

V.S.B Engineering College, Karur

Department of CIVIL Engineering

Assignment question

Technical English

Sl. No.	Reg. No.	Name of the Student	Assignment questions
1	922518103001	AARTHI P	Write a set of eight Instructions to improve fluency in English.
2	922518103002	ABIRAMI R	Write a set of eight Instructions to keep your vehicle in good condition.
3	922518103003	AISWARYA M	Write a set of eight Instructions for your friend who is planning to stay in his college hostel.
4	922518103005	ARUNKUMAR K	Write a set of eight Instructions that are to be followed by students in college library.
5	922518103006	CHANDRU P	Write a set of eight Instructions to be followed to maintain laptops in good condition.
6	922518103007	CHANDRU P	Write a set of eight Instructions that could be followed by students to the examination hall.
7	922518103008	DHARANIKUMAR P	Write a set of eight Instructions for operating the ticket vending machine at a railway station.
8	922518103009	DIVYA B	Write a set of eight Instructions for using your cell phone safely.
9	922518103010	GUNAPRIYA K M	Write a set of eight Instructions for safety while using welding equipment.
10	922518103011	HARINITHA S	Write a set of eight Instructions that could be followed to reduce pollution.
11	922518103012	KARTHIKEYAN M	Write a set of eight Instructions that must be followed as safety measures in a chlorine plant.
12	922518103013	MADHUMITHA E	Write a set of eight Instructions that must be followed in a chemical engineering lab.

13	922518103014	NAVANEETHAN T R	As the Maintenance Engineer of Software Company, give a set of eight instructions that are to be followed by the lab assistants while handling sophisticated equipment.
14	922518103015	PRIYADHARSHINI J	Write a job application letter to the following advertisement published in the "The Hindu" for the post of Deputy Manager, Design and Development, with resume to the personnel Manager, Lucas-TVS, Hosur, India.
15	922518103016	RUBAN S	Write a letter to the HRD Manager of Karur Vysya Bank, Anna Salai, Chennai-600 017, applying for the post of System Manager. Add a separate resume to your covering letter.
16	922518103017	SANKAR MATHAVAN S	Write a set of eight Instructions to make your city clean and green.
17	922518103018	SANTHOSHKUMAR M	Write a set of eight Instructions advising your younger sister on how to prepare for her Board exams.
18	922518103019	SATHIYA T	Write a set of eight Instructions on road safety.
19	922518103020	SELVAKUMAR R	Write a set of eight Instructions to maintain a computer in good condition.
20	922518103021	SHRIMAN D	Write a set of eight Instructions to save petrol.
21	922518103022	SIVABALAN C	Write a set of eight recommendations to keep your country peaceful from war.
22	922518103023	SUJA P	Write a set of eight recommendations that should be followed to preserve our water resources.
23	922518103024	SUNIL S	Write a set of eight recommendations for the proper maintenance of two-wheelers.
24	922518103025	TAMILARASAN K	Write a set of eight recommendations to keep the city free of air pollution.

ENGINEERING MATHEMATICS II

Sl. No.	Reg. No.	Questions
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1.	922518103001	Find the Eigenvalues and Eigenvectors of $\begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$.
2.	922518103002	Find the Eigenvalues and Eigenvectors of $\begin{bmatrix} 2 & 0 & 1 \\ 0 & 3 & 0 \\ 1 & 0 & 2 \end{bmatrix}$.
3.	922518103003	Find the Eigenvalues and Eigenvectors of $\begin{bmatrix} 6 & -2 & 2 \\ -2 & 3 & -1 \\ 2 & -1 & 3 \end{bmatrix}$.
4.	922518103005	Verify Cayley – Hamilton Theorem and find its inverse of the following matrix $\begin{bmatrix} 4 & 3 & 1 \\ 2 & 1 & -2 \\ 1 & 2 & 1 \end{bmatrix}$.
5.	922518103006	Verify Cayley – Hamilton Theorem and find its inverse of the following matrix $\begin{bmatrix} 1 & 3 & 7 \\ 4 & 2 & 3 \\ 1 & 2 & 1 \end{bmatrix}$.
6.	922518103007	Verify Cayley – Hamilton Theorem and find its inverse of the following matrix $\begin{bmatrix} 1 & 0 & -2 \\ 2 & 2 & 4 \\ 0 & 0 & 2 \end{bmatrix}$.
7.	922518103008	If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$, then prove that $A^3 - 3A^2 - 9A - 5I = 0$. Hence, find A^4 .
8.	922518103009	Given that $A = \begin{bmatrix} 1 & 2 & 1 \\ 0 & 1 & -1 \\ 3 & -1 & 1 \end{bmatrix}$, Express $A^6 - 5A^5 + 8A^4 - 2A^3 - 9A^2 + 35A + 6I$ as a linear polynomial in A, using Cayley Hamilton Theorem.
9.	922518103010	Obtain the matrix $A^6 - 25A^2 + 122A$ where $A = \begin{bmatrix} 0 & 0 & 2 \\ 2 & 1 & 0 \\ -1 & -1 & 3 \end{bmatrix}$.
10.	922518103011	Given that $A = \begin{bmatrix} 1 & 0 & 3 \\ 2 & 1 & -1 \\ 1 & -1 & 1 \end{bmatrix}$, compute the value of $A^6 - 5A^5 + 8A^4 - 2A^3 - 9A^2 + 35A - 36I$, using Cayley Hamilton Theorem.
11.	922518103012	Diagonalise the following matrix by suitable transformations $A = \begin{bmatrix} 7 & -2 & 0 \\ -2 & 6 & -2 \\ 0 & -2 & 5 \end{bmatrix}$, Also find A^4 .
12.	922518103013	Diagonalise the following matrix by suitable transformations $A = \begin{bmatrix} 11 & -4 & -7 \\ 7 & -2 & -5 \\ 10 & -4 & -6 \end{bmatrix}$, Also find A^5 .

13.	922518103014	Reduce the quadratic form $8x_1^2 + 7x_2^2 + 3x_3^2 - 12x_1x_2 - 8x_2x_3 + 4x_3x_1$ to the canonical form through an orthogonal transformation and hence, show that it is positive semi-definite.
14.	922518103015	Reduce the quadratic form $x_1^2 + 5x_2^2 + x_3^2 + 2x_1x_2 + 2x_2x_3 + 6x_3x_1$ to the canonical form through an orthogonal transformation.
15.	922518103016	Write down the quadratic form, whose associated matrix is $\begin{bmatrix} 3 & 1 & 1 \\ 1 & 0 & 2 \\ 1 & 2 & 0 \end{bmatrix}$ and reduce it to its canonical form.
16.	922518103017	Reduce the quadratic form $2x_1^2 + 5x_2^2 + 3x_3^2 + 4x_1x_2$ to the canonical form by orthogonal transformation. Also find the rank, index and signature of the quadratic form.
17.	922518103018	Reduce the quadratic form $3x_1^2 - 3x_2^2 - 5x_3^2 - 2x_1x_2 - 6x_2x_3 - 6x_3x_1$ to the canonical form by orthogonal transformation. Also find the rank, index and signature of the quadratic form.
18.	922518103019	Obtain an orthogonal transformation which will transform the quadratic form $2x_1^2 + 2x_2^2 + 2x_3^2 - 2x_1x_2 - 2x_2x_3 + 2x_3x_1$ into sum of squares form and find also the reduced form.
19.	922518103020	Using Green's theorem, evaluate $\int [(2xy - x^2)dx + (x^2 + y^2) dy]$, where C is the closed curve of the region bounded by $y = x^2$ and $y^2 = x$.
20.	922518103021	Verify Gauss divergence theorem for $\vec{F} = x^2 \vec{i} + z \vec{j} + yz \vec{k}$ taken over the cube bounded by $x = 0, x = a, y = 0, y = a, z = 0$ and $z = a$.
21.	922518103022	Verify Gauss divergence theorem for $\vec{F} = 2x^2y \vec{i} - y^2 \vec{j} + 4xz^2 \vec{k}$ over the region in the first octant bounded by $y^2 + z^2 = 9$ and $x = 2$.
22.	922518103023	Verify Stoke's theorem for $\vec{F} = y^2z \vec{i} + z^2x \vec{j} + x^2y \vec{k}$, where S is the open surface of the cube formed by the planes $x = -a, x = a, y = -a, y = a, z = -a, z = a$ in which $z = a$ is cut open.
23.	922518103024	Verify Stoke's theorem for $\vec{F} = (x^2 - y^2) \vec{i} + 2xy \vec{j} + xyz \vec{k}$ over the surface of the box bounded by the planes $x = 0, y = 0, x = a, y = b, z = c$ above the xy-plane.
24.	922518103025	Verify Stoke's theorem for $\vec{F} = xy \vec{i} - 2yz \vec{j} - zx \vec{k}$, where S is the open surface of the rectangular parallelepiped formed by the planes $x = 0, x = 1, y = 0, y = 2, z = 3$ above the xoy - plane.

PHYSICS FOR CIVIL ENGINEERING

Sl. No.	NAME OF THE STUDENT	Questions
1	AARTHI P	Explain the types of day lighting
2	ABIRAMI R	Write the Design Principles of motion picture hall
3	AISHWARYA M	Explain about daylight harnessing systems
4	ARUNKUMAR K	Write about the uses of crystals in construction
5	CHANDRU P	Explain the indices for measuring the daylights
6	CHANDRU P	Explain in detail about seismology
7	DHARANI KUMAR P	What are Acoustic absorbers and write its types and functions
8	DIVYA R	Describe in detail about Structure Borne Sound Propagation
9	GUNAPRIYA K M	Write the Design Principles of Auditorium
10	HARINITHA S	Write about the uses of polymers in construction
11	KARTHIKEYAN M	Explain the uses of shape memory alloys in the construction
12	MADHUMITHA E	What are different engineering materials and their uses
13	NAVANEETHAN T R	Write note on different acoustic materials.
14	PRIYADHARSHINI J	Give a brief discussion on seismology
15	RUBAN S	Write about photometry and glares
16	SANKAR MATHAVAN B S	Discuss about measurement of noise, Reduction of noise by Town Planning and Regional Planning consideration.
17	SANTHOSHKUMAR M	Explain different types of earthquake hazards.
18	SATHIYA T	What is noise pollution and state its effects?
19	SELVA KUMAR R	Explain the indices for measuring the thermal performance
20	SHRIMAN D	Explain the uses of steel in the construction
21	SIVABALAN C	Describe in detail about Air & Structure Borne Sound Propagation

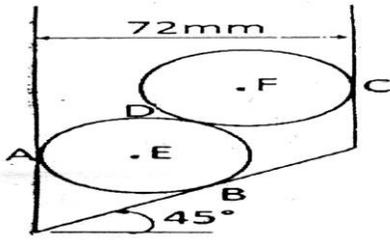
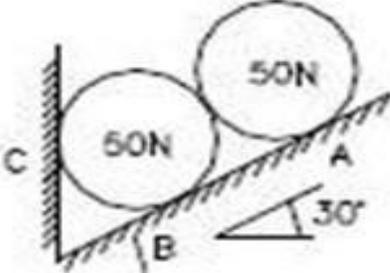
22	SUJA P	Write about sound transmission class
23	SUNIL S	Explain about Environmental Acoustics-Type,
24	TAMILARASAN K	Explain different types of hazards.

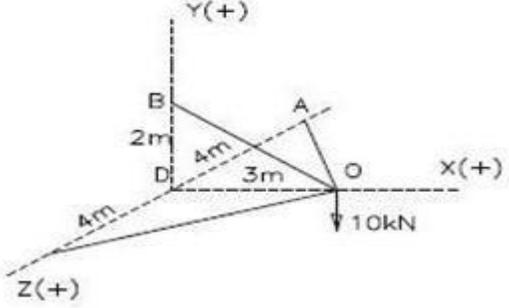
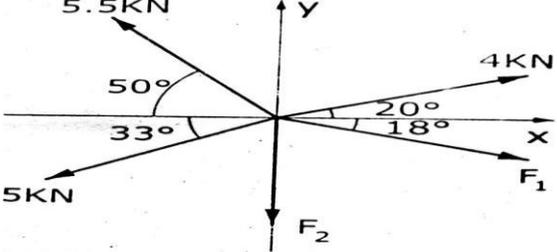
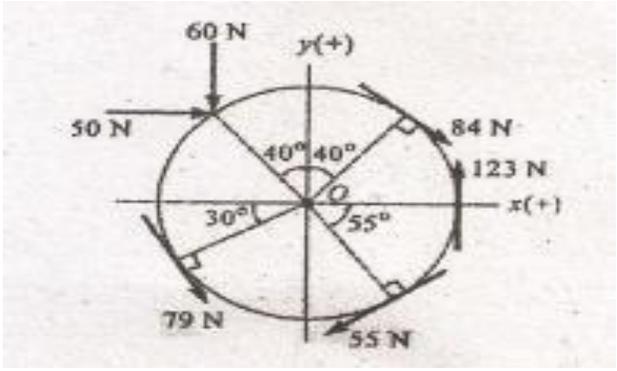
ENVIRONMENTAL SCIENCE AND ENGINEERING

Sl. No.	NAME OF THE STUDENT	Questions
1	AARTHI P	Explain the nature and facts about environment.
2	ABIRAMI R	Explain the political solutions to Environmental problems.
3	AISHWARYA M	Explain the bio geographical classification of India
4	ARUNKUMAR K	Write a case study on the man-wildlife conflicts
5	CHANDRU P	Explain the Field study of simple ecosystems
6	CHANDRU P	Discuss in detail the disaster management:
7	DHARANI KUMAR P	Explain the Use and over-exploitation of resources
8	DIVYA R	Explain timber extraction and effect on tribal people
9	GUNAPRIYA K M	Explain the environmental effects of extracting and using mineral resources
10	HARINITHA S	Explain the pollution case studies
11	KARTHIKEYAN M	How can you mitigate World food problems?
12	MADHUMITHA E	What are the effects of modern agriculture?
13	NAVANEETHAN T R	Explain the causes of man induced landslides
14	PRIYADHARSHINI J	What do you understand by Equitable use of resources for sustainable lifestyles?
15	RUBAN S	What are urban problems related to energy?
16	SANKAR MATHAVAN B S	Explain the impact of climate change.
17	SANTHOSHKUMAR M	Write a case study of nuclear accidents and holocaust.

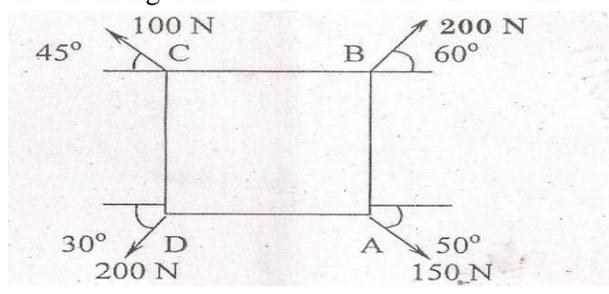
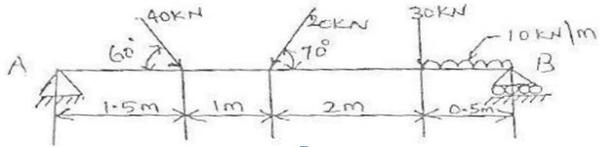
18	SATHIYA T	Write about Prevention and control of Pollution.
19	SELVA KUMAR R	Explain in detail about Wildlife protection act.
20	SHRIMAN D	How Population growth affects economy of nation?
21	SIVABALAN C	Discuss basic human rights in India.
22	SUJA P	Explain the role of information technology in environment and human health
23	SUNIL S	Explain the Growing energy needs.
24	TAMILARASAN K	Write short notes on child welfare

ENGINEERING MECHANICS

Sl.No.	Register No.	Name of the Student	Question
1.	922518103001	AARTHI P	<p>Two cylinders E,F of diameter 60mm and 30mm. Weighing 160N and 40 N respectively are placed as shown in Fig. Assuming all the contact surfaces to be smooth, find the reactions at the contact points.</p> 
2.	922518103002	ABIRAMI R	<p>Two identical rollers each of weight 50N are supported by an inclined plane and a vertical wall as shown in fig. Find the reactions at the points of supports A, B, and C.</p> 

<p>3.</p>	<p>922518103003</p>	<p>AISHWARYA M</p>	<p>Members OA, OB and OC form a three member space truss. A weight of 10 kN is suspended at the joint 'O' as shown in fig. Analyze magnitude and nature of forces in each of the three members of the truss.</p> 
<p>4.</p>	<p>922518103005</p>	<p>ARUNKUMAR K</p>	<p>Find out the resultant of the system of forces given below:</p> <ol style="list-style-type: none"> 1. 20N inclined at 30° towards north of east. 2. 25 N towards North. 3. 30N towards north west. 4. 35N inclined at 40° towards south of west.
<p>5.</p>	<p>922518103006</p>	<p>CHANDRU P</p>	<p>The forces shown in the figure below are in equilibrium. Determine the forces F_1 and F_2.</p> 
<p>6.</p>	<p>922518103007</p>	<p>CHANDRU P</p>	<p>Find the resultant of the force system shown in figure. Radius = 2.5m.</p> 

7.	922518103008	DHARANI KUMAR P	<p>Illustrate the system of forces shown in fig to a force – couple system at A</p>
8.	922518103009	DIVYA R	Explain about the types of supports and their reactions
9.	922518103010	GUNAPRIYA K M	What are the different components of building and explain each of them with neat sketches.
10.	922518103011	HARINITHA S	List out the steps to be followed to draw the free body diagram of a rigid body.
11.	922518103012	KARTHIKEYAN M	Explain about the three laws of mechanics with practical applications.
12.	922518103013	MADHUMITHA E	What are the everyday life applications of Kinematics?
13.	922518103014	NAVANEETHAN T R	List out the steps to be followed to draw the free body diagram of a rigid body.
14.	922518103015	PRIYADHARSHINI J	Write short notes on equilibrium of particle in 3D.
15.	922518103016	RUBAN S	Explain the different types of loads with neat sketch.
16.	922518103017	SANKAR MATHAVAN B S	Compare and Contrast Ladder friction and Wedge friction.
17.	922518103018	SANTHOSHKUMAR M	Classify the types of friction.
18.	922518103019	SATHIYA T	Discuss about the Polar moment of Inertia and state its significant
19.	922518103020	SELVA KUMAR R	<p>Solve reactions at points A & B</p>
20.	922518103021	SHRIMAN D	Find the magnitude, direction and line of action of resultant of the forces with respect to A, for the system

			<p>shown in fig. $AB = CD = 3\text{m}$ and $BC = AD = 3\text{m}$.</p> 
21.	922518103022	SIVABALAN C	<p>Calculate the reactions R_1, R_2, and R_3 for the two beams AB and CD supported as shown in fig. There being a Hinge connecting B and C.</p> 
22.	922518103023	SUJA P	<p>Three smooth pipes each weighing 20 kN and of diameter 60 cm are to be placed in a rectangular channel with horizontal base as shown. Calculate the reactions at the points of contact between the pipes and between the channel and the pipes. Take width of channel as 160</p>
23.	922518103024	SUNIL S	<p>Define Varignon's theorem. Derive with suitable example.</p>
24.	922518103025	TAMILARASAN K	<p>The magnitude of the resultant of two concurrent forces including an angle of 90° between them is $\sqrt{13}\text{ kN}$. When this included angle is changed to 60°, the magnitude of the resultant becomes $\sqrt{19}\text{ kN}$. Find the magnitude of the two forces.</p>