JHARKHAND Rai University
RANCHI

End Semester/Reappear (Semester I) Examination December, 2024

Programme:B.Tech (MiE/CSE)

Course: Engineering Graphics and Design **Full Marks: 70**

Course Code: 8ESC102/3ESC102 **Time: 3 Hrs.**

Enrolment no. _____

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
	Section I			
1	**Short Answer type questions.**			**4 x 5 = 20**
a	Construct a scale of 1:60 to show metres and decimetres and long enough to measure upto 5 metres.	CO1	Understand	
	or			
	Construct a scale of 1:4 to show centimetres and long enough to measure upto 5 decimetres.	CO1	Understand	
b	Draw the projection of a line AB which is 60mm long is inclined 45^{o} to HP and parallel to VP such that point A is 15mm above HP and 20mm in front of VP.	CO2	Apply	
	or			
	A line AB of 40 mm length is 20 mm away from VP and 40 mm above HP and parallel to both planes. Draw its projection.	CO2	Apply	
c	Explain different methods of development of surfaces.	CO3	Understand	
	or			
	Define Section planes, Sections and True shape of a section.	CO3	Remember	
d	Draw isometric view of a pentagon of side 30 mm in all three planes.	CO4	Understand	
	or			
	Draw isometric view of a hexagon of side 30 mm in x-y, y-z & x-z plane.	CO4	Understand	
	Section II			
Long Answer type questions.				**3 x 10 = 30**
2	a. What is CAD software? Write the major functions to be performed by using CAD software.	CO5	Understand	
	b. State AutoCAD. Enlist some of the features of CAD systems.	CO5	Understand	
	or			
	a. Write steps of Customisation & CAD Drawing consisting of setup of the drawing page and the printer.	CO5	Understand	
	b. Write the steps to set units and drawing limits in AutoCAD.	CO5	Understand	
3	a. Explain 3-D Wire-frame modelling. Define VPOINT command and UCS command.	CO6	Understand	
	b. What is Building information modelling (BIM)? Write its advantages.	CO6	Remember	
	or			
	a. What is Annotation in AutoCAD? What are the different types of Annotations?	CO6	Remember	
	b. Write Dimensioning guidelines used in AutoCAD.	CO6	Understand	
4	A hexagonal pyramid of side of base 30 mm and axis 60 mm long rest with its base on HP and one of the edges of its base is parallel to VP. It is cut by a horizontal section plane at a distance of 38 mm above the base. Draw the front view, sectional top view. Write the steps of construction.	CO3	Analyze	
	or			
	Draw the projection of a line CD measuring 36 mm inclined at an angle of 60^{o} to HP and the end C is 20mm in front of VP is in HP.	CO3	Analyze	

Section III				
	Application based questions			
5	A pentagonal prism side of base 30 mm and height 60 mm resting on HP on one of its corner with longer edge containing that corner is inclined at 45˚to HP and 30˚to VP. Draw the projection of prism and write the steps.	CO3	Analyze	**1 x 20 = 20**
	or			
	A hexagonal pyramid of side of base 30 mm and height 55 mm lies on one of its slant face on HP and edge of base lying on HP makes an angle of 45˚with VP. Draw its projection and write steps of projection.	CO3	Evaluate	

Course Outcome:

On the completion of the Course, the students will be able to:

CO1 To know and understand the conventions and the method of engineering drawing.

CO2 To know the Orthographic & Isometrics projections.

CO3 To know the various projections of regular Planes, solids, Sections and Views of Right Angular Solids.

CO4: To improve visualization skills so that student can apply these skills in developing new products.

CO5 To know about graphical communication and various graphical drawing tools.

CO6 To know the creation of engineering models and their presentation in standard 2D & 3D forms.