



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET-A

Registration No.: .....

**School of Manufacturing Skills**  
**Session: 2021-22 (Summer Semester)**  
**B. Voc. Program, III Semester,**  
**End-Sem. Examination**

Course Code: GEN1302

Time: 2 Hour

Course Name: Computer Aided Drawing

Max. Marks: 50

**Instructions:**

1. Attempt all questions.
2. Section A contains 10 Questions. Each question carries 1 Mark.
3. Section B contains 04 Questions. Each question carries 4 Marks.
4. Section C contains 04 Questions. Each question carries 6 Marks.

**Section – A**

10X1= 10 Marks

1. The line given below is used for -----

- a) Long-break line
- b) Hidden line
- c) Centroidal lines
- d) Out lines of adjacent parts

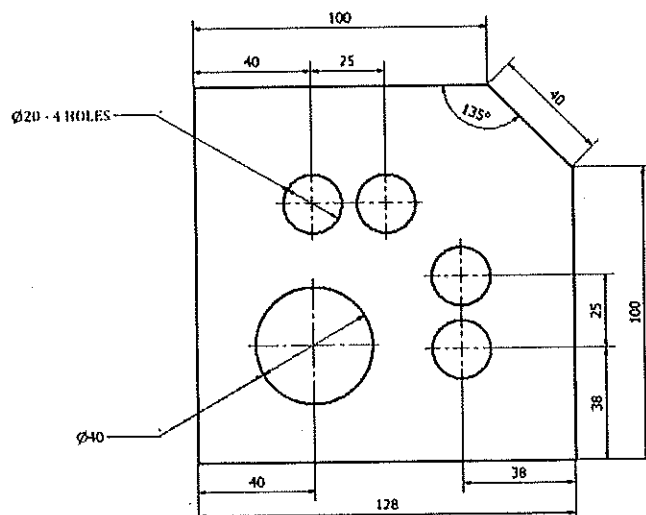
2. Which among the following represent the no machining symbol?

- a)
- b)
- c)

d) None of the above

3. Which of the following dimensions represent the aligned dimension?

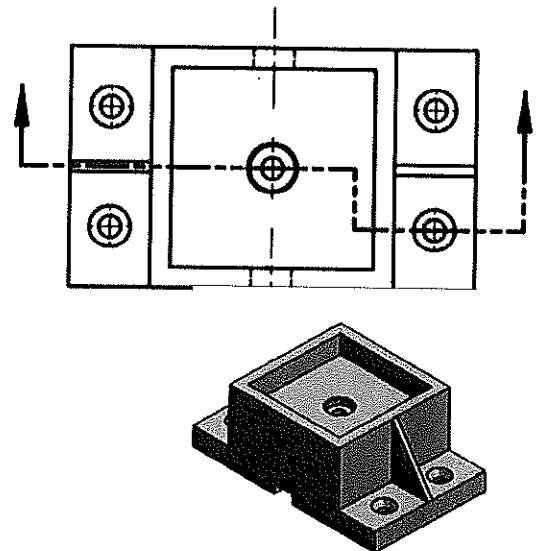
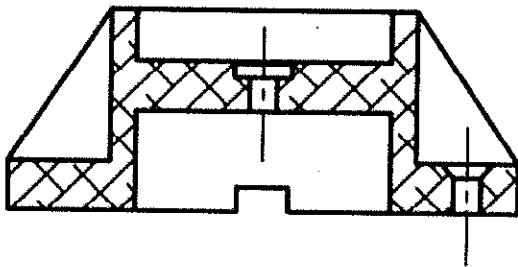
- a) 100
- b) 25
- c) 40
- d) 128



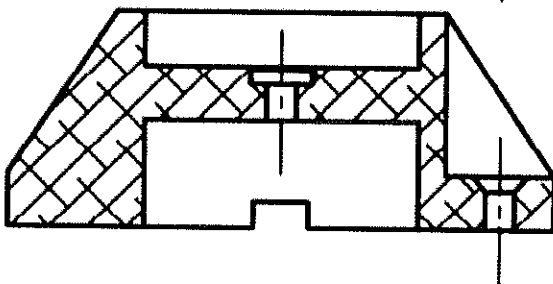
4. If a right-angle cone is placed with its base parallel to horizontal plane what will be its front view
- triangle
  - point
  - line
  - circle
5. What is the representative factor of a line, whose length is 18cm on the drawing sheet, representing an actual length of 6cm?
- 1:50
  - 3:1
  - 1:24
  - 1:60

6. Which of the following accurately represent the section view for the following figure?

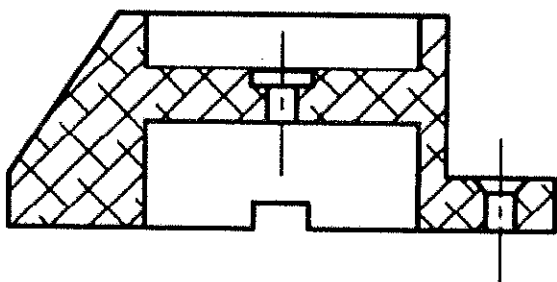
a)

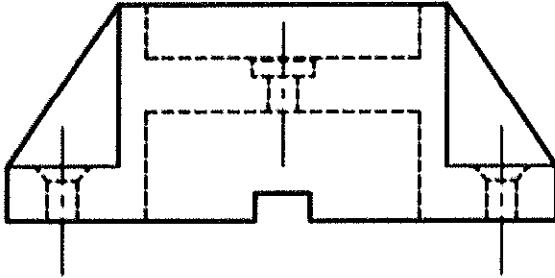


b)



c)





7. The visible parts inside or back side of the object while represented in orthographic projection are represented by which line?

- a) Continuous thick line
- b) Continuous thin line
- c) Dashed thin line
- d) Long-break line

8. Which of the following angle sets is not possible to draw with the help of set-squares?

- a)  $60^{\circ}$ - $30^{\circ}$
- b)  $45^{\circ}$ - $90^{\circ}$
- c)  $0^{\circ}$ - $90^{\circ}$
- d)  $75^{\circ}$ - $35^{\circ}$

9. Which of the following is the HARDEST pencil:

- a) 3H
- b) H
- c) HB
- d) 2B

10. The image obtained by projection is known as \_\_\_\_\_:

- a) Projectors
- b) Plane of projection
- c) Viewer
- d) View

## Section- B

04X4= 16 Marks

11. Write down the name of any 2-drawing instrument with their diagram and 2 uses each?

12. Differentiate between parallel and perspective view of projection?

13. Define layout of engineering drawing with its components?

14. Describe the four different types of sizes with a proper example?



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Section- C

04X6= 24 Marks

15. Differentiate between the first angle and third angle of projections?
16. What is sectioning state different types of section views with diagrams each?
17. Write down the difference between artistic drawing and engineering drawing?
18. Calculate the following for 85G6:
  - a) Upper deviation b) Minimum size c) Nominal size d) Fundamental deviation
  - e) Upper limit f) Lower deviation g) basic size h) Tolerance zone i) IT grade
  - j) Tolerance class

ISO Tolerances for Holes (ISO 286-2)																				
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micrometres																				
<b>E6</b>	+28 +20	+34 +25	+43 +32	+53 +40	+66 +50	+79 +60	+94 +72	+110 +85	+129 +100	+142 +110	+161 +125									
<b>E7</b>	+32 +20	+40 +25	+50 +32	+61 +40	+75 +50	+90 +60	+107 +72	+125 +85	+146 +100	+162 +110	+185 +125									
<b>E11</b>	+95 +20	+115 +25	+142 +32	+170 +40	+210 +50	+250 +60	+292 +72	+335 +85	+390 +100	+430 +110	+485 +125									
<b>E12</b>	+140 +20	+175 +25	+212 +32	+250 +40	+300 +50	+360 +60	+422 +72	+485 +85	+560 +100	+630 +110	+695 +125									
<b>E13</b>	+200 +20	+245 +25	+302 +32	+370 +40	+440 +50	+520 +60	+612 +72	+715 +85	+820 +100	+920 +110	+1015 +125									
<b>F6</b>	+18 +10	+22 +13	+27 +16	+33 +20	+41 +2	+49 +30	+58 +36	+68 43	+79 +50	+88 +56	+98 +62									
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<b>G6</b>	+12 +4	+14 +5	+17 +6	+20 +7	+25 +9	+29 +10	+34 +12	+39 +14	+44 +15	+49 +17	+54 +18									
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<b>H9</b>	+30 0	+36 0	+43 0	+52 0	+62 0	+74 0	+87 0	+100 0	+115 0	+130 0	+140 0									

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**Answer Key**

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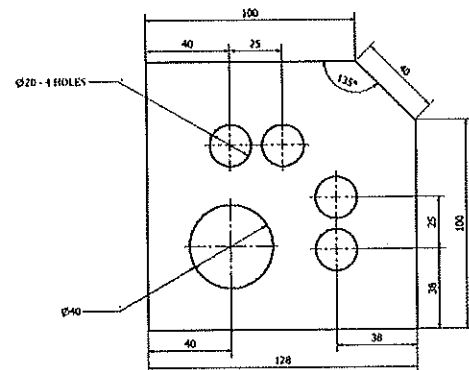
2. Which among the following represent the no machining symbol?

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- 
- 

d) None of the above

3. Which of the following dimensions represent the aligned dimension?

- 100
- 25
- 40**
- 128



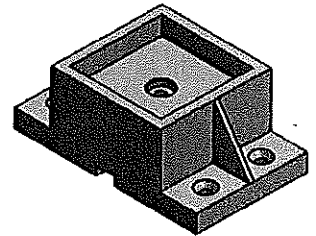
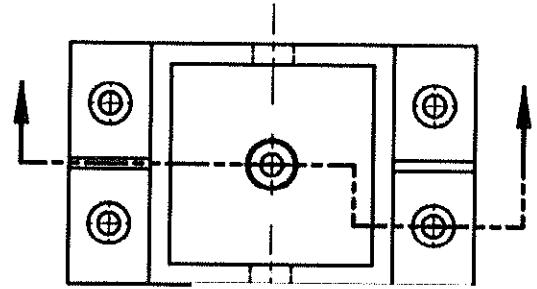
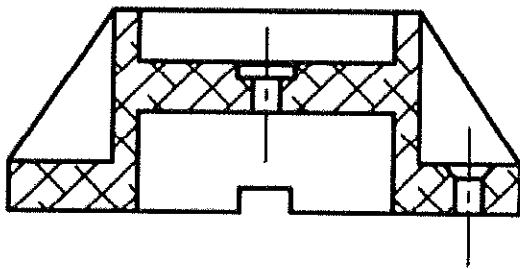
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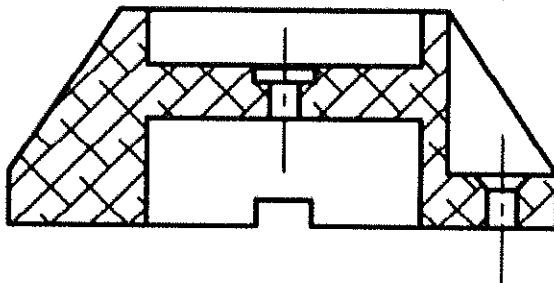
- a) 1:50
- b) 3:1
- c) 1:24
- d) 1:60

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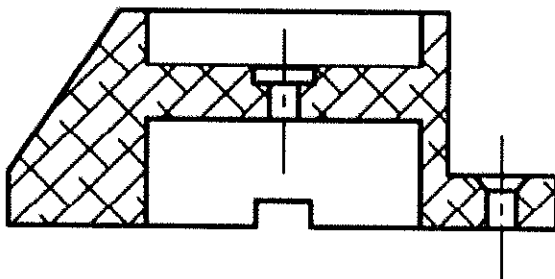
a)



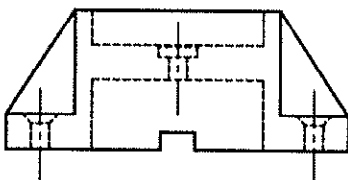
b)



c)



d)





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7. The visible parts inside or back side of the object while represented in orthographic projection are represented by which line?

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- c) **Dashed thin line**
- d) Long-break line

8. Which of the following angle sets is not possible to draw with the help of set-squares?

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9. Which of the following is the HARDEST pencil:

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10. The image obtained by projection is known as \_\_\_\_\_:

- a) Projectors
- b) Plane of projection
- c) Viewer
- d) **View**

Section- B

04X4= 16 Marks

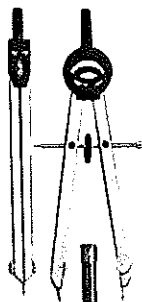
11. Write down the name of any 2-drawing instrument with their diagram and 2 uses each?

I) Divider

- a) It is used in indirect dimensioning
- b) It is used for scribing purpose

II) Compass

- a) Used to create arcs and circles
- b) Used to divide arc and circles into equal parts



12. Differentiate between parallel and perspective view of projection?

Parallel projection	Perspective projection
Distance from the observer to the object is infinite; projection lines are parallel – the object is positioned at infinity.	Distance from the observer to the object is finite and the object is viewed from a single point – projectors are not parallel.
Less realistic but easier to draw.	Perspective projections mimic what the human eyes see, however, they are difficult to draw.

13. Define layout of engineering drawing with its components?

### LAYOUT OF DRAWING SHEETS

- Any engineering drawing has to follow a standard format. The drawing sheet consist of drawing space, title block and sufficient margins.

A typical drawing sheet consist of the following:

- **Borders**
- **Filling margin**
- **Grid reference system**
- **Title box**

14. Describe the four different types of sizes with a proper example?

**Nominal size:** The size by name which is called is known as Nominal size

**Basic size:** The size on which Tolerances are applied is known as basic size


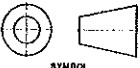
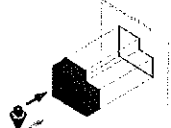
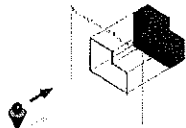
**Measured size:** The size which we get upon measuring by an instrument is known as measured size.

**True size:** The size which is neither be achieved nor be measured

### Section- C

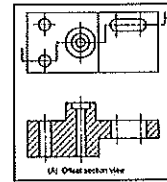
04X6= 24 Marks

15. Differentiate between the first angle and third angle of projections?

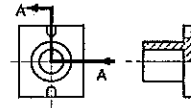
First Angle Projection	Third Angle Projection
The object is imagined to be in first quadrant.	The object is imagined to be in third quadrant.
The object lies between the observer and plane of projection.	The plane of projection lies between the observer and object.
The plane of projection is assumed to be non transparent.	The plane of projection is assumed to be transparent.
When view are drawn in their relative position Top view comes below Front view, Right side view drawn to the left side of elevation.	When view are drawn in their relative position Top view comes above Front view, Right side view drawn to the right side of elevation.
 <p style="text-align: center;">SYMBOL</p>	 <p style="text-align: center;">SYMBOL</p>
	

16. What is sectioning state different types of section views with diagrams each?

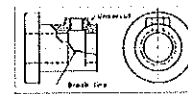
- a) Full section view
- b) Offset section view



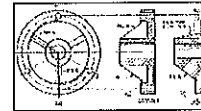
- c) Half section view



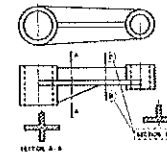
- d) Broken section view



- e) Aligned or revolved section views



- f) Removed view



17. Write down the difference between artistic drawing and engineering drawing?

Ans:

S.no.	Points of difference	Engineering drawing	Artistic drawing
1.	Technical information	It contains technical information Eg: dimensions, symbols and notes	It contains no technical information
2.	manufacturability	It can be manufactured easily in workshops	It can't be manufactured
3.	understandability	It can be understand by technical persons only	It can be understand by all types of persons
4.	examples	-	-

18. Calculate the following for 85G6:

- a) Upper deviation b) Minimum size c) Nominal size d) Fundamental deviation
- e) Upper limit f) Lower deviation g) basic size h) Tolerance zone i) IT grade
- j) Tolerance class



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ISO Tolerances for Holes (ISO 286-2)																				
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E12	+40 +20	+48 +25	+57 +32	+67 +40	+80 +50	+95 +60	+112 +72	+130 +85	+152 +100	+168 +110	+195 +125									
E13	+40 +20	+48 +25	+57 +32	+67 +40	+80 +50	+95 +60	+112 +72	+130 +85	+152 +100	+168 +110	+195 +125									
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H9	+30 0	+36 0	+43 0	+52 0	+62 0	+74 0	+87 0	+100 0	+115 0	+130 0	+140 0									

- a) +34 microns or 0.034 mm
- b) 85.012 mm
- c) 85 mm
- d) NA
- e) 85.034 mm
- f) +12 microns or 0.012 mm
- g) 85G6 mm or 85 +34 +12 mm
- h) 22 microns or 0.022 mm
- i) 6
- j) G6

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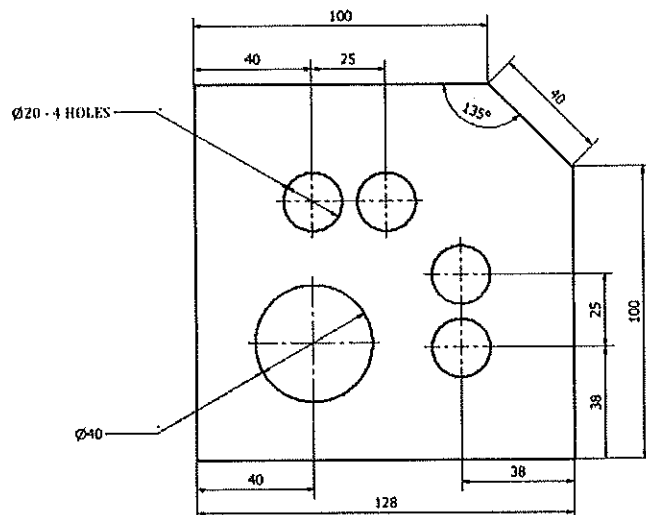
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4. If a right-angle cone is placed with its base parallel to horizontal plane what will be its front view

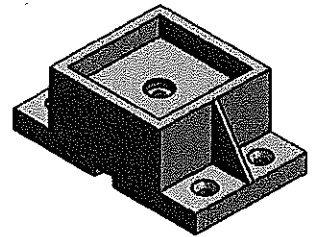
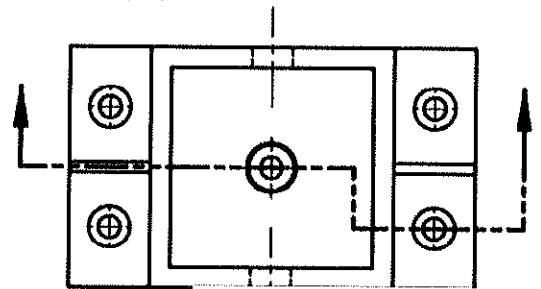
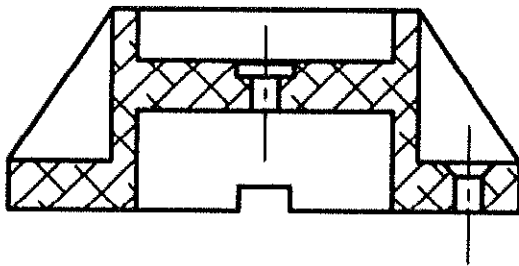
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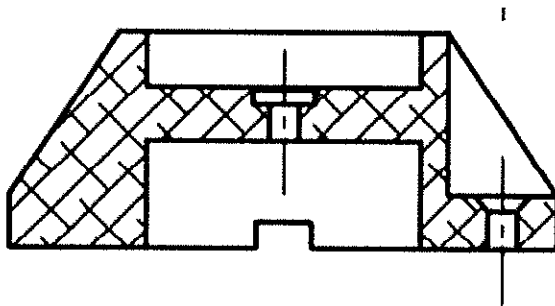
- a) 1:50
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- d) 1:60

6. Which of the following accurately represent the section view for the following figure?

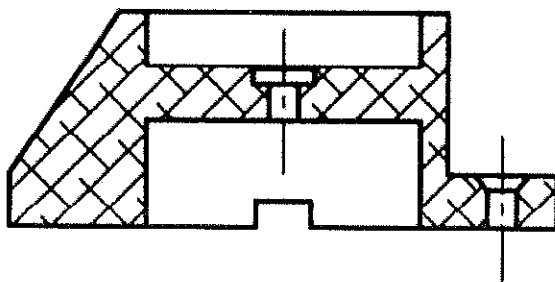
a)



b)



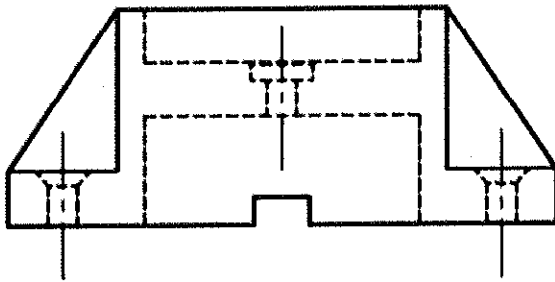
c)



d)



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7. The visible parts inside or back side of the object while represented in orthographic projection are represented by which line?

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inc.	6	10	18	30	40	50	65	80	100	120	140	160	180	200	225	250	280	315	355	400			
micrometres																							
<b>E6</b>	+28 +20	+34 +25	+43 +32	+53 +40	+66 +50	+79 +60	+94 +72	+110 +85	+129 +100	+142 +110	+161 +125	<b>E7</b>	+32 +20	+40 +25	+50 +32	+61 +40	+75 +50	+90 +60	+107 +72	+125 +85	+146 +100	+162 +110	+185 +125
<b>E11</b>	+95 +20	+115 +25	+142 +32	+170 +40	+210 +50	+250 +60	+292 +72	+335 +85	+390 +100	+430 +110	+485 +125	<b>E12</b>	+140 +20	+175 +25	+212 +32	+250 +40	+300 +50	+360 +60	+422 +72	+485 +85	+560 +100	+630 +110	+695 +125
<b>E13</b>	+200 +20	+245 +25	+302 +32	+370 +40	+440 +50	+520 +60	+612 +72	+715 +85	+820 +100	+920 +110	+1015 +125	<b>F6</b>	+18 +10	+22 +13	+27 +16	+33 +20	+41 +25	+49 +30	+58 +36	+68 +43	+79 +50	+88 +56	+98 +62
<b>F7</b>	+22 +10	+28 +13	+34 +16	+41 +20	+50 +25	+60 +30	+71 +36	+83 +43	+96 +50	+108 +56	+119 +62	<b>F8</b>	+28 +10	+35 +13	+43 +16	+53 +20	+64 +25	+76 +30	+90 +36	+106 +43	+122 +50	+137 +56	+151 +62
<b>G6</b>	+12 +4	+14 +5	+17 +6	+20 +7	+25 +9	+29 +10	+34 +12	+39 +14	+44 +15	+49 +17	+54 +18	<b>G7</b>	+16 +4	+20 +5	+24 +6	+28 +7	+34 +9	+40 +10	+47 +12	+54 +14	+61 +15	+69 +17	+75 +18
<b>G8</b>	+22 +4	+27 +5	+33 +6	+40 +7	+48 +9	+56 +10	+66 +12	+77 +14	+87 +15	+98 +17	+107 +18	<b>H6</b>	+8 0	+9 0	+11 0	+13 0	+16 0	+19 0	+22 0	+25 0	+29 0	+32 0	+36 0
<b>H7</b>	+12 0	+15 0	+18 0	+21 0	+25 0	+30 0	+35 0	+40 0	+46 0	+52 0	+57 0	<b>H8</b>	+18 0	+22 0	+27 0	+33 0	+39 0	+46 0	+54 0	+63 0	+72 0	+81 0	+89 0
<b>H9</b>	+30 0	+36 0	+43 0	+52 0	+62 0	+74 0	+87 0	+100 0	+115 0	+130 0	+140 0												



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET-B

Registration No.: .....

**School of Manufacturing Skills**  
**Session: 2021-22 (Summer Semester)**  
**B. Voc. Program, III Semester,**  
**End-Sem. Examination**

**Course Code: GEN1302**

**Time: 2 Hour**

**Course Name: Computer Aided Drawing**

**Max. Marks: 50**

**Instructions:**

1. Attempt all questions.
2. Section A contains 10 Questions. Each question carries 1 Mark.
3. Section B contains 04 Questions. Each question carries 4 Marks.
4. Section C contains 04 Questions. Each question carries 6 Marks.

**Section – A**

10X1= 10 Marks

1. The line given below is used for -----

- a) Long-break line
- b) Hidden line
- c) Centroidal lines
- d) Out lines of adjacent parts

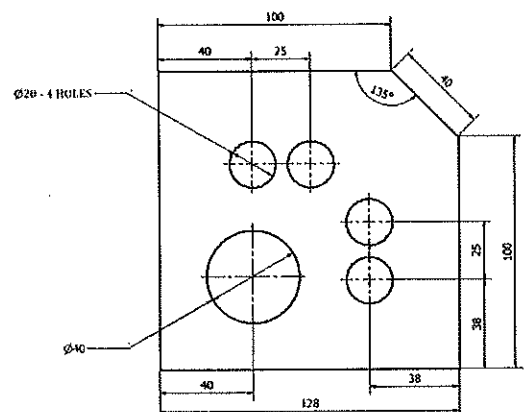
2. Which among the following represent the no machining symbol?

- a)
- b)
- c)

d) None of the above

3. Which of the following represent the largest horizontal dimension?

- a) 100
- b) 25
- c) 40
- d) 128



4. If a right-angle cone is placed with its base parallel to horizontal plane what will be its front view

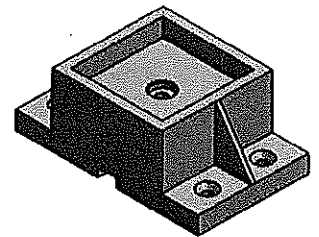
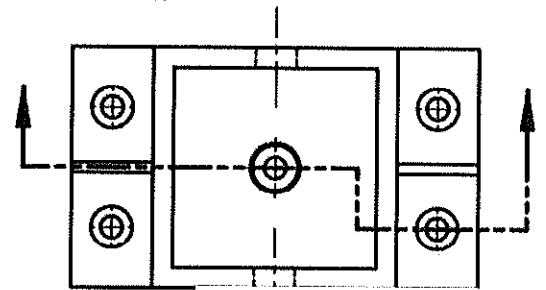
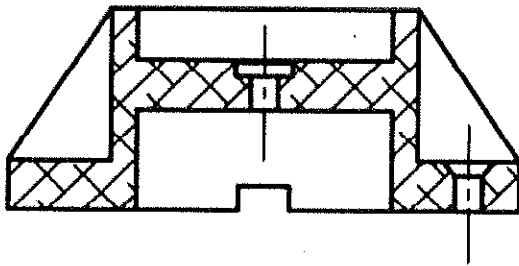
- a) triangle
- b) point
- c) line
- d) circle

5. What is the representative factor of a line, whose length is 36 cm on the drawing sheet, representing an actual length of 6cm?

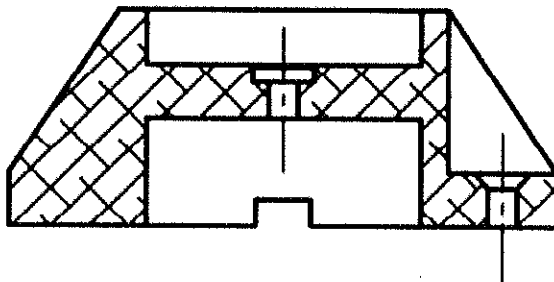
- a) 1:50
- b) 6:1**
- c) 1:24
- d) 1:60

6. Which of the following accurately represent the section view for the following figure?

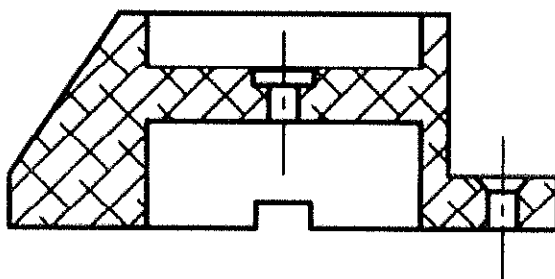
a)



b)



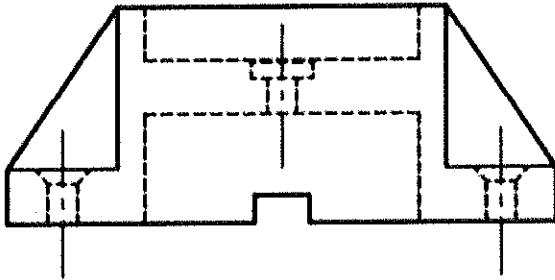
c)



d)



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7. The visible parts inside or back side of the object while represented in orthographic projection are represented by which line?

- a) Continuous thick line
- b) Continuous thin line
- c) Dashed thin line**
- d) Long-break line

8. Which of the following angle sets is not possible to draw with the help of set-squares?

- a)  $60^{\circ}$ - $30^{\circ}$
- b)  $45^{\circ}$ - $90^{\circ}$
- c)  $0^{\circ}$ - $90^{\circ}$
- d)  $75^{\circ}$ - $35^{\circ}$**

9. Which of the following is the DARKEST pencil:

- a) 3H
- b) H
- c) HB**
- d) 2B

10. The image obtained by projection is known as \_\_\_\_\_:

- a) Projectors
- b) Plane of projection
- c) Viewer
- d) View**

## Section- B

04X4= 16 Marks

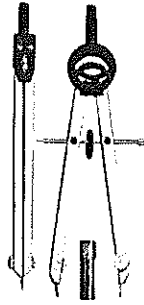
11. Write down the name of any 2-drawing instrument with their diagram and 2 uses each?

I) Divider

- a) It is used in indirect dimensioning
- b) It is used for scribing purpose

II) Compass

- a) Used to create arcs and circles
- b) Used to divide arc and circles into equal parts



12. Differentiate between parallel and perspective view of projection?

### PARALLEL VS PERSPECTIVE PROJECTION

Parallel projection	Perspective projection
Distance from the observer to the object is infinite; projection lines are parallel – the object is positioned at infinity.	Distance from the observer to the object is finite and the object is viewed from a single point – projectors are not parallel.
Less realistic but easier to draw.	Perspective projections mimic what the human eyes see, however, they are difficult to draw.

13. Define layout of engineering drawing with its components?

### LAYOUT OF DRAWING SHEETS

- Any engineering drawing has to follow a standard format. The drawing sheet consist of drawing space, title block and sufficient margins.

A typical drawing sheet consist of the following:

- **Borders**
- **Filling margin**
- **Grid reference system**
- **Title box**

14. Describe the four different types of sizes with a proper example?

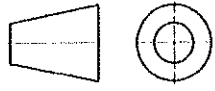
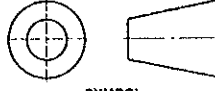
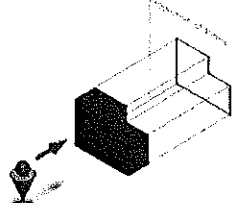
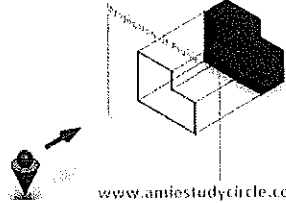
**Nominal size:** The size by name which is called is known as Nominal size

**Basic size:** The size on which Tolerances are applied is known as basic size

**Measured size:** The size which we get upon measuring by an instrument is known as measured size.

**True size:** The size which is neither be achieved nor be measured

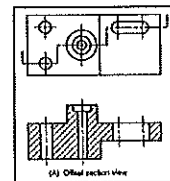
15. Differentiate between the first angle and third angle of projections.

First Angle Projection	Third Angle Projection
The object is imagined to be in first quadrant.	The object is imagined to be in third quadrant.
The object lies between the observer and plane of projection.	The plane of projection lies between the observer and object.
The plane of projection is assumed to be non transparent.	The plane of projection is assumed to be transparent.
When views are drawn in their relative position Top view comes below Front view, Right side view drawn to the left side of elevation.	When views are drawn in their relative position Top view comes above Front view, Right side view drawn to the right side of elevation.
 SYMBOL	 SYMBOL
	 <small>www.amiestudycircle.com</small>

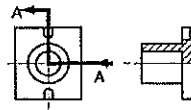
16. What is sectioning state different types of section views with diagrams each?

a) Full section view

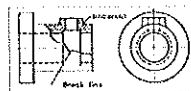
b) Offset section view



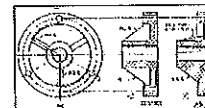
c) Half section view



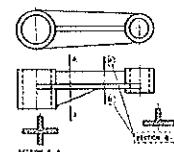
d) Broken section view



e) Aligned or revolved section views



f) Removed view





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17. Write down the difference between artistic drawing and engineering drawing?

Ans:

S.no.	Points of difference	Engineering drawing	Artistic drawing
1.	Technical information	It contains technical information Eg: dimensions, symbols and notes	It contains no technical information
2.	manufacturability	It can be manufactured easily in workshops	It can't be manufactured
3.	understandability	It can be understood by technical persons only	It can be understood by all types of persons
4.	examples	-	-

18. Calculate the following for 185F7:

- a) Upper deviation b) Minimum size c) Nominal size d) Fundamental deviation  
 e) Upper limit f) Lower deviation g) basic size h) Tolerance zone i) IT grade  
 j) Tolerance class

ISO Tolerances for Holes (ISO 286-2)																			
Nominal hole sizes (mm)																			
over	3	6	10	18	30	40	50	63	80	100	120	140	160	180	200	250	280	315	355
inc.	6	10	18	30	40	50	63	80	100	120	140	160	180	200	250	280	315	355	400
micrometres																			
E6	+28 +20	+34 +25	+43 +32	+53 +40	+66 +50	+79 +60	+94 +72	+110 +85	+129 +100	+142 +110	+161 +125								
E7	+32 +20	+40 +25	+50 +32	+61 +40	+75 +50	+90 +60	+107 +72	+125 +85	+146 +100	+162 +110	+185 +125								
E11	+95 +20	+115 +25	+142 +32	+170 +40	+210 +50	+250 +60	+292 +72	+335 +85	+390 +100	+420 +110	+485 +125								
E12	+140 +20	+175 +25	+212 +32	+250 +40	+300 +50	+360 +60	+422 +72	+485 +85	+560 +100	+620 +110	+695 +125								
E13	+200 +20	+245 +25	+302 +32	+370 +40	+440 +50	+520 +60	+612 +72	+715 +85	+820 +100	+920 +110	+1015 +125								
F6	+18 +10	+22 +13	+27 +16	+33 +20	+41 +25	+49 +30	+58 +36	+68 +43	+79 +50	+88 +56	+98 +62								
F7	+22 +10	+28 +13	+34 +16	+41 +20	+50 +25	+60 +30	+71 +36	+83 +43	+96 +50	+108 +56	+119 +62								
F8	+28 +10	+35 +15	+43 +16	+53 +20	+64 +25	+76 +30	+90 +36	+106 +43	+122 +50	+137 +56	+151 +62								
G6	+12 +4	+14 +5	+17 +6	+20 +7	+25 +9	+29 +10	+34 +12	+39 +14	+44 +15	+49 +17	+54 +18								
G7	+16 +4	+20 +5	+24 +6	+28 +7	+34 +9	+40 +10	+47 +12	+54 +14	+61 +15	+69 +17	+75 +18								
G8	+22 +4	+27 +5	+33 +6	+40 +7	+48 +9	+56 +10	+66 +12	+77 +14	+87 +15	+98 +17	+107 +18								
H6	+8 0	+9 0	+11 0	+13 0	+16 0	+19 0	+22 0	+25 0	+29 0	+32 0	+36 0								
H7	+12 0	+15 0	+18 0	+21 0	+25 0	+30 0	+35 0	+40 0	+46 0	+52 0	+57 0								
H8	+18 0	+22 0	+27 0	+33 0	+40 0	+48 0	+56 0	+66 0	+77 0	+87 0	+98 0								
H9	+30 0	+36 0	+43 0	+52 0	+62 0	+74 0	+87 0	+100 0	+115 0	+130 0	+140 0								

- a) +96 microns or 0.096 mm  
 b) 185.050 mm  
 c) 185 mm  
 d) NA  
 e) 185.096 mm  
 f) +50 microns or 0.050 mm  
 g) 185F7 mm or 185 +96 +50 mm  
 h) 46 microns or 0.046 mm  
 i) 7 j) F7

**School of Manufacturing Skills**  
**Session: 2021-22 (Summer Semester)**  
**B. Voc. Program, III Semester,**  
**End-Sem. Examination**

**Course Code: GEN1305**

**Time: 2 Hour**

**Course Name: Elementary Drawing Skills**

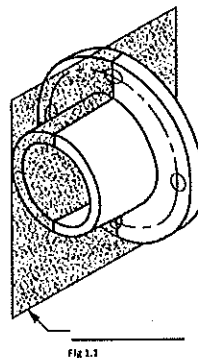
**Max. Marks: 50**

**Instructions:**

1. Attempt all questions.
2. Section A contains 10 Questions. Each question carries 1 Mark.
3. Section B contains 04 Questions. Each question carries 4 Marks.
4. Section C contains 04 Questions. Each question carries 6 Marks.

**Section – A**

10X01 = 10 Marks



1. What does this plane called as shown in fig 1.1?
  - a) Side plane.
  - b) Front plane.
  - c) Cutting plane.
  - d) None of the above
2. Distance from the observer to the object is finite and the object is viewed from single point, is a characteristic of which view?
  - a) parallel view
  - b) prospective view
  - c) both (a) and (b)
  - d) none of the above
3. Which element of Vernier caliper is required to measure length of the steps?
  - a) Depth rod.
  - b) To clean the face
  - c) To reduce the diameter
  - d) None of the above
4. Which of the following measuring instrument can measure internal diameter?
  - a) Height gauge
  - b) micrometer
  - c) Hole test micro meter
  - d) bevel
5. Standard size of drawing sheet as per BIS for A3 sheet?
  - a) 841mm X 1189mm
  - b) 549mm X 841mm
  - c) 420mm X 594mm
  - d) 297mm X 420mm



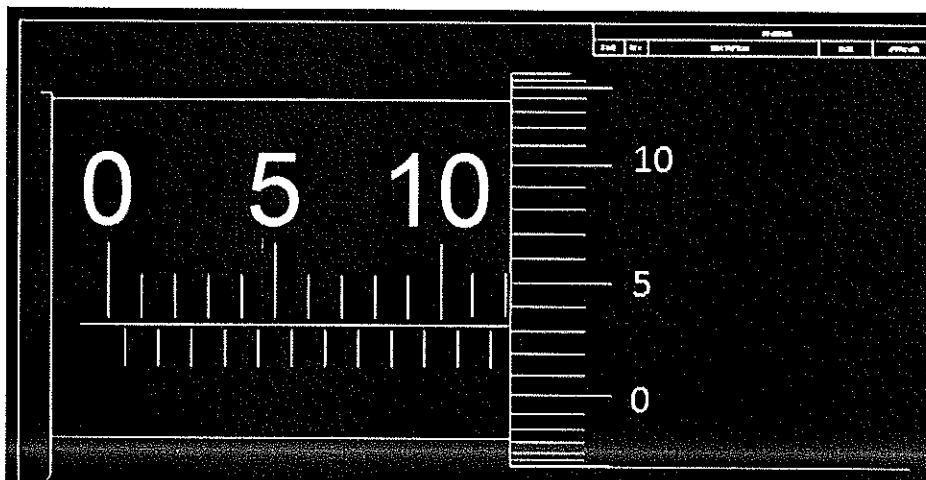
## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

6. Which component support the cylindrical workpiece to measure the diameter
  - a) Anvil
  - b) Frame
  - c) Ratchet
  - d) Main scale
7. The largest permeable size is known as
  - a) Maximum size
  - b) Minimum size
  - c) Tolerance
  - d) Actual size
8. The combination of nominal size and deviation is called
  - a) Upper deviation
  - b) Lower deviation
  - c) Fit dimension
  - d) deviation
9. How many number of basic tolerance grades are there?
  - a) 15
  - b) 20
  - c) 15
  - d) 7
10. What proportion of scale we use to draw a center line?
  - a) 6:2
  - b) 6:1
  - c) 6:3
  - d) 6:4

### Section – B

04X04 = 16 Marks

11. Identify the reading on the micrometer.



12. Define parallel projection.
13. Define prospective projection.
14. What is orthographic projection?

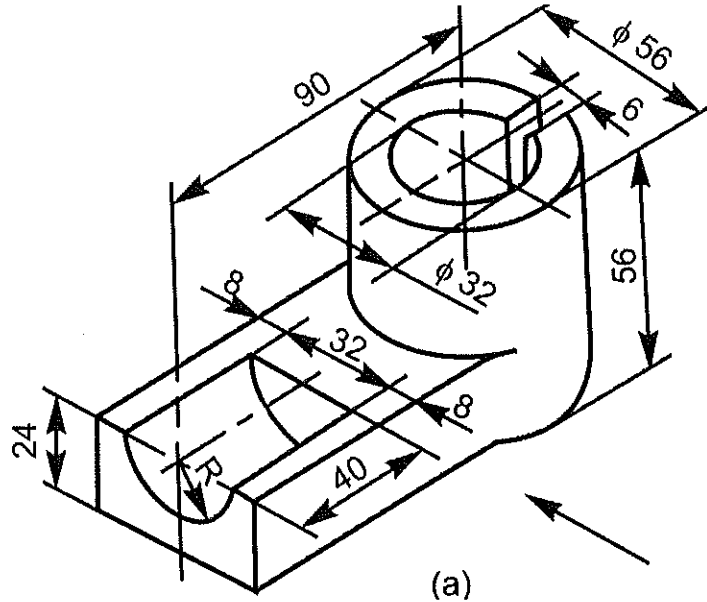


# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

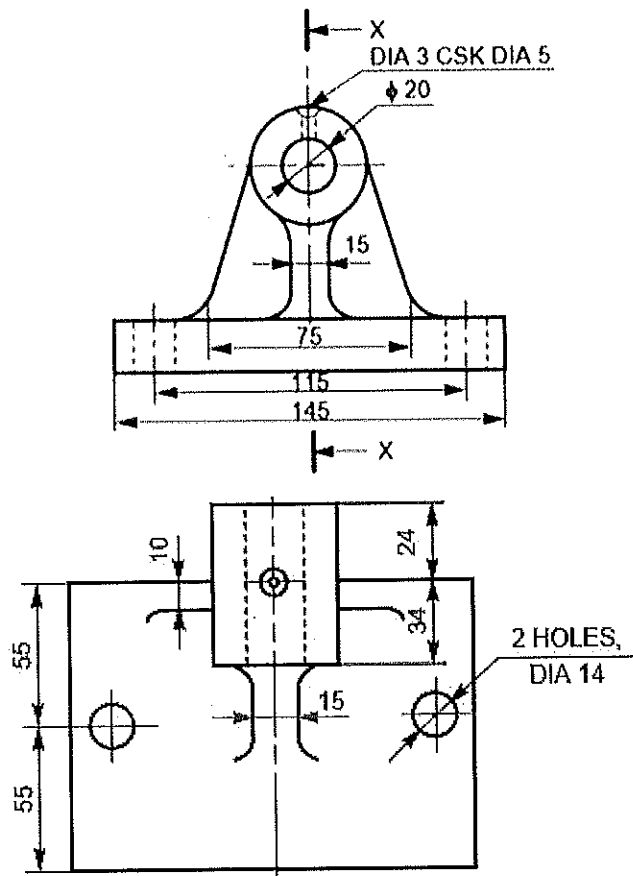
Section – C

04X06 = 24 Marks

15. Explain is first angle projection?
16. Draw the orthographic projection of given view and also draw a section view along the top plane



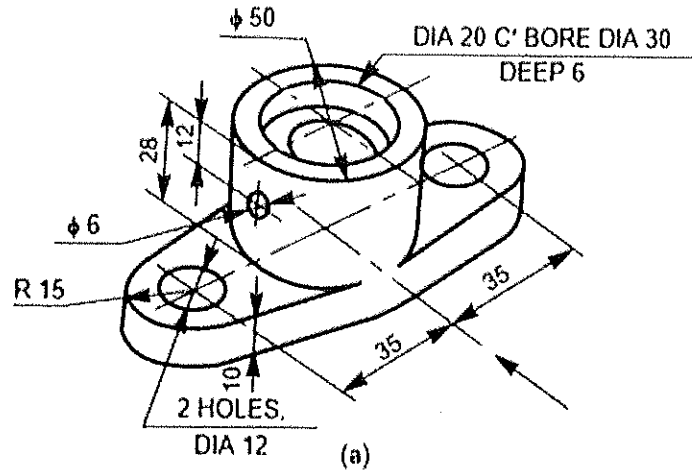
17. Draw the section view along the X-X line





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18. Draw the orthographic projection of given view.



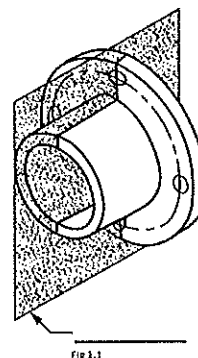
**School of Manufacturing Skills**  
**Session: 2021-22 (Summer Semester)**  
**B. Voc. Program, III Semester,**  
**End-Sem. Examination**

**Course Code: GEN1305**  
**Course Name: Elementary Drawing Skills**

**Time: 2 Hour**  
**Max. Marks: 50**

**Answer Key**

**Section – A**



10X01 = 10 Marks

1. What does this plane called as shown in fig 1.1?
  - a) Side plane.
  - b) Front plane.
  - c) **Cutting plane.**
  - d) None of the above
2. Distance from the observer to the object is finite and the object is viewed from single point, is a characteristic of which view?
  - a) parallel view
  - b) **perspective view**
  - c) both (a) and (b)
  - d) none of the above
3. Which element of Vernier caliper is required to measure length of the steps?
  - a) **Depth rod.**
  - b) To clean the face
  - c) To reduce the diameter
  - d) None of the above
4. Which of the following measuring instrument can measure internal diameter?
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  - b) micrometer
  - c) **Hole test micro meter**
  - d) bevel
5. Standard size of drawing sheet as per BIS for A3 sheet?
  - a) 841mm X 1189mm
  - b) 549mm X 841mm
  - c) 420mm X 594mm
  - d) **297mm X 420mm**



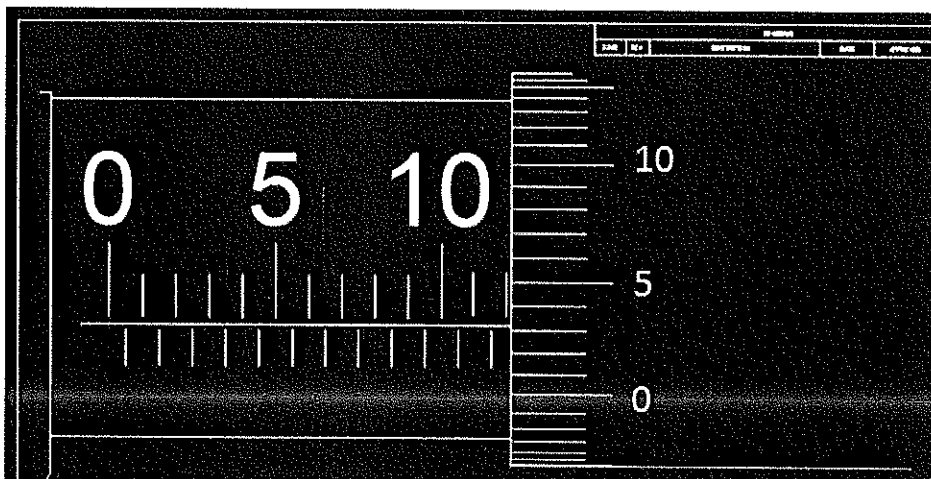
## BHARTIYA SKILL DEVELOPMENT UNIVERSITY

6. Which component support the cylindrical workpiece to measure the diameter
  - a) Anvil
  - b) Frame
  - c) Ratchet
  - d) Main scale
7. The largest permeable size is known as
  - a) Maximum size
  - b) Minimum size
  - c) Tolerance
  - d) Actual size
8. The combination of nominal size and deviation is called
  - a) Upper deviation
  - b) Lower deviation
  - c) Fit dimension
  - d) deviation
9. How many number of basic tolerance grades are there
  - a) 15
  - b) 20
  - c) 15
  - d) 7
10. What proportion of scale we use to draw a centre line
  - a) 6:2
  - b) 6:1
  - c) 6:3
  - d) 6:4

### Section – B

04X04 = 16 Marks

11. Identify the reading on the micrometer





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12. Define parallel projection?

Ans parallel projection

- Distance from the observer to the object is infinite; Projection lines are parallel and object is positioned at infinity.
- Less realistic but easier to draw.

13. Define prospective projection?

Ans prospective projection

- Distance from the observer to the object is finite and the object is viewed from a single point projectors are not parallel.
- Perspective projections mimic what the human eyes see, however, they are difficult to draw.

14. What is orthographic projection?

Ans Orthographic projection is a Parallel Projection Technique in which the plane of projection is perpendicular to the parallel line of sight.

There are two ways of drawing in orthographic - First Angle and Third Angle.

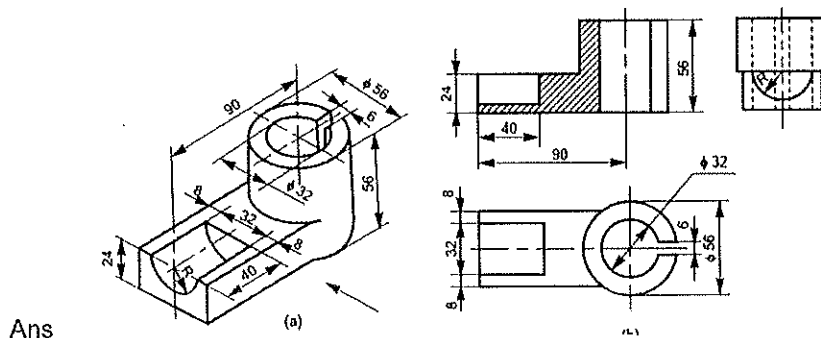
## Section – C

04X06 = 24 Marks

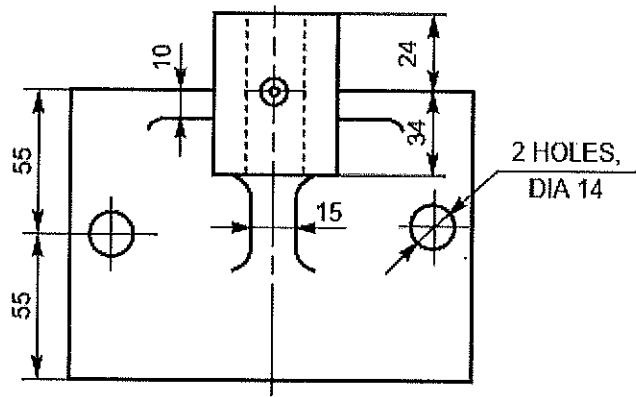
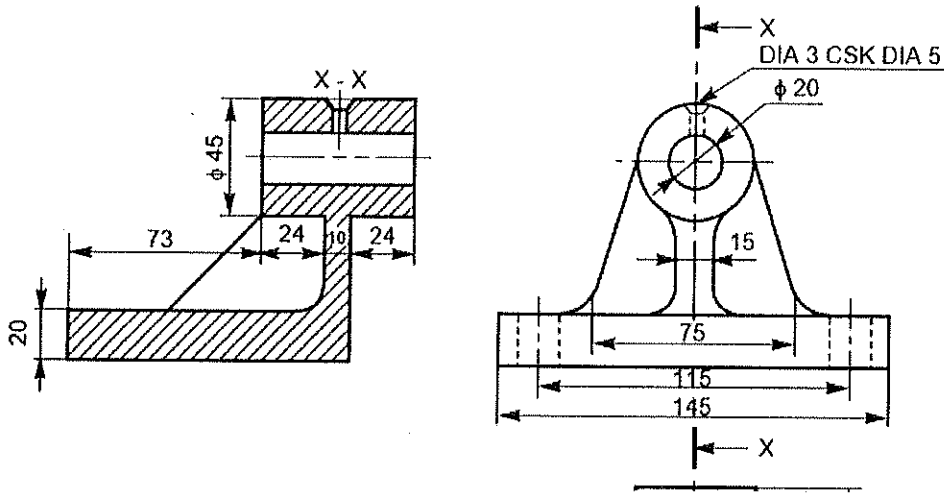
15. Explain is first angle projection?

- Ans In this the object is assumed to be positioned in the first quadrant
- The object is assumed to be positioned in between the projection planes and the observer. The views are obtained by projecting the images on the respective planes.
- Note that the right hand side view is projected on the plane placed at the left of the object.
- After projecting on to the respective planes, the bottom plane and left plane is unfolded on to the front view plane. i.e. the left plane is unfolded towards the left side to obtain the Right hand side view on the left side of the Front view and aligned with the Front view. The bottom plane is unfolded towards the bottom to obtain the Top view below the Front view and aligned with the Front View.

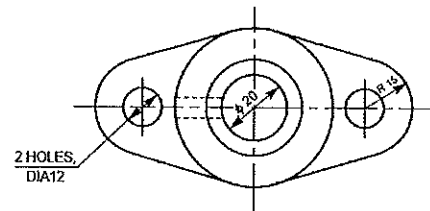
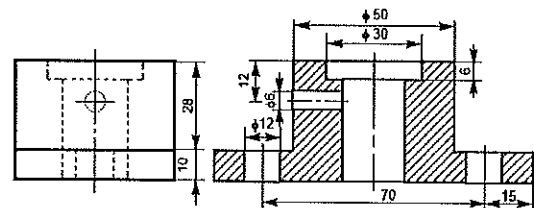
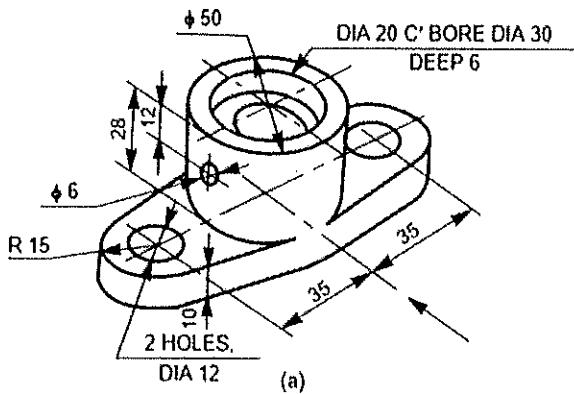
16. Draw the orthographic projection of given view and also draw a section view along the top plane



17. Draw the section view along the X-X line



18. Draw the orthographic projection of given view?



**School of Manufacturing Skills**  
**Session: 2021-22 (Summer Semester)**  
**B. Voc. Program, III Semester,**  
**End-Sem. Examination**

**Course Code: GEN1305**

**Time: 2 Hour**

**Course Name: Elementary Drawing Skills**

**Max. Marks: 50**

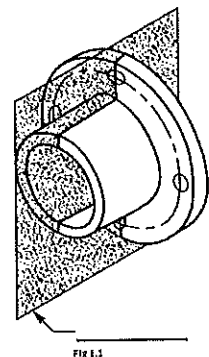
**Instructions:**

1. Attempt all questions.
2. Section A contains 10 Questions. Each question carries 1 Mark.
3. Section B contains 04 Questions. Each question carries 4 Marks.
4. Section C contains 04 Questions. Each question carries 6 Marks.

**Section – A**

10X01 = 10 Marks

1. Distance from the observer to the object is finite and the object is viewed from single point, is a characteristic of which view?
  - a) parallel view
  - b) prospective view
  - c) both (a) and (b)
  - d) none of the above
2. Which element of Vernier caliper is required to measure length of the steps?
  - a) Depth rod.
  - b) To clean the face
  - c) To reduce the diameter
  - d) None of the above
3. Which of the following measuring instrument can measure internal diameter?
  - a) Height guage
  - b) micrometer
  - c) Hole test micro meter
  - d) bevel
4. What does this plane called as shown in fig.1.1?
  - a) Side plane.
  - b) Front plane.
  - c) Cutting plane.
  - d) None of the above
5. Standard size of drawing sheet as per BIS for A3 sheet?
  - a) 841mm X 1189mm
  - b) 549mm X 841mm
  - c) 420mm X 594mm
  - d) 297mm X 420mm





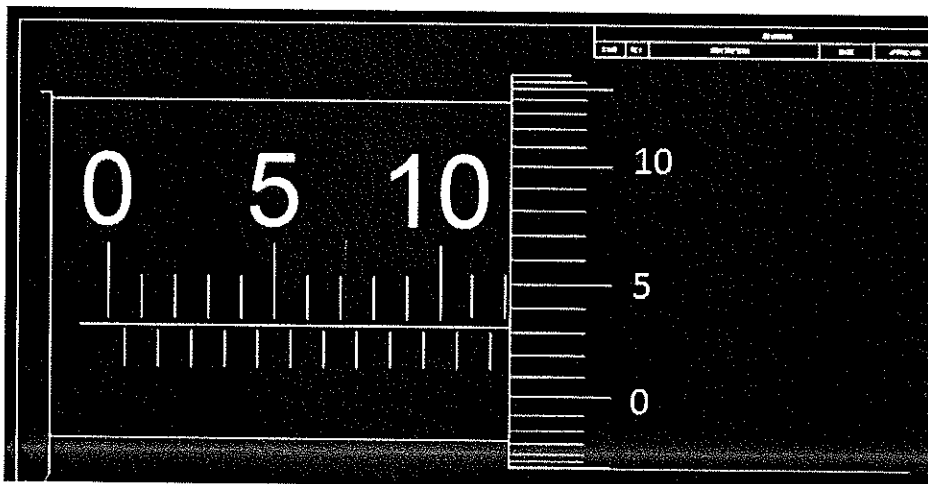
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6. The largest permeable size is known as
  - a) Maximum size
  - b) Minimum size
  - c) Tolerance
  - d) Actual size
7. The combination of nominal size and deviation is called
  - a) Upper deviation
  - b) Lower deviation
  - c) Fit dimension
  - d) deviation
8. Which component support the cylindrical workpiece to measure the diameter
  - a) Anvil
  - b) Frame
  - c) Ratchet
  - d) Main scale
9. How many number of basic tolerance grades are there?
  - a) 15
  - b) 20
  - c) 15
  - d) 7
10. What proportion of scale we use to draw a centre line?
  - a) 6:2
  - b) 6:1
  - c) 6:3
  - d) 6:4

### Section – B

04X04 = 16 Marks

11. Identify the reading on the micrometer



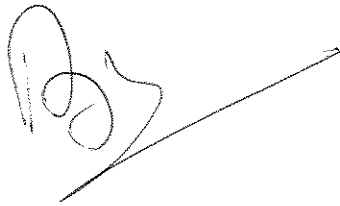
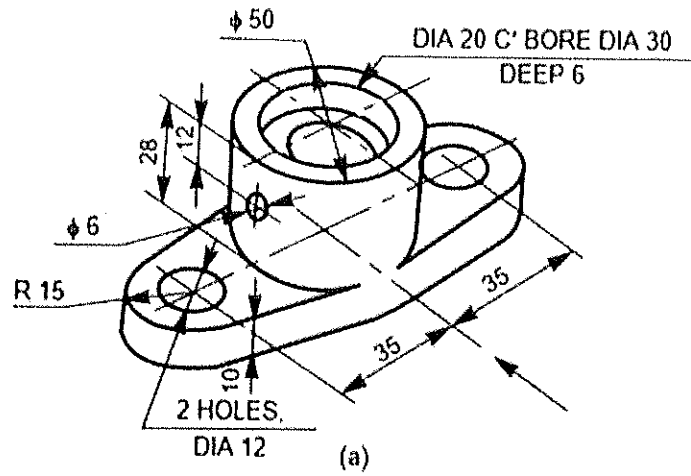
12. Define parallel projection?
13. What is orthographic projection
14. Define prospective projection?





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18. Draw the orthographic projection of given view.



## School of Manufacturing Skills

Session: 2021-22 (Summer Semester)

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End-Sem. Examination

Course Code: GEN1305

Time: 2 Hour

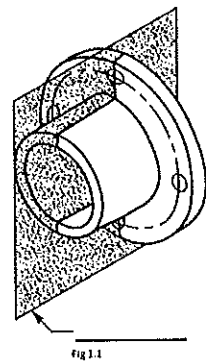
Course Name: Elementary Drawing Skills

Max. Marks: 50

### Answer Key Section – A

10X01 = 10 Marks

- Distance from the observer to the object is finite and the object is viewed from single point, is a characteristic of which view?
  - parallel view
  - perspective view**
  - both (a) and (b)
  - none of the above
- Which element of Vernier caliper is required to measure length of the steps?
  - Depth rod.**
  - To clean the face
  - To reduce the diameter
  - None of the above
- Which of the following measuring instrument can measure internal diameter?
  - Height guage
  - micrometer
  - Hole test micro meter**
  - bevel
- What does this plane called as shown in fig 1.1?
  - Side plane.
  - Front plane.
  - Cutting plane.**
  - None of the above
- Standard size of drawing sheet as per BIS for A3 sheet?
  - 841mm X 1189mm
  - 549mm X 841mm
  - 420mm X 594mm
  - 297mm X 420mm**
- The largest permissible size is known as
  - Maximum size**
  - Minimum size
  - Tolerance
  - Actual size





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7. The combination of nominal size and deviation is called
  - a) Upper deviation
  - b) Lower deviation
  - c) **Fit dimension**
  - d) deviation
8. Which component support the cylindrical workpiece to measure the diameter
  - a) Anvil
  - b) Frame
  - c) Ratchet
  - d) Main scale
9. How many number of basic tolerance grades are there?
  - a) 15
  - b) **20**
  - c) 15
  - d) 7
10. What proportion of scale we use to draw a centre line?
  - a) 6:2
  - b) **6:1**
  - c) 6:3
  - d) 6:4

### Section – B

04X04 = 16 Marks

11. Identify the reading on the micrometer
12. Define parallel projection.

Ans parallel projection

- Distance from the observer to the object is infinite; Projection lines are parallel and object is positioned at infinity.
- Less realistic but easier to draw.

13. What is orthographic projection?

Ans Orthographic projection is a Parallel Projection Technique in which the plane of projection is perpendicular to the parallel line of sight.

There are two ways of drawing in orthographic - First Angle and Third Angle.

14. Define prospective projection.

Ans prospective projection

- Distance from the observer to the object is finite and the object is viewed from a single point projectors are not parallel.
- Perspective projections mimic what the human eyes see, however, they are difficult to draw.

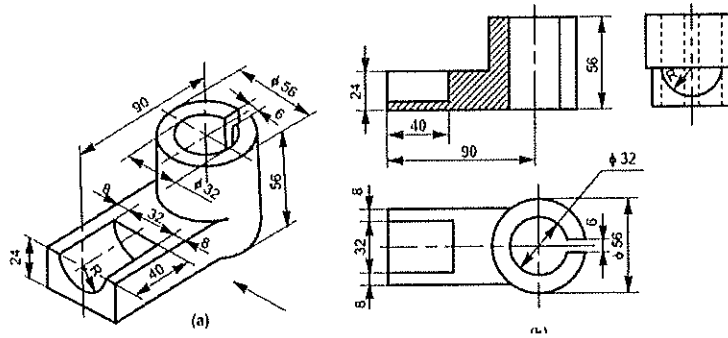


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Section – C

04X06 = 24 Marks

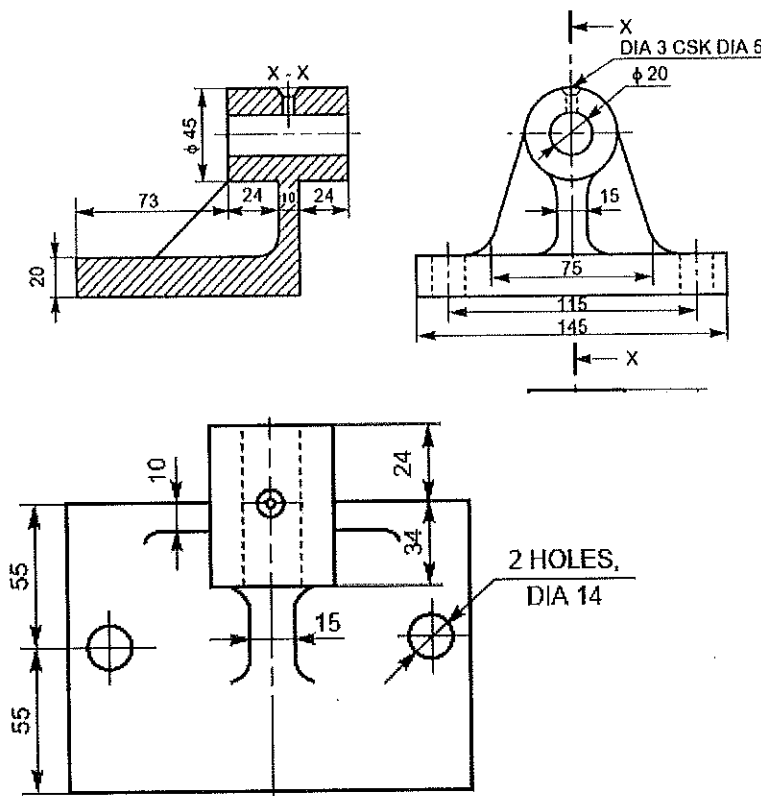
15. Draw the orthographic projection of given view and also draw a section view along the top plane



16. Explain is first angle projection.

Ans In this the object is assumed to be positioned in the first quadrant. The object is assumed to be positioned in between the projection planes and the observer. The views are obtained by projecting the images on the respective planes. Note that the right hand side view is projected on the plane placed at the left of the object. After projecting on to the respective planes, the bottom plane and left plane is unfolded on to the front view plane. i.e. the left plane is unfolded towards the left side to obtain the Right hand side view on the left side of the Front view and aligned with the Front view. The bottom plane is unfolded towards the bottom to obtain the Top view below the Front view and aligned with the Front View.

17. Draw the section view along the X-X line





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18. Draw the orthographic projection of given view.

