

CAE-II- Unit 4-Use 3D Modeling-2020

Computer Aided Engineering

* Required

1. Email address *

2. First Name *

3. Last Name *

4. Email *

5. How many axes are required to define a plane? *

Mark only one oval.

☐ 1

☐ 2

☐ 3

☐ 4

6. If the XY plane is designated as the front view, the _____ plane would be a profile plane. *

Mark only one oval.

- ☐ XZ
- ☐ isometric
- ☐ YZ
- ☐ construction

7. A construction plane on a CAD system *

Mark only one oval.

- ☐ allows for creation of geometry
- ☐ adjusts the drawing scale
- ☐ produces mass quantities of objects
- ☐ adjusts the dimension scale properties

8. Use _____ when inserting a 3-D object into a drawing. *

Mark only one oval.

- ☐ X axis only
- ☐ Y and Z axes only
- ☐ X and Y axes only
- ☐ X, Y, and Z axes

9. A non-standard plane needs to be defined *

Mark only one oval.

- ☐ so that the object scale will adjust automatically
- ☐ so that a part can be drawn on an angle using manual drafting tools
- ☐ because most objects in manufacturing consist of right angles
- ☐ because not everything is parallel to the Cartesian Coordinate system

10. Inserting geometry on a predefined construction plane requires the construction plane to be *

Mark only one oval.

- ☐ visible
- ☐ in color
- ☐ current
- ☐ tangent

11. The thimble on an inch micrometer has _____ graduations. ??????????????
*

Mark only one oval.

- ☐ 4
- ☐ 10
- ☐ 25
- ☐ 100

12. Use a _____ to calibrate a measuring instrument. ?????????????? *

Mark only one oval.

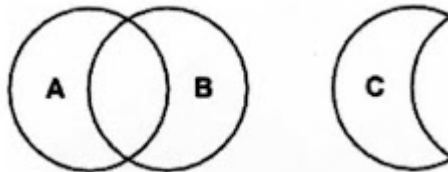
- ☐ coordinate measuring machine
- ☐ optical comparator
- ☐ set of gage blocks
- ☐ radiography inspection device

13. Use a _____ to determine the dimensions of a machined part to an accuracy of 0.0001. *

Mark only one oval.

- ☐ caliper
- ☐ steel rule
- ☐ vernier micrometer
- ☐ snap gage

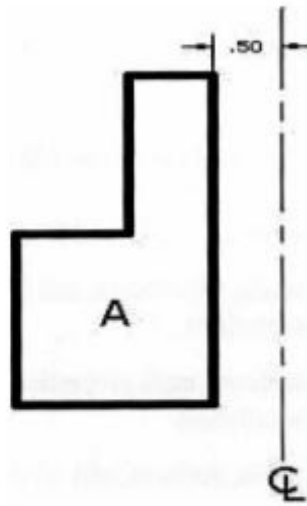
14. What operation is performed on A and B to produce result C? *



Mark only one oval.

- ☐ union
- ☐ erase
- ☐ subtraction
- ☐ scale

15. When profile A is revolved around the center line, the hole diameter will be *



Mark only one oval.

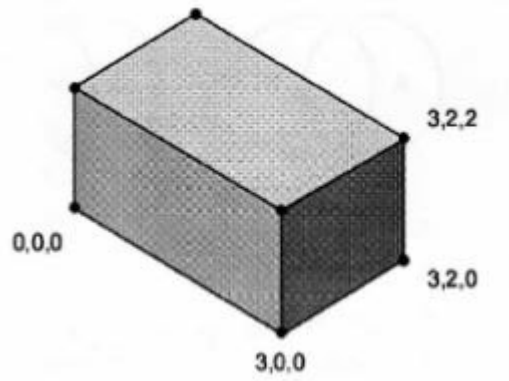
- ☐ .5
- ☐ .75
- ☐ 1.0
- ☐ 1.5

16. The generation of a 2-D drawing from a 3-D model requires *

Mark only one oval.

- ☐ a valid 3-D model
- ☐ preset view ports
- ☐ a valid isometric view
- ☐ preset line types and layers

17. What is the total surface area of the object shown? *



Mark only one oval.

- ☐ 24
- ☐ 32
- ☐ 48
- ☐ 52

18. Which of the following are 3-D objects? *

Mark only one oval.

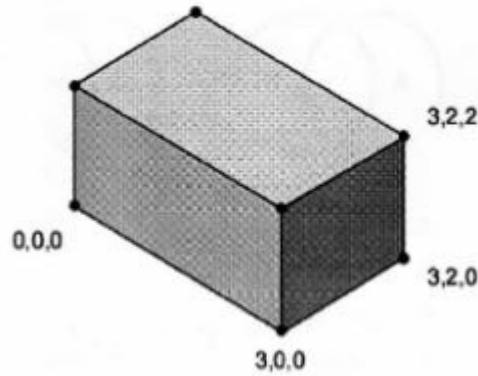
- ☐ surfaces, solids, and Boolean operations
- ☐ solids, wireframes, and Boolean
- ☐ surfaces, mass properties, and coincident geometry wireframes
- ☐ solids, surfaces, and wireframes intersection reduces mass from coincident geometry

19. When creating 3-D geometry, the scale factor should always be 1 because it *

Mark only one oval.

- ☐ simulates reality
- ☐ will reduce file size
- ☐ will reduce distortion
- ☐ ensures clarity

20. What is the volume of the 3-D solid described below? *



Mark only one oval.

- ☐ 6 cubic units
- ☐ 10 cubic units 48
- ☐ 12 cubic units
- ☐ 24 cubic units

21. Which of the following commands allows the designer to create a curved solid from a two dimensional polyline object by sweeping it around an axis? *

Mark only one oval.

- ☐ Array
- ☐ Trim
- ☐ Revolve
- ☐ Drawing limits

22. Which of the following scale factors should always be used when inserting a 3-D geometry to 3-D space? *

Mark only one oval.

☐ 1:1

☐ 1:2

☐ 2:1

☐ 2:3

23. Solids, surfaces, and _____ are 3-D objects. *

Mark only one oval.

☐ Boolean Operations

☐ Mass properties

☐ Lithographic printing

☐ Wireframes

24. Which of the following axes are used when inserting a 3 dimensional object into a drawing? *

Mark only one oval.

☐ Z axis only

☐ X and Y axes only

☐ Y and Z axes only

☐ X Y, and Z and axes

