



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಜಯ ಅಧಿನಿಯಮ ೧೯೯೪ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ



VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1994 "JnanaSangama" Belagavi-590018, Karnataka, India

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REF: VTU/BGM/BOS/CEAD MQP/490/2023-24/ 5411

DATE: 09 JAN 2024

CIRCULAR

Subject: Model Question Paper for Computer Aided Engineering drawing Course
/Subject regarding ...

Reference: VTU/Aca/2022-23/5150, Dated 28th December 2023

VTU/BGM/BOS/.../2023-24/5365, Dated: 04th January 2024

VTU/EXAM/QPDS/CW(2)/2023-2024/1250, dated 11th December
2023

Chairperson BoS in Mechanical Engineering email dated: 28th
December 2023

This is a reference to the subject cited above: the model question papers for the course/subject "**BCEAD103/203: Computer Aided Engineering Drawing**" for the 1st year 2022 scheme have been prepared by the Board of Studies in Mechanical Engineering. Nearly 12 sets of model question papers are attached to this circular for reference by students and teachers concerned.

It is hereby notified that the Chairpersons/Program Coordinators of University departments and the Principals of Engineering Colleges/Constitutional Engineering Colleges are under the purview of the University to ensure that everyone involved is aware of the contents of the circular and MQPs.

Ranga 09/01/24 BE
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CC to

- The Hon'ble Vice-Chancellor through the secretary to VC for information
- The Registrar (Evaluation) for information
- The Dean Faculty of Engineering, VTU Belagavi for information
- The Office copy

CBCS 22-SCHEME

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BCEDK103/203

First/Second Semester B.E. Degree Examination, Jan/Feb 2024

Computer Aided Engineering Drawing

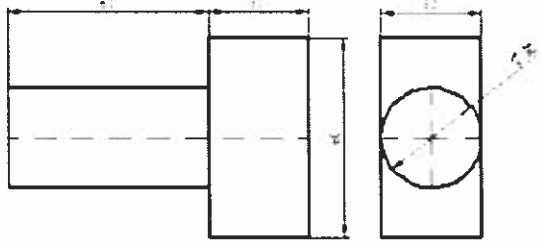
Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	(a)	08
<p>A point A is on HP and 35 mm in front of VP. Another point B is on VP and below HP. The line joining their front views makes an angle of 30° to XY line while the line joining their top views makes an angle of 45° with XY line. Find the distance of the point B from HP.</p>		
	(b)	12
<p>The distance between the end projectors through the end points of a line AB is 60 mm. The end A is 10 mm above HP and 15 mm Infront of VP. The end B is 35 mm Infront of VP. The line AB appears 70 mm long in the front view. Complete the projections. Find the true length of the line and its inclinations with HP and VP.</p>		
Module - 2		
Q.02		30
<p>A hexagonal prism of 25 mm side of base and axis height 60 mm rests on one of its edges of base on HP. Draw the projections of the prism when the axis is inclined to HP at 45° and to VP at 30°.</p>		
Module - 3		
Q.03		25
<p>Draw the isometric projection for the combinations of solids shown in Fig.</p>		
		
Module - 4		
Q.04		25
<p>A square pyramid of 40 mm base edge and 60 mm height rests with its base on HP with all of its base edges equally inclined to VP. It is cut by a plane perpendicular to VP and inclined to HP at 60°, passing through the extreme right corner of base. Draw the development of the lateral surface of the pyramid.</p>		

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BCEDK103/203

First/Second Semester B.E. Degree Examination. Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	A circular lamina inclined to the VP appears in the front view as an ellipse of major axis 60mm and minor axis 40mm. the major axis is parallel to be both HP and VP. One end of the minor axis is in both the HP and VP. Draw the projections of the lamina and determine the inclined of the lamina with the VP.	20
Module - 2		
Q.02	A tetrahedron of 50 mm sides rests on a of its corner such that an edge containing that corner is inclined to HP at 50° and VP at 30°.	30
Module - 3		
Q.03	A sphere of diameter 50 mm rests centrally on top of a cube of sides 50 mm. Draw the isometric projections of the combination of solids.	25
Module - 4		
Q.04	A square pyramid base 40 mm side and axis 65 mm long has its base on HP and all the edges of the base are equally inclined to VP. It is cut to with an inclined section plane so as the truncated surface at 45° to its axis, bisecting it. Draw the development of the truncated pyramid.	25

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BCEDK103/203

First/Second Semester B.E. Degree Examination, Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	An equilateral triangular lamina of 50mm side lies on the sides on HP. The lamina makes 45° with HP and one of its medians is inclined at 45° to VP. Draw its projection.	20
Module - 2		
Q.02	A hexagonal prism of 25 mm side of base and axis height 60 mm rests on one of its edges of base on HP. Draw the projections of the prism when the axis is inclined to HP at 45° and to VP at 30°.	30
Module - 3		
Q.03	A sphere of diameter 50 mm rests centrally on top a cube sides 50 mm. draw the isometric projections of the combination of solids.	25
Module - 4		
Q.04	A pentagonal prism of base sides 30 mm and axis length 60 mm rests with its base on HP and an edge of the base inclined at 45° to VP. It is cut by a plane perpendicular to VP, inclined at 40° to HP and passing through a point on the axis, at a distance of 30 mm from the base. Develop the remaining surface of the truncated prism.	25

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First/Second Semester B.E. Degree Examination. Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1			Marks
Q.01	(a)	A point A is on HP and 35 mm in front of VP. Another point B is on VP and below HP. The line joining their front views makes an angle of 30° to XY line while the line joining their top views makes an angle of 45° with XY line. Find the distance of the point B from HP.	08
	(b)	A line PQ 85 mm long has its end P 10 mm above the HP and 15 mm Infront of VP. The top view and front view of line PQ are 75 mm and 80 mm respectively. Draw its projections. Also determine the true and apparent inclinations of the line.	12
Module - 2			
Q.02		A hexagonal prism 25 mm sides of base and 50 mm axis length rests on HP on one of its edges of the base. Draw the projections of the prism when the axis is inclined to HP at 45° and VP at 30° .	30
Module - 3			
Q.03		Draw isometric projection of a hexagonal prism of side of base 40mm and height 60mm with a right circular cone of base 40mm as diameter and height 60mm, resting on its top such that the axes of both solids are collinear.	25
Module - 4			
Q.04		A Square prism of base sides 30 mm and axis length 60 mm is resting on HP on its base with all vertical faces being equally inclined to VP. It is cut by an inclined plane 60° to HP and perpendicular to VP and is passing through a point on the axis at a distance 50 mm from the base. Draw the development of the lower portion of the prism.	25

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First/Second Semester B.E. Degree Examination, Jan/Feb 2024

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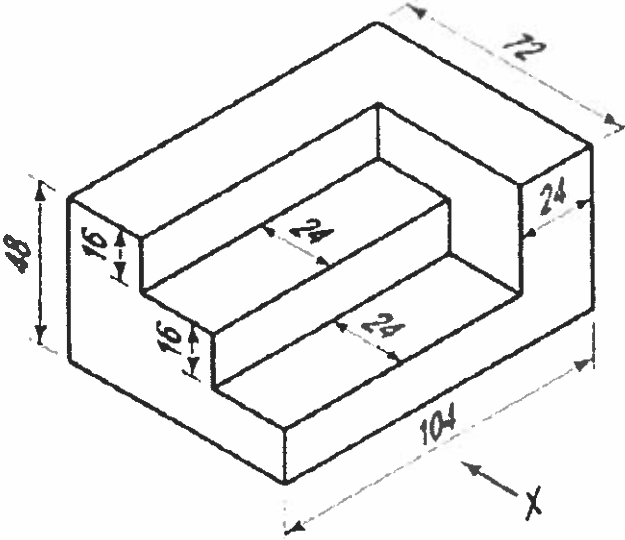
Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	A rectangular plate of 60 mm x 40 mm has one of its shorter edges in the VP and inclined at 40° to the HP. Draw its top view if its front view is a square of 40 mm sides.	20
Module - 2		
Q.02	A hexagonal prism 25 mm sides of base and 50 mm axis length rests on HP on one of its edges. Draw the projections of the prism when the axis is inclined to HP at 45° and appears to be inclined to VP 40°.	30
Module - 3		
Q.03	<p>Draw the complete orthographic projections of the object shown in figure</p> 	25
Module - 4		
Q.04	A cube of side 40 mm is resting on HP with its base such that one of the vertical faces is inclined to 30° to VP. It is cut by a sectional plane perpendicular to VP, inclined to HP at angle of 30° and passing through the mid-point of the axis. Draw the development of the lateral surfaces of the lower retained portion of the cube.	25

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BCEDK103/203

First/Second Semester B.E. Degree Examination. Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks	
Q.01	(a)	Draw the projections of the following Points on the same XY line, keeping convenient distance between each projector. Name the Quadrants in which they lie. E - 30 mm below HP & 25 mm behind VP. F- 35 mm below HP & 30 mm front of VP. G- On HP & 30 mm in front of VP. H - On HP & 35 mm behind VP.	08
	(b)	Draw the projections of a straight-line AB 80 mm long is inclined at 45° to HP and 30° to VP. The end A is in HP and 80 mm above HP. The end B is nearer to VP than A.	12
Module - 2			
Q.02		A hexagonal pyramid 25 mm sides of base and 60 mm axis length rests on HP on one of its slant triangular faces. Draw the projections of the pyramid when the axis appears to be inclined to VP at 45°.	30
Module - 3			
Q.03		A cube of side-40mm is resting centrally on a hexagonal prism base side-40mm and height 50mm, such that one of the base sides of the cube is parallel to one of the sides of the top face of the prism. Draw the isometric projection of the combination.	25
Module - 4			
Q.04		A square pyramid base 40 mm side and axis 65 mm long has its base on HP and all the edges of the base are equally inclined to VP. It is cut to with an inclined section plane so as the truncated surface at 45° to its axis, bisecting it. Draw the development of the truncated pyramid.	25

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First/Second Semester B.E. Degree Examination, Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	Draw the projections of a circular of negligible thickness of 60mm diameter resting on HP on a point A on the circumference, with its plane inclined at 45° to HP and view of the diameter passing through the resting point makes 60° with VP.	20
Module - 2		
Q.02	A square prism 35mm sides of base and 65 mm axis length rests on HP on one of its edges of the base which is inclined to VP at 30° . Draw the projections of the prism when the axis is inclined to HP at 45° .	30
Module - 3		
Q.03	A sphere diameter 50mm is placed centrally on the flat of a hemisphere diameter 60mm. Draw the isometric of the combination.	25
Module - 4		
Q.04	A Square prism of base sides 30 mm and axis length 60 mm is resting on HP on its base with all vertical faces being equally inclined to VP. It is cut by an inclined plane 60° to HP and perpendicular to VP and is passing through a point on the axis at a distance 50 mm from the base. Draw the development of the lower portion of the prism.	25

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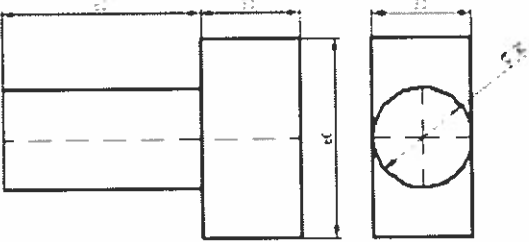
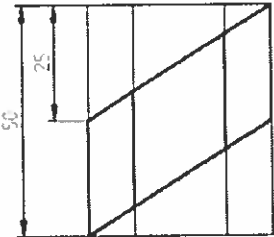
Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	(a)	A point P is 30 mm in front of VP, 40 mm above HP and 50 mm from RPP. Draw its projections.
	(b)	A line AB 70 mm long is inclined to HP at 30° and to VP at 45°. The end A is 15 mm above HP and in VP. Draw the projections.
Module - 2		
Q.02		A pentagonal pyramid of side of base 25 mm and axis 60 mm long rests on HP on one of its slant triangular faces. Draw its projections when its axis appears to be inclined at 30° to VP with the apex is being nearer to the VP than its base.
Module - 3		
Q.03		<p>Draw the isometric projection for the combinations of solids shown in Fig.</p> 
Module - 4		
Q.04		<p>A hexagonal prism of base side 25 mm and height 50 mm is resting on HP on its base, such that one of its base edges is parallel to VP. The prism is cut in this position as shown in the following front view. Draw the development of the lateral surface of the prism.</p> 

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Computer Aided Engineering Drawing

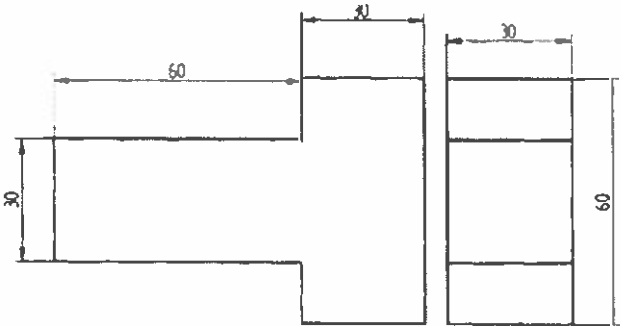
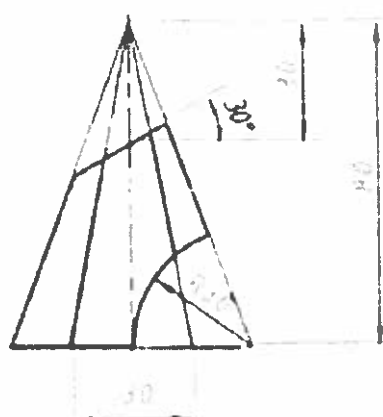
Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	<p>A triangular plane lamina of sides 25 mm is resting on HP with one of its corners touching it such that the side opposite to the corner on which it rests is 15 mm above HP and makes an angle of 30° with VP. Draw the top and front views in this position. Also determine the inclination of the lamina to the reference plane.</p>	20
Module - 2		
Q.02	<p>A square pyramid 35 mm sides of base and 65 mm axis length rests on HP on one of its corners of the base. Draw the projections of the pyramid when its base is inclined to HP at 45° and its axis appears to be inclined at 30° to VP.</p>	30
Module - 3		
Q.03	<p>The following figure shows the front and side view of the object. Draw its isometric projection</p> 	25
Module - 4		
Q.04	<p>Draw the development of the lateral surfaces of a regular hexagonal pyramid for the Fig as shown aside.</p> 	25

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BCEDK103/203

First/Second Semester B.E. Degree Examination. Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	(a)	08
State the quadrants in which the following points are located. Assume any distances A- Front view below XY & top view above XY line. B-Front & top views are below XY line. C -Front & top views are above XY line. D - Front view above XY & top view below XY line.		
	(b)	12
Draw the projections of a line PQ and find its true length and inclinations when the line is inclined at 30° to the HP and 45° to the VP. The line is having one of its ends 15 mm above HP and 20 mm in front of VP. The distance between the end projectors on the XY line is 60 mm.		
Module - 2		
Q.02		30
A right circular cone of base diameter 50 mm and axis 60 mm long is resting on HP on its rim such that the axis is inclined to VP at 30° and at 45° to HP. Draw its projections showing its base.		
Module - 3		
Q.03		25
A rectangular pyramid of base- 60mm x 45mm and height 50mm is placed centrally on a rectangular slab side- 100mm x 60mm and thickness-20mm. Draw the isometric projection of the combination.		
Module - 4		
Q.04		25
A funnel is to be made of sheet metal. The funnel tapers from 60 mm to 30 mm diameters to a height of 25 mm and then forms to a cylinder with a height of 50 mm. Bottom of funnel is bevelled off completely at an angle of 45° to axis. Draw the development of funnel.		

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BCEDK103/203

First/Second Semester B.E. Degree Examination, Jan/Feb 2024

Computer Aided Engineering Drawing

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	A pentagonal lamina of edges 30mm is resting on HP with one of its corners such that the edge opposite to this corner is 20mm above HP & makes an angle of 45° with VP. Draw the top and views of the plane lamina in this position. Determine of the lamina with HP.	20
Module - 2		
Q.02	A square pyramid 40 mm sides of base and 65 mm axis length rests on HP on one of its edges of the base which is inclined to VP at 30° . Draw the projections of the pyramid when the axis is inclined to HP at 45° .	30
Module - 3		
Q.03	Draw the isometric projection for the combinations of solids shown in Fig. <div style="text-align: center; margin-top: 10px;"> </div>	25
Module - 4		
Q.04	A right cone of 60 mm diameter of base and 75 mm height stands on its base on HP. It is cut to the shape of a truncated cone with its truncated surface inclined at 45° to the axis lying at a distance of 40 mm from the apex of the cone. Obtain the development of the lateral surface of the truncated cone.	25

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Time: 3 Hours

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Max. Marks: 100

Note: 01. Answer all Four full questions

02. Grid sheets may be used for making preparatory sketches

Module - 1		Marks
Q.01	<p>(a) Two Points R and S are on HP. The point R is 35 mm in front of VP, while S is 50mm behind VP. The line joining their top views makes an angle of 40° with XY. Find the horizontal distance between the two projectors.</p>	08
	<p>(b) Draw the projections of a line PQ and find its true length and inclinations when the line is inclined at 30° to the HP and 45° to the VP. The line is having one of its ends 15 mm above HP and 20 mm in front of VP. The distance between the end projectors on the XY line is 60 mm.</p>	12
Module - 2		
Q.02	<p>A hexagonal prism of 25 mm side of base and axis height 60 mm rests on one of its longer edges on HP such that the two of the rectangular faces containing the longer edge on which it rests make equal inclinations with HP. Draw the projections of the prism when the axis is inclined to VP at 40°.</p>	30
Module - 3		
Q.03	<p>Using first angle projection, draw front view looking in the direction of arrow shown, top view and right side view of the machine component as shown in Figure</p> <div style="text-align: center;"> </div>	25
Module - 4		
Q.04	<p>A square pyramid base 40 mm side and axis 65 mm long has its base on HP and all the edges of the base are equally inclined to VP. It is cut to with an inclined section plane so as the truncated surface at 45° to its axis, bisecting it. Draw the development of the truncated pyramid.</p>	25