

India's Number 1 Education App

PHYSICS

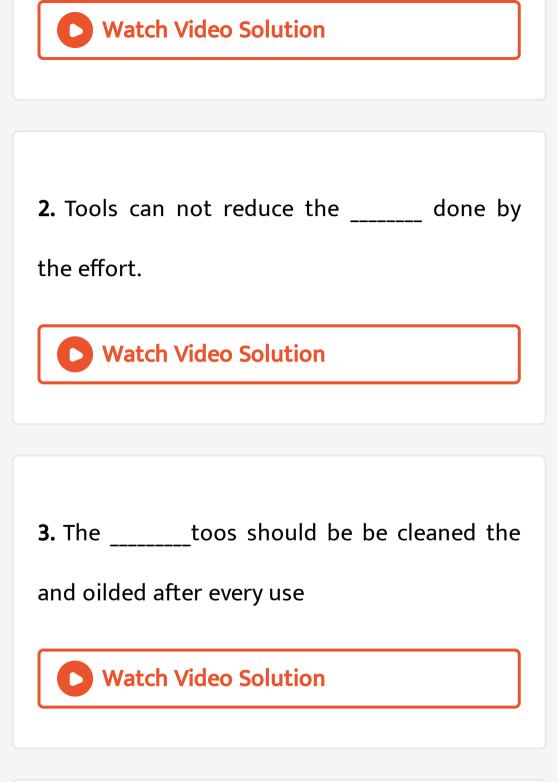
BOOKS - PEARSON IIT JEE FOUNDATION

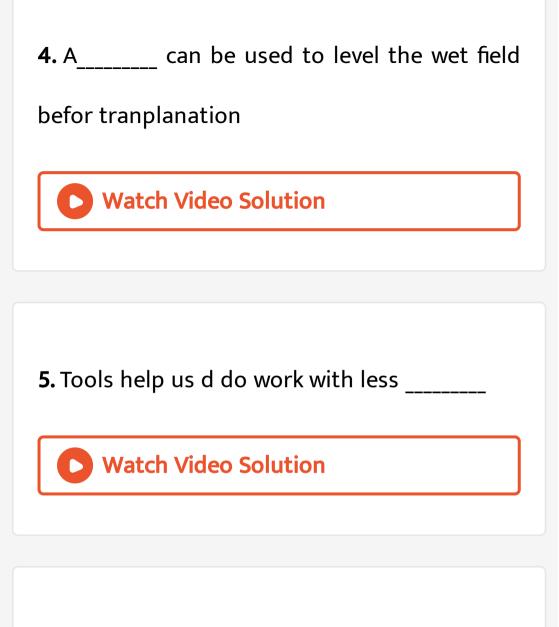
MACHINES AND TOOLS

Test Your Concepts

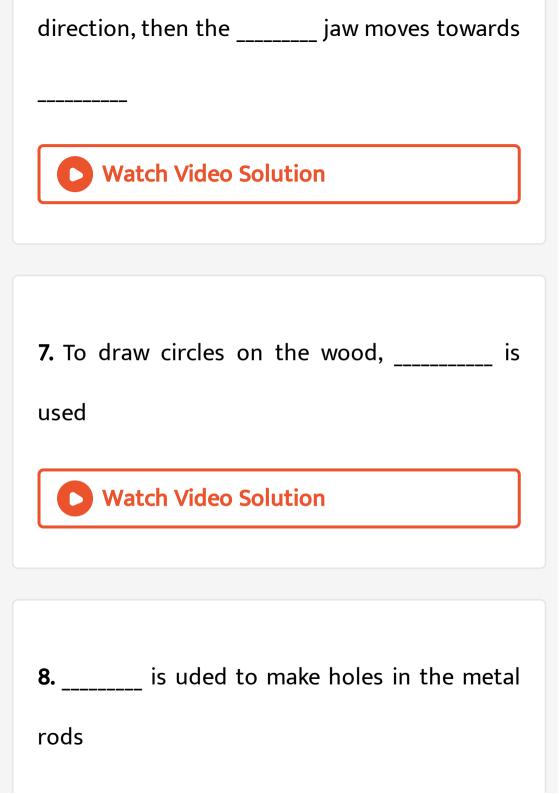
1. _____ can be used to remove nails from a

wall or a pice of wool





6. When the screw used to fix the object between the jaws is rotated in the clockswise





cutting a water pipe by means of a hack-saw

is

A. to and fro

B. translatory

C. rotatory

D. data insufficient

Answer: A



10. Which of the following is not a part of a

hack saw ?

A. Blade

B. Fixed jaw

C. Handle

D. Metallic frame

Answer: B





11. Sulphite is used to

A. work piece

B. tool

C. table

D. measuring insrument

Answer: B

12. To break the mud rocks on the surface of

the soil, _____ can be used

A. horrow

B. seed drill

C. leveller

D. wooden plank

Answer: D

13. Which of the following is required to cut

metal pipes by fixing is to a vice?

A. Table

B. Drill bit

C. Cutting plier

D. Hammer

Answer: A



14. Selecte the odd one from the following list.

A. Hack-saw

B. Tin cutter

C. Vice

D. Drilling tool

Answer: C

15. Which of the following does not have a metal part?

A. Hack-saw

B. Wooden plough

C. Tin cutter

D. None of the above

Answer: D

16. The funnel in a seed drill is used to ____

A. hold the seeds

B. remove weeds in a fields

C. to store lubricating oils

D. None of these.

Answer: A

17. If the screw of a vice is rotated in the

clockwise direction, then _____

A. jaws move closer

B. jasws moves away

C. tool rotates in closkwise direction

D. tool rotates in anti-clockwise direction

Answer: A

18. Which of the following tools does not have

any jaws on it?

A. Tin cutter

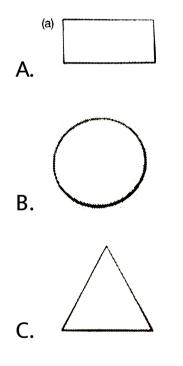
B. Multipurpose tool

C. Hack saw

D. Vice

Answer: C

19. Which of the following geometrical plane figure cannot be drawn on a wooden board only by using a divider ?



D. Both (a) and (c)

Answer: D



20. Which of the following tools cannot be fixed in the collet of a multipurpose tool?

A. file

B. poker

C. a screw driver

D. Hammer

Answer: D



21. Which of the following tools are useful in cutting a smal piece of metal?

A. Vice

B. Hack-saw

C. Screwdirver

D. Both (a) and (b)

Answer: D



22. A tin-cutter is used to cut a thin metallic circular plat. Then the angle between the forces which are applied at both the handle is

A. 30°

B. 60°

C. 180°

D. 90°

Answer: C

Watch Video Solution

23. A farmer plough his field ,to _____

A. To prevent the surface from becoming

hard

B. increase the evaporation of water from

the surface of field

C. make the land dry

D. None of the above

Answer: A



24. Motion of plough in a field is ____

A. translatory

B. rotatory

C. random

D. oscillatory

Answer: C

Watch Video Solution

25. Choose the correct alternateice (s) among the following statements

A. Seed drill is used to sow seeds

B. Four or five ploughs are attached to the

palank of the sed drill to sow the seeds

deeper

C. Speed drill is also used to put mabyre

bear the roots of the small plants

D. All the above

Answer: D

View Text Solution

26. Which of the following agricultural tools is

used to sow the seeds in a field?

A. Horrow

B. Leveller

C. Plough

D. Wooded plank

Answer: A

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27. The use of metal balde in a plough is

A. to penetrate deep into the soil easily

B. to give strength to the L-shaped log.

C. to avoid breaking of wooden log when it

strikes a stone

D. All the above

Answer: A

28. Which of the following agent (s) is (are)

used to pull a plough?

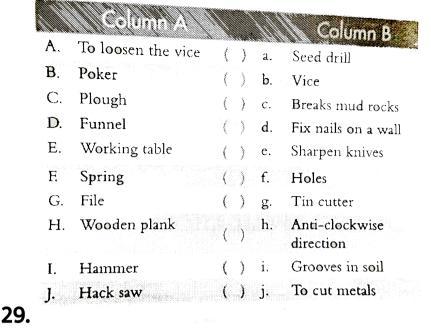
A. Tractor

B. Bull

C. Man

D. Both (a) and (b)

Answer: D



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Very Short Answer Type Questions

 How are wooden tools and metal tools maintained ?
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2. Name the tool which is used to put fertilizer

near the roots of a plant

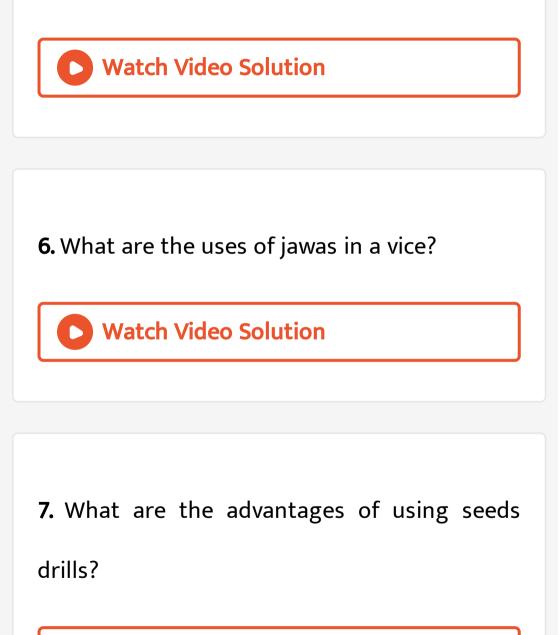
3. What is the use of collet in a multipupose

tool?

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4. Which of the following tools can be fixd in the collet of a multipurpose tool the drill holes in to a wooden plank?

5. Write one use of a tin-cutter.



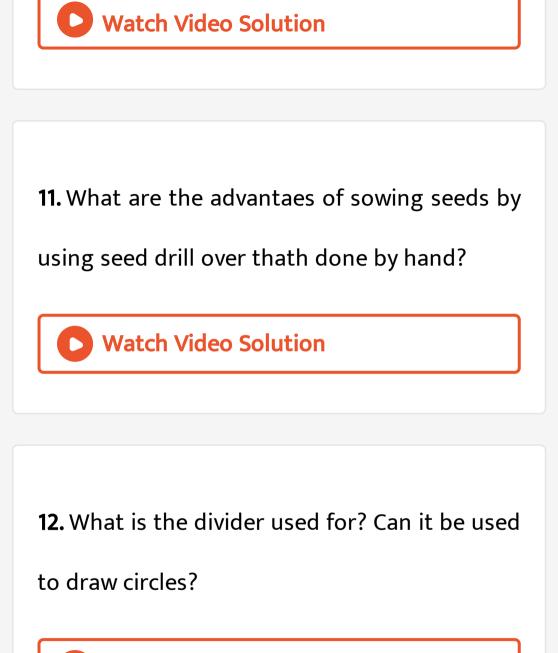
8. Why is oil or grease applied to tools?



9. What is the use of the long pole in a wooden plough?



10. What are the different kinds hammers?



13. Which part of the wooden plough is made

of steel?

What is the use of this part?

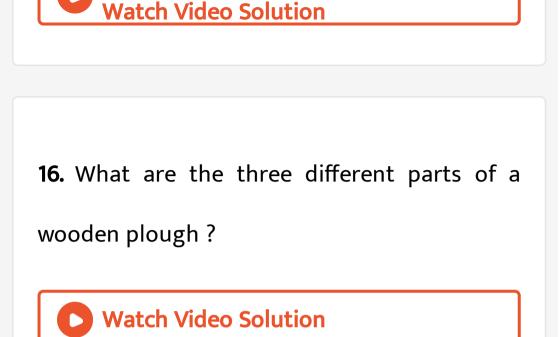
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14. What is the use of harrow?

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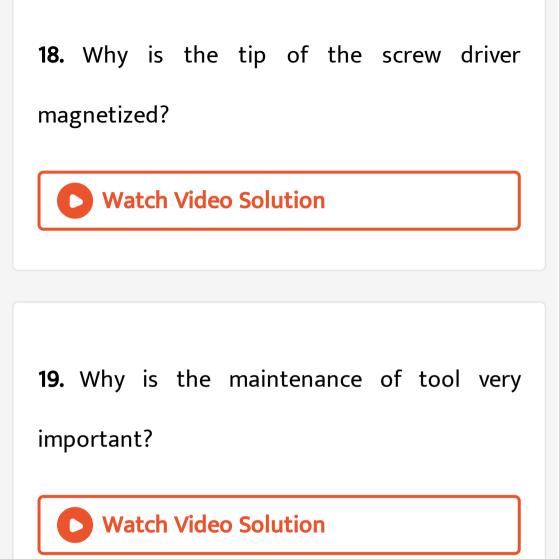
15. Write the use of a Vice





17. What is the use of a leveller?





Short Answer Type Questions

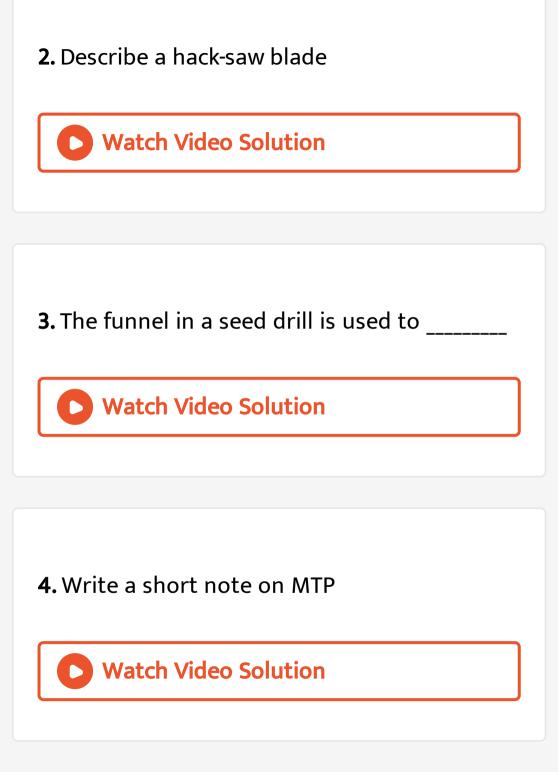
1. Why are the advantages and disadvantages

in using a vice?



Essay Type Questions

1. Describe a wooden plough





1. why an ordinary hammer can be used to remove nails from a wall or a piece of wood

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2. The diameter fo ametallic plate can be measured by using a divider

3. The hack-saw blad cannot be removed from

a hack-saw

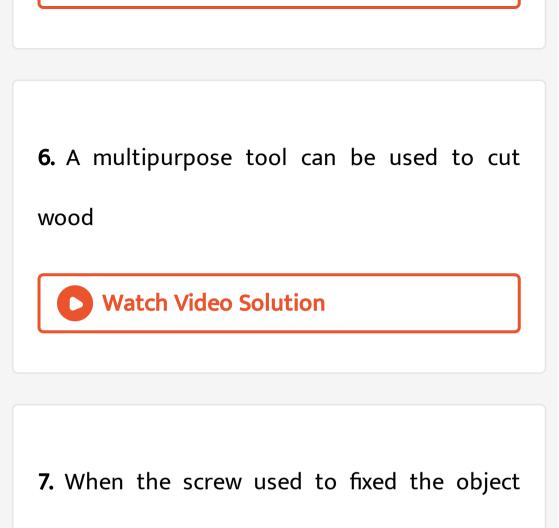


4. A harrow can be used to elvel the wet field

before transplanation

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5. A hammer is made of a soft metal



between the jaws is rotated in the anit-

clockwise direction, both the jaws of the vice

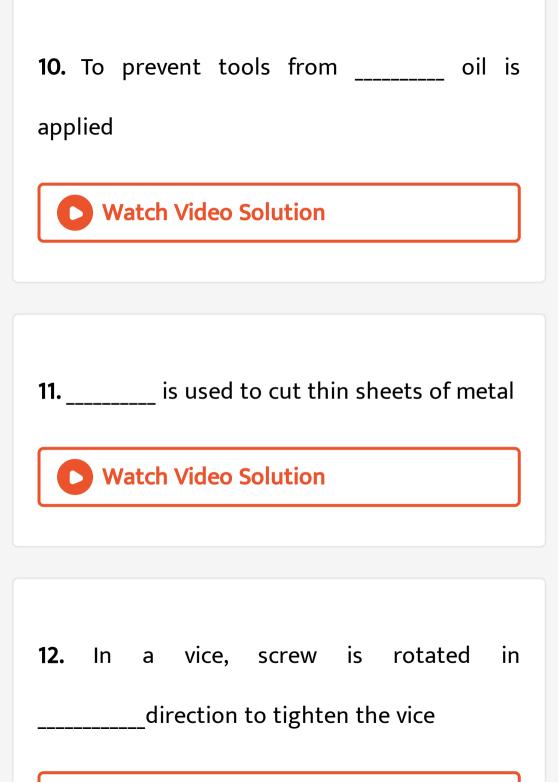
move towards each other.

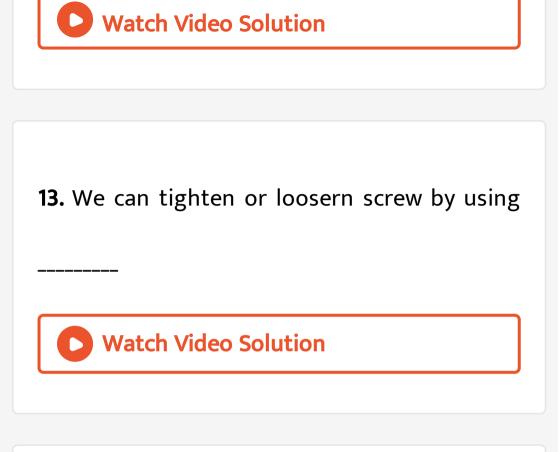
8. Poker is used to make the surface of a metal smoother.



9. There are two screws in a vice







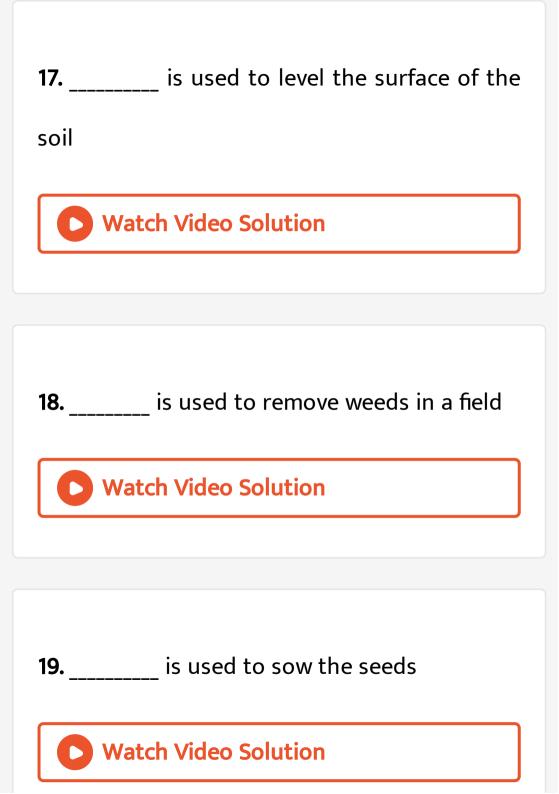
14. Which of the following tools can be fixd in the collet of a multipurpose tool the drill holes in to a wooden plank?



15. Tools used to make article or to repair
them are called _____
Watch Video Solution

16. Plough which is made up of iron of steel

plates is called _____ plough



20. Which of the following tools can be used to cut the metal plates of smallest thickness?

A. Tic cutter

B. Scissors

C. Piler

D. Hack-saw

Answer: A

21. Which of the following tools has a spring

attached to it?

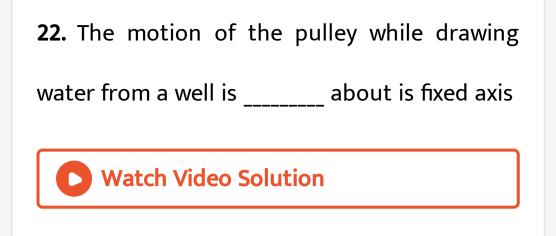
A. Hack-saw

B. Vice

C. Tin cutter

D. Drilling tool

Answer: C



23. Which of the following can be used as a

measuring tool?

A. Hammer

B. Divider

C. Vice

D. Hack-saw





24. Which of the following is not a part of wooden plough?

A. Handle

B. Blade

C. Long pole

D. None of the above

Answer: D



25. Which of the following is an example for agriculture tool?

A. screwdriver

B. wooden plough

C. divider

D. Hack-saw black





26. Which of the following can be attached to

multipurpose tool?

A. Poker

B. Chisel

C. Screw driver

D. Hammer





27. Which of the following is not a workshop tool?

A. Divider

B. Hammer

C. Wooden plank

D. Vice





28. The farmer controls the direction of the plough and depth of the soil ploughed, by the

A. handle

B. blade

C. Long pole

D. main plough





29. A thin piece of steel with shapr teeth on one edge is known as

A. Tin cutter

B. hack saw blade

C. drill bit

D. Hammer

Answer: B



30. Which among the following angles can be the maximum angle through which a divider can be streched to draw a circle ?

A. 180°

B. 90°

C. 45°

D. 160°

Answer: D



31. Which of the following tools can be fixd in the collet of a multipurpose tool the drill holes in to a wooden plank?

A. Chisel

B. Drill bit

C. Poker

D. All the above

Answer: D



32. Choose the correct statements (s) among the following alternatives for a 'vice'

A. To losen the vice, the handle of the

screw should be rotaed in a clockwise

direction

B. To tightten the vice, the handle of the screw should be roated in an anti-clockwise direction
C. The vice has only on movable jaw

D. Both (a) and (b)

Answer: C

33. The angle between the direction of applied forces and the main plough (or blade of plough), in a wooden plough is _____

- A. greater than 90°
- B. 90°
- $\mathsf{C.}\,60^\circ$
- D. less than $90^{\,\circ}$

Answer: D



34. The use of the handle of the plough, when

the farmer uses on his field is _____

A. to control the direction of plough

B. to control the direction of bulls

C. to control the depth of the soil

ploughed

D. Both (a) and (c)

Answer: D

35. Which of the following agricultural tools is used to level the surface of the soil ?

A. Wooden plank

B. Harrow

C. Leveller

D. Plough

Answer: C

36. Which of these is not a workshop tool?

A. Hammer

B. Tin cutter

C. Scale

D. Seed drill

Answer: D



37. Which of the following agricultural tools is

used to sow the seeds in a field?

A. Seed drill

B. Plough

C. Harrow

D. Both (b) and (c)

Answer: A

38. Choose the correct statements in case of

mulipurpose tools

A. We can perform multiple tasks by fixing

diferent tools in its collet.

B. It is not possible to drill holes by using

multipurpose tool

C. We can fix a carpenters hand -saw in this

tool and cut wood.

D. Both (a) and (c)

Answer: D



39. Which of the following is modern scientific machine which can perfome multiple tasks in agriculture?

A. Bulllock Cart

- B. Improviesed plough
- C. Tractor
- D. Computer

Answer: C



40. The motion of the handle of the plough

while ploughing is _____

A. to and fro

B. translatory

C. vibratory

D. Cannot be determined

Answer: A





Column A Column B

A. Collet	() a. Vice
B. To make surfaces smoother	() b. Multipurpose tool
C. Long pole	() c. Leveller
D. Heavy wooden	() d. Wooden plough

41. frame

View Text Solution

Level 2

1. Why do we use a sharp contiuous metla blade for cutting a mango and a blade with

many small teeth fo cutting metals?



2. Sriharsha had a doublt as to why the head of a screw drives is made of plastic material and not metal. Clarify his doubt.

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3. A thick metallic cylindrical rod which is to be cut when placed between th jasws of a 'vice'

the handle to roated though $4 \times 360^{\circ}$, if the distance moved by the movable jaws is 0.5 cm per rotation then calculate the radius of the rod. (Assume that initially th jaws are in contact with each other)

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4. A leveller with one metre long metal strip is used to level the surface of the soil. If the farmer takes the leveller from one end to

another end of the field of length 265m hen

calculate the area of the field which is levelled.



5. The movable jaw of a vice moves through a distance of 7mm for one complete rotation of the handle. Through how many rotation shold the handle be rotated so that it holds a metal plate of thickness 3.5 cm firmly.



6. A leveller with a 1.5 meters long metallic strip is used to level an area of 45 square metres Then calculate the length of the field which is levelled

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7. Venkat went to a factory workshop where he

saw hot metallic square plats. He measured

the surface area of the plats. How did he do it?



8. What is the use of spring in a tin cutter?



9. Rahul, by using a hace salw blade, was cutting metal pipes to supply water to house. What will happen if he starts moving the hack saw blade very fast over the metal, due to lack of time



10. Why does an axe has a curved sharp edge?

A. What are the advantages and

disadbantages in using a vice?

Β.

C.

D.

Answer:

11. Why are the advantages and disadvantages

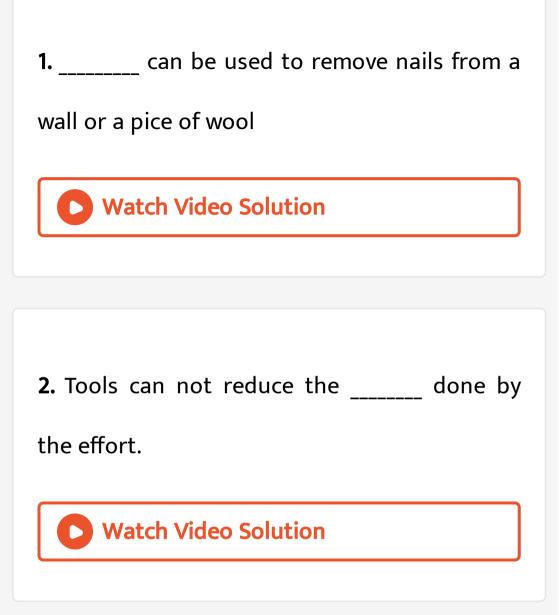
in using a vice?

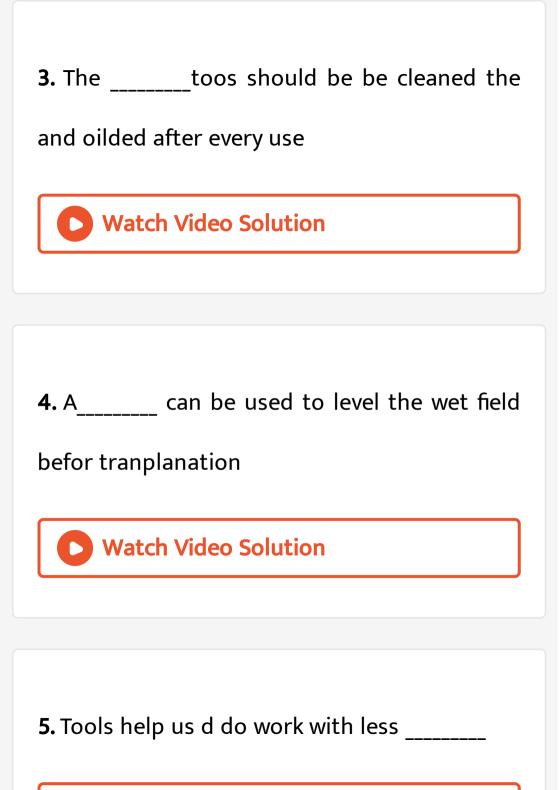


12. Komali found tha of most of the agricultural tools her father uses are made up of wood. Explain why it is so.



Text Your Concepts







6. When the screw used to fix the object between the jaws is rotated in the clockswise direction, then the _____ jaw moves towards

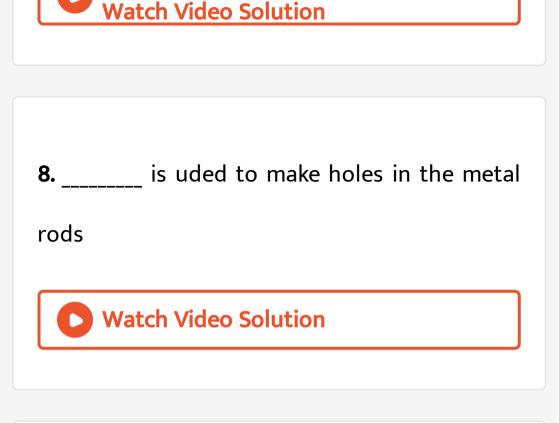


7. To draw circles on the wood, _____

is

used





9. The motion of the hand of a perosn while cutting a water pipe by means of a hack-saw is

A. to and fro

B. translatory

C. rotatory

D. data insufficient

Answer: A

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10. Which of the following is not a part of a

hacksaw?

A. Blade

B. Fixed jaw

C. Handle

D. Metallic frame

Answer: B

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11. Collet is used to hold_____

A. work piece

B. tool

C. table

D. measuring instrument

Answer: B

Watch Video Solution

12. To break the mud rocks on the surface of

the soil, _____ can be used

A. harrow

B. seed drill

C. leveller

D. wooden plank

Answer: D



13. Which of the following is required to cut

metal pipes by fixing is to a vice?

A. Table

B. Drill bit

C. Cutting plier

D. Hammer

Answer: A



14. Select the odd one from the following list.

A. Hacksaw

B. Tin -cutter

C. Vice

D. Drilling tool

Answer: C

View Text Solution

15. Which of the following does not have a metal part?

A. Hacksaw

B. Wooden plough

C. Tin-cutter

D. None of the above

Answer: D

Watch Video Solution

16. The funnel in a seed drill is used to ____

A. hold the seeds

B. remove weeds in a field

C. to store lubricating oils

D. None of these





17. If the screw of a vice is rotated in the clockwise direction, then _____

A. jaws move closer

B. jaws move away

C. tool rotates in clockwise direction

D. tool rotates in anti clockwise direction





18. Which of the following tools does not have any jaws on it?

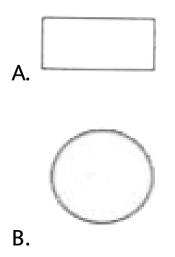
A. Tin cutter

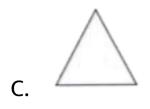
- B. Multipurpose tool
- C. Hacksaw
- D. Vice

Answer: C



19. Which of the following geometrical plane figure cannot be drawn on a wooden board only by using a divider ?





D. Both a and c

Answer: D

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20. Which of the following tools cannot be fixed in the collet of a multipurpose tool?

A. a file

B. poker

C. a screw driver

D. hammer

Answer: D

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21. Which of the following tools are useful in

cutting a smal piece of metal?

A. Vice

B. Hacksaw blade

C. Screw driver

D. Both a and b

Answer: D

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22. A tin-cutter is used to cut a thin metallic circular plat. Then the angle between the forces which are applied at both the handle is

A. $30^{\,\circ}$

B. 60°

C. 180°

D. 90°

Answer: C

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23. A farmer plough his field ,to _____

A. prevent the escape of moisture, present

in the surface of field

B. increase the evaporation of water from

the surface of field

C. make the land try

D. None of the above

Answer: A

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24. Motion of plough in a field is _____

A. translatory

B. rotatory

C. random

D. oscillatory

Answer: C

Watch Video Solution

25. Choose the correct alternative(s) among the following statements

A. Seed drill is used to sow seeds.

B. Four or five ploughs are attached to the

plank of the seed drill to sow the seeds

deeper.

C. Speed drill is also used to put manure

near the roots of the small plants.

D. All of the above





26. Which of the following agricultural tools is

used to remove weeds in a field?

A. Harrow

B. Leveller

C. Plough

D. wooden plank





27. The use of metal balde in a plough is

A. to penetrate deep into the soil easily.

B. to give strength to the L-shaped log.

C. to avoid breaking of wooden log when it

strikes a stone.

D. All of the above

Answer: A

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28. Which of the following agent (s) is (are) used to pull a plough?

A. Tractor

B. Bull

C. Man

D. Both a and b

Answer: D

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29. Match the entries given in Column A with the appropriate ones in Column B

	Column A	1		Column B
Α.	To loosen the vice	()	a,	Seed drill
B.	Poker	()	h	Vice
С.	Plough	()	с.	Breaks mud rocks
D	Funnel	()	d	Fix nails on a wall
E.	Working table	()	e.	Sharpen knives
E	Spring	()	f.	Holes
G.	File	()	g	Tin-cutter
H.	Wooden plank	()	h.	Anti-clockwise direction
t.	Hammer	()	i	Grooves in soil
1	Hacksaw	()	j.	To cut metals

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30. How are wooden tools and metal tools

maintained ?

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31. Name the tool which is used to put fertilizer near the roots of a plantWatch Video Solution

32. What is the use of collet in a multipupose

tool?



33. Name few tools which can be fixed on a

multipurpose tool.

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34. What is a tool?

Watch Video Solution

35. Write one use of a tin-cutter.

Watch Video Solution

36. What are the uses of jaws in a vice?

Watch Video Solution

37. What are the advantages of using seeds

drills?



38. Why is oil or grease applied to tools?



39. What is the use of the long pole in a wooden plough?

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40. What are the different kinds hammers?

Watch Video Solution

41. Why are the advantages and disadvantages

in using a vice?

Watch Video Solution

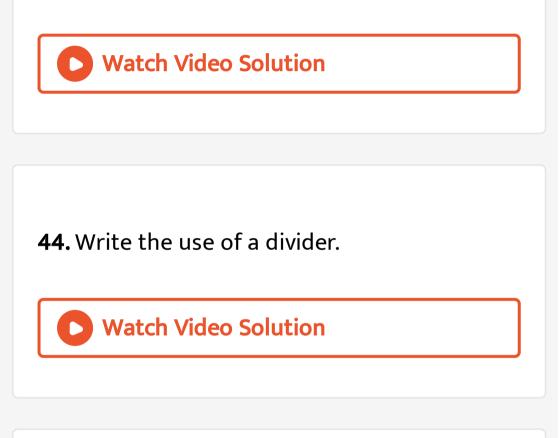
42. Between the maintenance of agriculture

tool or workshop tool, which is difficult? Why?

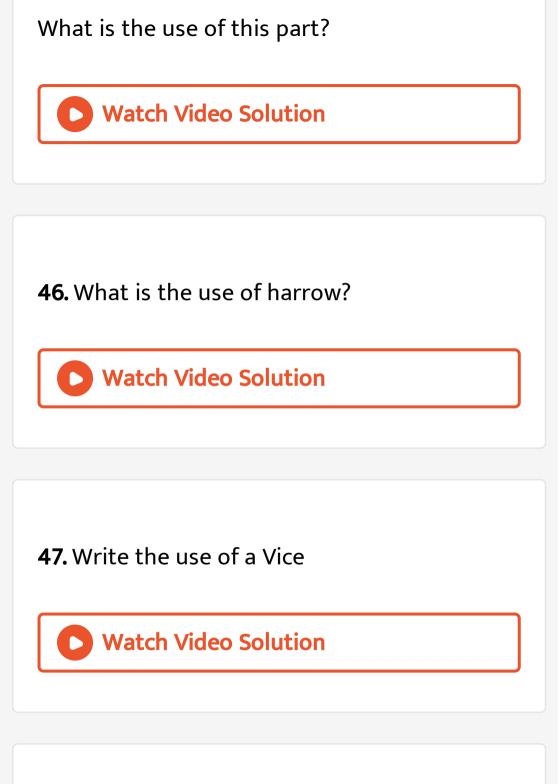
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43. What are the advantaes of sowing seeds by

using seed drill over thath done by hand?

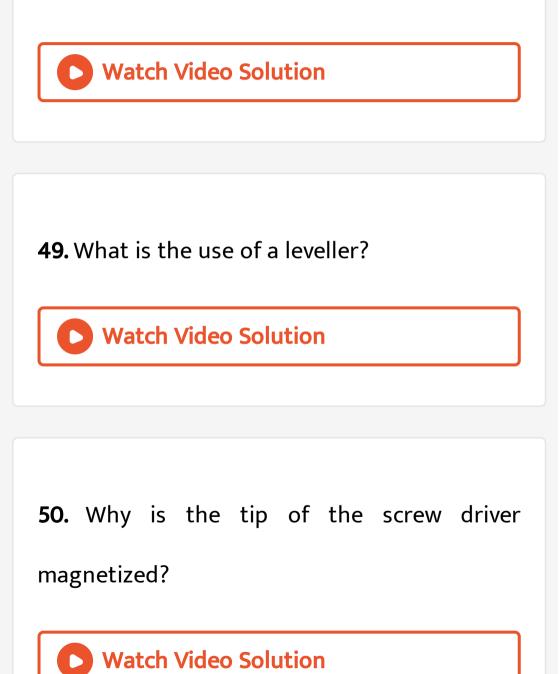


45. Which part of the wooden plough is made of steel?



48. What are the three different parts of a

wooden plough ?



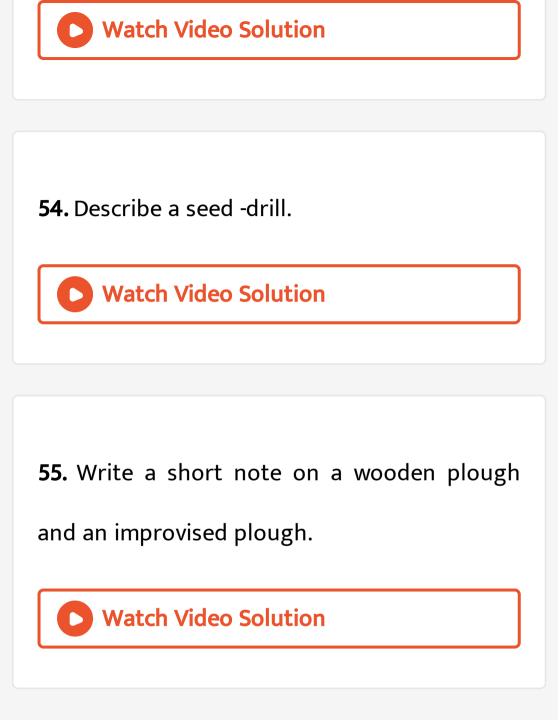
51. Why is the maintenance of tool very important?



52. Describe a wooden plough



53. Describe a hack-saw blade



1. why an ordinary hammer can be used to

remove nails from a wall or a piece of wood

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2. The diameter fo ametallic plate can be

measured by using a divider

3. The hack-saw blad cannot be removed from

a hack-saw

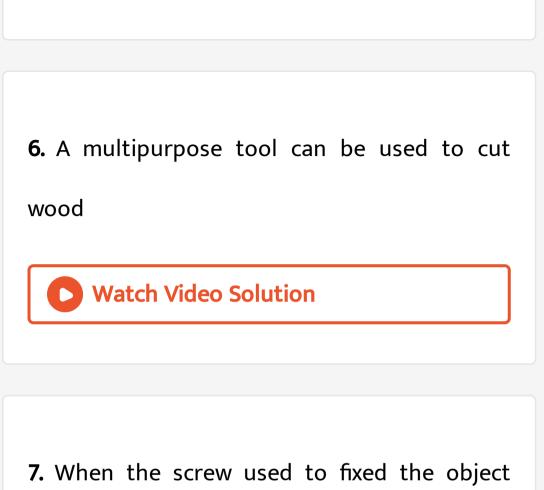


4. A harrow can be used to elvel the wet field

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5. A hammer is made of a soft metal



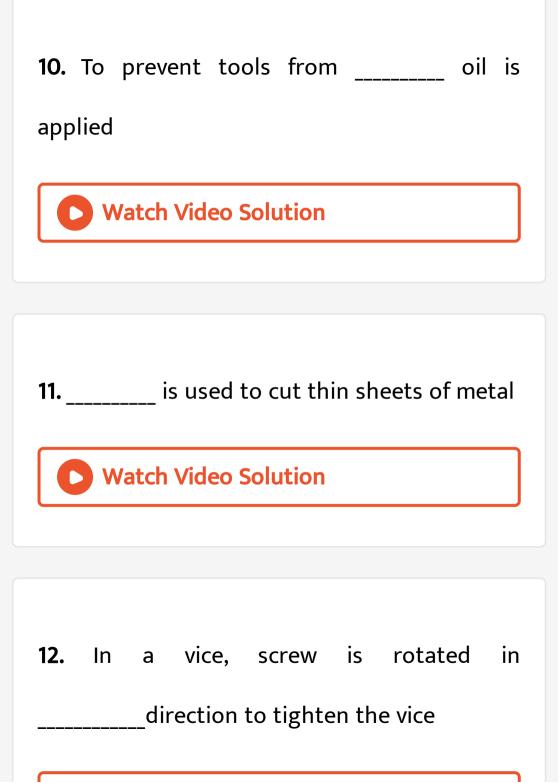
between the jaws is rotated in the anitclockwise direction, both the jaws of the vice move towards each other.

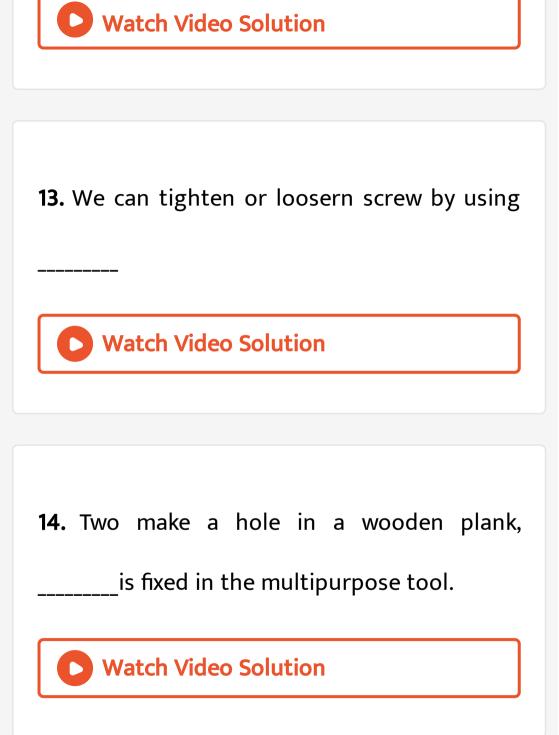
8. Poker is used to make the surface of a metal smoother.



9. There are two screws in a vice







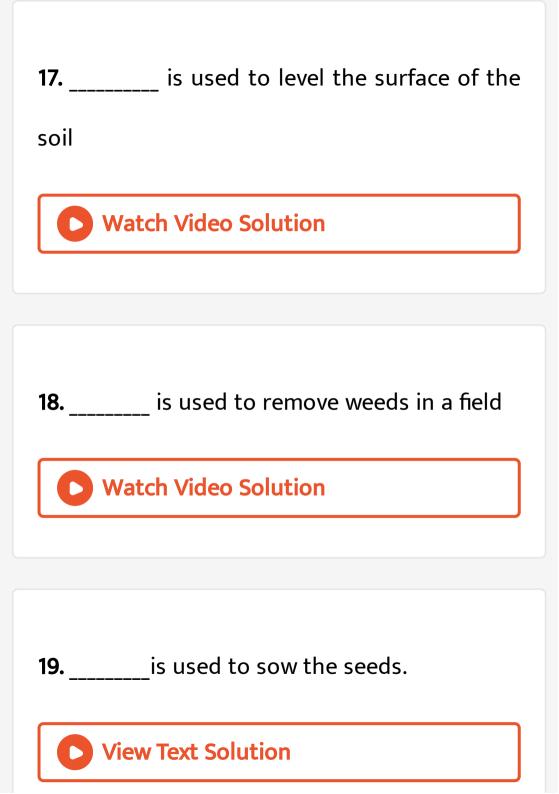
15. Tools used to make article or to repair

them are called _____

Watch Video Solution

16. Plough which is made up of iron or steel

plates is called_____plough.



20. Which of the following tools can be used to cut the metal plates of smallest thickness?

A. Tin cutter

B. Scissors

C. Plier

D. Hacksaw

Answer: A

21. Which of the following tools has a spring

attached to it?

A. Hacksaw

B. Vice

C. Tin cutter

D. Drilin

Answer: C

22. The motion of the pulley while drawing

water from a well is _____ about is fixed axis

A. translatory

B. rotatory

C. oscillatory

D. to and fro

Answer: B

23. Which of the following can be used as a

measuring tool?

A. Hammer

B. Divider

C. Multipurpose tool

D. Hacksaw

Answer: B

24. Which of the following is not a part of

wooden plough?

A. Handle

B. Blaxe

C. Long pole

D. None of the above

Answer: D

25. Which of the following is an example for

agriculture tool?

A. Screwdriver

B. Wooden plough

C. Divider

D. Hacksaw black

Answer: B

26. Which of the following can be attached to

multipurpose tool?

A. Poker

B. Chisel

C. Screw driver

D. Hammer

Answer: D

27. Which fo the following is not a workshop

tool?

A. Divider

B. Hammer

C. Wooden plank

D. Vice

Answer: C

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28. The farmer controls the direction of the plough and depth of the soil ploughed, by the

A. handle

B. blade

C. Long pole

D. main plough

Answer: A

29. A thin piece of steel with shapr teeth on

one edge is known as _____

A. Tin cutter

B. Hacksaw blade

C. drill bit

D. hammer

Answer: B

30. Which among the following angles can be the maximum angle through which a divider can be stretched to draw a circle?

A. 180°

B. 90°

C. 45°

D. 160°

Answer: D



31. Which of the following tools can be fixd in the collet of a multipurpose tool the drill holes in to a wooden plank?

A. Chisel

B. Drill bit

C. Poker

D. All of the above

Answer: D

32. Choose the correct statement(s) among the following alternatives for a vice.

A. To loosen the vice the handle of the screw should be rotated in a clockwise direction.

- B. To tighten the vice the handle of the screw should be rotated in an anti clockwise direction.
- C. The vice has only one movable jaw.

D. Both a and b

Answer: C

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33. The angle between the direction of applied forces and the main plough (or blade of plough), in a wooden plough is _____

A. greater than 90°

B. 90°

 $\mathsf{C}.\,60^\circ$

D. less than 90°

Answer: D



34. The use of the handle of the plough, when

the farmer ploughs his field is _____.

A. to control the direction of plough

B. to control the direction of bulls

C. to control the depth of the soil

ploughed

D. Both a and c

Answer: D

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35. Which of the following agricultural tools is

used to level the surface of the soil ?

A. Wooden plank

B. Harrow

C. leveller

D. Plough

Answer: C

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36. Which of the following is not a workshop

tool?

A. Hammer

B. Tin cutter

C. Scale

D. Seed drill

Answer: D

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37. Which of the following agricultural tools is

used to sow the seeds in a field?

A. Seed drill

B. Plough

C. Harrow

D. Both b and c

Answer: A

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38. Choose the correct statements in case of

mulipurpose tools

A. We can perform multiple tasks by fixing

different tools in its collet.

B. It is not possible to drill holes by using

multipurpose tool.

C. We can fix a carpenters hand saw in this

tools and cut wood.

D. Both a and c

Answer: D

39. Which of the following is modern scientific machine which can perfome multiple tasks in agriculture?

A. Bullock cart

B. Improvised plough

C. Tractor

D. Computer

Answer: C

40. The motion of the handle of the plough

while ploughing is _____.

A. to and fro

B. translatory

C. vibratory

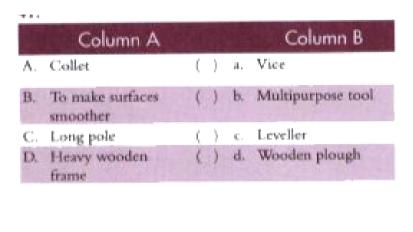
D. Canot be determined

Answer: A

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41. Match the entries given in Column A with

the appropriate ones I Column B



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Concept Application Level 2

1. Why do we use a sharp continuous metla blade for cutting a mango and a blade with many small teeth fo cutting metals ?



2. Sriharsha had a doublt as to why the head

of a screw drives is made of plastic material

and not metal. Clarify his doubt.



3. A thick metallic cylindrical rod which is to be cut when placed between th jasws of a 'vice' the handle to roated though $4 \times 360^{\circ}$, if the distance moved by the movable jaws is 0.5 cm per rotation then calculate the radius of the rod. (Assume that initially th jaws are in contact with each other)

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4. A leveller with one metre long metal strip is used to level the surface of the soil. If the

farmer takes the levellr from one end to another end of the field of length 25m, then calculate the area of the field which is levelled.

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5. The movable jaw of a vice moves through a distance of 7mm for one complete rotation of the handle. Through how many rotation shold the handle be rotated so that it holds a metal plate of thickness 3.5 cm firmly.



6. A leveller with a 1.5 meters long metallic strip is used to level an area of 45 square metres Then calculate the length of the field which is levelled

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7. Venkat went to a factory workshop where he saw hot metallic square plats. He measured the surface area of the plats. How did he do it?

8. What is the use of spring in a tin cutter?

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9. Rahul, by using a hace salw blade, was cutting metal pipes to supply water to house. What will happen if he starts moving the hack saw blade very fast over the metal, due to lack of time

10. Why does an axe has a curved sharp edge?

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11. Why are the advantages and disadvantages

in using a vice?

12. Komali found tha of most of the agricultural tools her father uses are made up of wood. Explain why it is so.