circ$ to the VP. Draw the projections.	07	CO3	Apply	PI-2
	c	Write the path for following draw commands: 1.Circle 2. Polygon 3. Construction line 4. Hatch 5. Text	07	CO2	Remember	PI-1
3	Solve Any Two					
	a	Differentiate between first angle and third angle method	07	CO4	Remember	PI-1

Draw front, side and top view of given object:



All dimensions are in Centimetre. Use scale 1:100

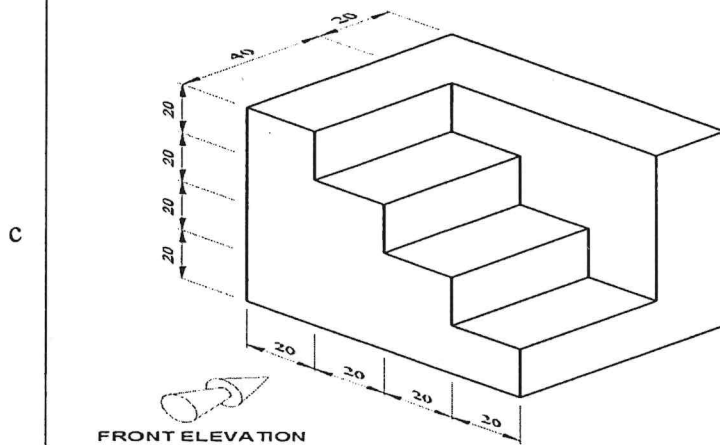
07

CO4

Create

PI-2

Draw front, side and top view of given object:



All dimensions are in Centimetre. Use scale 1:100

07

CO4

Create

PI-2

Solve Any Two

4

a	Draw a typical cross section of a wall of a building.	07	CO5	Understand	PI-5
b	Draw any three Simple Lifting Machines.	07	CO5	Remember	PI-1
c	Draw simple layout of residential building.	07	CO5	Remember	PI-1

Solve Any Two

5

a	What are the types of dimensioning system? explain in brief with neat sketch.	07	CO1	Remember	PI-1
b	Write a note on page set for AutoCAD 2D drawing.	07	CO2	Understand	PI-5
c	Draw simple layout of Residential Building.	07	CO5	Analyse	PI-5



PRN NO

QP. CODE

W 016

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	First Year B. Tech- Semester – I
Course Code	01FYESL108
Course Title	Fundamentals of Programming Languages

Day & Date	Monday 13/11/2025
Time	10:30 to 1:00 P.M.
Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.No.		Marks	CO	BL	PI	
<b>Solve Any Two</b>						
1	a	What are the primary data types? Explain in detail.	07	1	L1	1.3.1
	b	Explain nested if- else statement with example.	07	1	L2	1.3.1
	c	Describe the following statements with an example i. Goto ii. Break iii. Continue	07	1	L2	1.3.1
<b>Solve Any Two</b>						
2	a	Define array. Write a program to input and display one dimensional array.	07	2	L1	1.3.1
	b	Enlist String handling functions. Explain any two with suitable examples.	07	2	L2	1.3.1
	c	Explain Dynamic memory allocation with example.	07	2	L2	1.3.1
<b>Solve Any Two</b>						
3	a	Define function. Describe the general format of a function with its elements.	07	2	L2	1.3.1
	b	Distinguish between Array and Structure	07	2	L2	1.3.1
	c	Write C program to store information of a student like roll no, name, marks and display using Structure.	07	3	L3	2.4.3
<b>Solve Any Two</b>						
4	a	Write a c program to display months using switch case statement.	07	3	L3	2.4.3
	b	Write a C program to display even numbers and odd numbers in between 1-50 using for loop.	07	3	L3	2.4.3
	c	What is two dimensional arrays? How it is defined and initialized? Explain with example.	07	3	L2	1.3.1
<b>Solve Any Two</b>						
5	a	What is Structure? How it is defined and initialized? Explain with example.	07	3	L2	1.3.1
	b	Define Pointers? Explain call by value and call by pointer with suitable examples.	07	2	L2	1.3.1
	c	Write a C program to find maximum and minimum number between two numbers using Functions.	07	2	L3	2.4.3



PRN NO

QP. CODE

W017

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	FY M Tech(CM)	Day & Date	Monday 13-1-2025
Course Code	ICML505	Time	10.30am to 1pm
Course Title	Statistical and Data Analysis	Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Ma rks	CO	BL	PI																				
1	Solve Any Two																								
	a	Explain Statistical inference ,Experimental Design	07	1,3	L1, L3	1.1.1																			
	b	Explain null, alternative and statistical hypothesis.	07	1,3	L1, L3	1.1.1																			
	c	Calculate the arithmetic mean from the following data	07	1,3	L1, L3	1.1.1																			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Monthly rent</td> <td>20-40</td> <td>40-60</td> <td>60-80</td> <td>80-100</td> <td>100-120</td> <td>120-140</td> <td>140-160</td> <td>160-180</td> <td>180-200</td> </tr> <tr> <td>No of families</td> <td>6</td> <td>9</td> <td>11</td> <td>14</td> <td>20</td> <td>15</td> <td>10</td> <td>8</td> <td>7</td> </tr> </table>	Monthly rent					20-40	40-60	60-80	80-100	100-120	120-140	140-160	160-180	180-200	No of families	6	9	11	14	20	15	10	8	7
Monthly rent	20-40	40-60					60-80	80-100	100-120	120-140	140-160	160-180	180-200												
No of families	6	9	11	14	20	15	10	8	7																
2	Solve Any Two																								
	a	If $A = \left\{ \frac{0.6}{1} + \frac{0.5}{2} + \frac{0.7}{3} + \frac{0.3}{4} + \frac{1}{5} \right\}$ and $B = \left\{ \frac{1}{1+10x} \right\}, x \in \{1,2,3,4,5\}$ Find i) ${}^{0.4}\bar{A}$ ii) ${}^{0.4}(A \cup \bar{B})$	07	1,3	L1, L3	1.1.1																			
	b	Explain Basic concepts of alpha cuts and strong alpha cuts of a fuzzy set.	07	1,3	L1, L3	1.1.1																			
	c	Let A and B be fuzzy sets defined as follows $A = \left\{ \frac{0.5}{-1} + \frac{1}{0} + \frac{0.5}{1} + \frac{0.3}{2} \right\}$ $B = \left\{ \frac{0.5}{2} + \frac{1}{3} + \frac{0.5}{4} + \frac{0.3}{5} \right\}$ Calculate $A \times B$	07	1,3	L1, L3	1.1.1																			

3	Solve Any Two																				
	a	Explain analysis of variance technique and strategy of experimental design.	07	1,3	L1, L3	1.1.1															
	b	Find the value of k for the following probability distribution. Also find $P(x \geq 3)$ and mean of the distribution. $\begin{array}{cccccc} x: & 1 & 2 & 3 & 4 & 5 \\ P(x): & k & 2k & 3k & 2k & 1 \end{array}$	07	1,3	L1, L3	1.1.1															
c	In an experiment with 2500 seeds in a group of five the following result were obtained <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>x</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>Total</td> </tr> <tr> <td>F(x)</td> <td>10</td> <td>70</td> <td>150</td> <td>160</td> <td>80</td> <td>30</td> <td>500</td> </tr> </tbody> </table> Fit a binomial distribution to the above data.	x	0	1	2	3	4	5	Total	F(x)	10	70	150	160	80	30	500	07	1,3	L1, L3	1.1.1
x	0	1	2	3	4	5	Total														
F(x)	10	70	150	160	80	30	500														
4	Solve Any Two																				
	a	Explain Tests of statistical hypothesis, One sided and two sided statistical hypothesis .	07	1,3	L1, L3	1.1.1															
	b	Explain Collection of Data , Measure of Central tendency.	07	1,3	L1, L3	1.1.1															
c	If $A = \left\{ \frac{0}{0} + \frac{0.2}{1} + \frac{0.35}{2} + \frac{0.15}{3} + \frac{0.5}{4} + \frac{0.25}{5} + \frac{0.4}{6} \right\} ,$ $B = \left\{ \frac{1}{0} + \frac{0.15}{1} + \frac{0.2}{2} + \frac{0.35}{3} + \frac{0.4}{4} + \frac{0.15}{5} + \frac{0}{6} \right\}$ Find degree of subset hood $S((A \cap \bar{B}) \cup A, A)$	07	1,3	L1, L3	1.1.1																
5	Solve Any Two																				
	a	Let A and B be fuzzy sets defined as follows $A = \left\{ \frac{0.5}{-1} + \frac{1}{0} + \frac{0.5}{1} + \frac{0.3}{2} \right\} \quad B = \left\{ \frac{0.5}{2} + \frac{1}{3} + \frac{0.5}{4} + \frac{0.3}{5} \right\}$ Calculate $B - A$	07	1,3	L1, L3	1.1.1															
	b	Explain one way ANOVA .	07	1,3	L1, L3	1.1.1															
c	Explain probability distribution with example.	07	1,3	L1, L3	1.1.1																

PRN NO

QP. CODE

W018

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	MCA	Day & Date	Monday 13/1/2025
Course Code	01MCL110	Time	10:30 to 11:00
Course Title	Digital Marketing	Max. Marks	70

**Instructions:**

1. All questions are compulsory; assume suitable data if necessary and mention it clearly.
2. Mobile phones and programmable calculators are strictly prohibited.
3. Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 4	
1	Solve Any Two						
	a	Discuss digital marketing strategy for websites	07	1	VI	1.2.1	1
	b	Comparison between traditional marketing and digital marketing	07	1	V	1.6.1	
	c	Determine digital marketing and discuss examples of digital marketing in the real world	07	1	V	1.6.1	
Solve Any Two							
2	a	Determine website and explain types of websites	07	2	II	3.8.3	2
	b	Demonstrate content management in WordPress	07	2	V	3.6.1	
	c	Illustrate components of WordPress dashboard?	07	2	II	3.6.1	
	Solve Any Two						
3	a	Explain SEM? Discuss types of paid marketing	07	3	IV	2.7.1	3
	b	Evaluate account level setting	07	3	V	3.6.1	
	c	Explain Mobile app marketing	07	3	IV	1.2.1	
	Solve Any Two						
4	a	Discuss basic terminology in google analytics	07	4	VI	2.8.2	4
	b	Determine Key Performance Indicator(KPIs) and explain important KPIs in google analytics	07	4	V	4.6.1	
	c	Elaborate conversion tracking	07	4	VI	2.7.1	
	Solve Any Two						
5	a	Discover digital marketing? Describe tools and benefits of digital marketing	07	1	IV	1.6.1	1 - 4
	b	Explain role of HTML play in website development, and how does it structure a web page?	07	2	V	3.5.6	
	c	Comparison between Ad Rank and Quality score	07	3	II	1.2.1	
	d	Discuss Customer Acquisition Report	07	4	VI	2.7.1	
	Solve Any Two						



PRN NO

QP. CODE

W019

Dr. J. J. Magdum Trust's  
**Dr. J. J. Magdum College of Engineering, Jaysingpur**  
 (An Autonomous Institute)  
 End Semester Exam

Class-Program	MCA
Course Code	01MCL108
Course Title	Disaster Management

Day & Date	Wednesday 15/1/2025
Time	10:30 to 1:00
Max. Marks	70

## Instructions:

- All questions are compulsory; assume suitable data if necessary and mention it clearly.
- Mobile phones and programmable calculators are strictly prohibited.
- Writing anything on question paper (except PRN), exchange/sharing of stationery, calculator etc. are not allowed.

Q.no.		Marks	CO	BL	PI	Unit 5	
1	Solve Any Two						
	a	Discover disaster and explain its significance and factors	07	1	IV	7.3.1	1
	b	Compare Hazard and Disaster.	07	1	II	7.4.2	
	c	Discuss types of natural disaster.	07	1	VI	7.4.2	
Solve Any Two							
2	Solve Any Two						
	a	Explain the causes and effects of industrial accident	07	2	II	7.3.1	2
	b	Discuss economic damages.	07	2	VI	7.3.1	
	c	Determine Earthquake and explain types of seismic waves	07	2	IV	7.4.2	
Solve Any Two							
3	Solve Any Two						
	a	Identify the flood prone zone in India	07	3	III	7.4.1	3
	b	Examine the causes and impacts of post-disaster diseases and epidemics in India	07	3	III	7.3.2	
	c	Explain the regions in India prone to cyclonic hazards and tsunamis.	07	3	II	7.3.1	
Solve Any Two							
4	Solve Any Two						
	a	Explain disaster preparedness and monitoring phenomena triggering a disaster	07	1	V	7.3.1	4
	b	Explain the evaluation of risk	07	2	V	7.3.1	
	c	Discuss application of remote sensing	07	2	VI	7.4.1	
Solve Any Two							
5	Solve Any Two						
	a	Determine disaster risk and explain disaster risk element	07	2	V	7.3.1	5
	b	Identify strategies for survival	07	3	III	7.3.2	
	c	Demonstrate global disaster and Describe global disaster risk situation	07	3	II	7.3.1	
Solve Any Two							

