



SHEET METAL WORK 1
5405

JUNE XXXX

INTERMEDIATE LEVEL

Subject title	SHEET METAL WORK 1
Subject code	5405
Paper number	ONE

Mobile phones are **NOT** allowed in the examination room.

5405 SHEET METAL WORK 1: MULTIPLE CHOICE QUESTION PAPER

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

Read the following instructions carefully before you start answering the questions in this paper. Make sure you have a soft HB pencil and an eraser for this examination.

1. USE A SOFT HB PENCIL THROUGHOUT THE EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Before the examination begins:

3. Check that this question booklet is headed “**Intermediate Level – 5405 SHEET METAL WORK**”
4. Insert the information required in the spaces above.
5. Insert the information required in the spaces provided on the answer sheet using your HB pencil:

Candidate Name, Exam Session, Subject Code, Centre Number and Candidate Number.

Take care that you do not erase or fold the answer sheet or make any marks on it other than those asked for in these instructions.

How to answer the questions in this examination:

6. Answer **ALL** the **50** questions in this Examination. All questions carry equal marks.
7. Each question has **FOUR** suggested answers: **A, B, C** and **D**. Decide which answer is correct. Find the number of the question on the Answer Sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen.
For example, if **C** is your correct answer, mark **C** as shown below:
[A] [B] [C] [D]
8. Mark only one answer for each question. If you mark more than one answer, you will score a zero for that question. If you change your mind about an answer, erase the first mark carefully, then mark your new answer.
9. Avoid spending too much time on any one question. If you find a question difficult, move on to the next question. You can come back to this question later.
10. Do all rough work in this booklet, using, where necessary, the blank spaces in the question booklet.
11. **You must not take this booklet and the answer sheet out of the examination room. All question booklets and answer sheets will be collected at the end of the examination.**

Turn Over

1. All of the following are safety when using a drilling machine except

A	use all protective guards
B	bolt the vice to avoid spinning
C	hold small jobs with your fingers
D	always lubricate the job

B	13.21mm
C	1.21mm
D	34mm

2. Give the operation that will help to obtain a round hold in the workshop

A	Cutting
B	drilling
C	welding
D	grinding

7. Give the procedure to obtain a metal box in a sheet metal shop.

A	Welding, cutting, marking out, assembling, control
B	Cutting, marking out, welding, control, bending
C	Cutting, welding, bending, marking out, control
D	Marking out, cutting, bending, welding, control

3. All of the following are marking out tools except

A	scriber
B	try square
C	steel rule
D	calipers

8. The radius R of the bend in Figure 15 is 10mm, the angle of bend is 60° , the thickness of the material is 8mm. The developed length will be

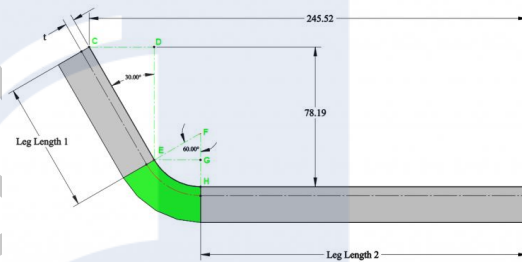


Figure 15

4. Recognize the safety equipment that is not used in welding



1-Safety shoes 2-gloves 3- painting brush 4- helmet

A	Safety shoes
B	Gloves
C	Painting brush
D	Helmet

A	230mm
B	90mm
C	220mm
D	224.66mm

5) State from the list below what we are not to use when doing spot welding.

A	gloves
B	Face shield
C	overall
D	tie

6. The dimension of the steel ball in Figure 2 if the hundredths scale division is 0.02mm is

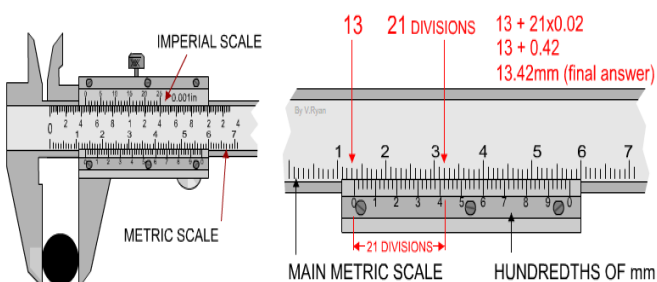


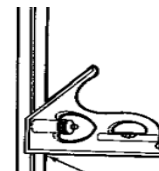
Figure 2

A	13.42mm
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9. State what we can use to make a small indentation (centre hole) in sheet metal

A	Pencil
B	Center Punch
C	Needle
D	Scriber

10. Give the name of tool below



A	Combination square
B	clamp
C	Screw driver
D	Welding torch

11. Explain the use of the tool below



A	is used for forming riveted heads
B	Cutting thin sheet in shop
C	is used to close down joint edges of sheets metal part
D	is used for hollowing sheet metal part

12 The instrument used to produce external thread is known as a

A	die stock
B	tap
C	tap wrench
D	die

13.)State element of combination of carbon steel

A	Aluminum
B	Rubber
C	Wood
D	Iron

14.state the function of mallet



A	Rolling
B	Milling
C	flattening
D	Hollowing

15. Give the classification of a hammer

A	Head and weight
B	Size weight
C	Length and weight
D	Height and weight

16. Give the material from which Mallets made of

A	Steel
B	Cast iron
C	High carbon steel
D	rubber

17. identify the instrument in figure 3 below



Figure 3

A	vernier caliper
B	micrometer
C	G cram
D	hand drill

18. During drilling the work must be firmly held by

A	drill chuck
B	machine vice or clamp
C	hand
D	bench vice

19. Internal screw threads are cut by hand using

A	Twist drills
B	Dies
C	Chisel
D	Taps

20.Give the tool that is used when cutting with power cutting machine:

A	Saw
B	Punch
C	Reaming
D	Disc

21. Give the Machine that is used to cut small pieces of sheet metal

A	Welding
B	Notching
C	Drilling
D	Soldering

22. state the purpose of environmental legislation

A	To protect humans and environment against hazardous substances
B	to regulate the production of hazardous substances
C	to specify the method used for storing hazardous substances
D	to give the management on how to work

23. Give the number of jaw that the vice have

A	Two
B	Four
C	One
D	three

24. Name the commonly used flux in brazing is

A	Zinc chloride
B	Rosin
C	Lead sulphide
D	Borax

25. state the meaning of the sign post in the workshop



Figure 2

A	protect your self
B	wear your helmet
C	do not wear welding shield
D	arc welding safety

26. Give the composition of soft solder

A	lead 37% tin 63%
B	lead 50% tin 50%
C	lead 63% tin 37%
D	lead 70% tin 30%

27. Give the welding process that uses non-consumable electrodes

A	TIG welding
B	MIG welding
C	Manual arc welding
D	Submerged arc welding

28. Compare temperature of oxy-hydrogen flame to oxy-acetylene flame

A	same as
B	less than
C	more than
D	Equal than

29. state the symbol of the welding done on the plate in figure 5 below

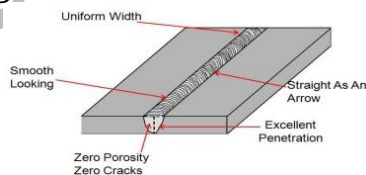


Figure5

A	
B	

C	
D	

30. Give an example of cutting tool

A	screw
B	hack saw
C	hammer
D	gamma ray test

31. The oxy-acetylene gas used in gas welding produce a flame temperature of

A	1800°C
B	2100°C
C	2400°C
D	3200°C

32) Identify how the teeth of hacksaw blade are bent

A	Towards right
B	Towards left
C	Alternately towards right and left and every third or fourth left straight
D	May be bent in any direction

33. indicate a welding symbol on the design welded in Figure 6 below showing that welding is done at the arrow side

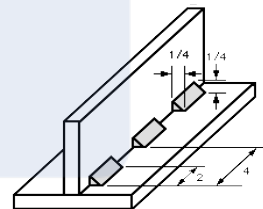


Figure 6

A	
B	
C	
D	

34. Give the chemical formula of acetylene gas

A	C2H1
B	C2H2
C	C2H3
D	C2H4

35). State a thermal forming process

A	Milling
B	Cutting
C	Cold rolling
D	Casting

A	filling
B	Marking
C	Weld
D	Control

36. Give the welding process used in joining mild steel shanks to high speed drills, is

A	Spot welding
B	Seam welding
C	Flash butt welding
D	Upset butt welding

43. Calculate the intensity of current in arc welding with coated electrode when the diameter of electrode is 2.5 mm

A	85
B	80
C	70
D	75

37. Identify process when molten metal is fed in the cavity of a metallic mould by gravity:

A	Moulding
B	Die casting method
C	Permanent mould casting method
D	Centrifugal casting method

44 Give the tool that is used with steel headed hammers for chipping or cutting material

A	Hacksaw
B	Chisel
C	Punch
D	Files

38. Give the welding process used to join thin mild steel with the use of copper electrode:

A	Seam welding
B	Flash butt welding
C	Upset butt welding
D	Spot welding

45 Give the combination below that goes with spot welding

A	Sheet metal and electrode
B	Heat and spark
C	Pressure and temperature
D	Heat, pressure and time

39. Identify the chisel used in cutting key ways is

A	Flat chisel
B	Cape chisel
C	Round nose chisel
D	Diamond pointed chisel

46. Identify the material used in the fabrication of a drill bit

A	High carbon steel
B	Pure iron
C	Wood
D	Rubber

40. Compare metal patterns to wood patterns in term of require allowance

A	Shrinkage allowance
B	Machining allowance
C	Draft allowance
D	Distortion allowance

47. Identify the element that can be used for drilling

A	The size of the work
B	The diameter of the hole required
C	The length of the drill been used
D	The shape of the hole require

41. Describe the operation carried out?

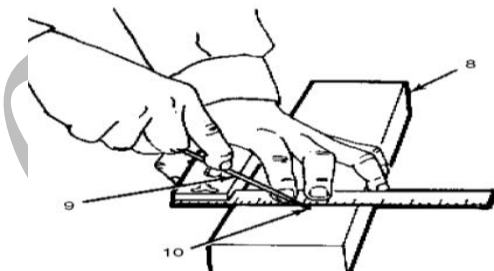


Figure 13

A	marking out
B	measuring
C	cutting
D	squaring

42. Select the last operation to perform in a thermal assembly process.

48. Explain the used of this machine



A	Used for punching
B	Used for bending
C	Used for shearing sheet metal
D	Used for joining sheet

49. Identify the tool below

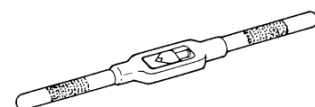


Figure 14

Turn over

A	Tap wrench
B	Die wrench
C	Hand wrench
D	Pipe wrench

50. calculate the rough dimension of sheet 30/10

A	100mm
B	10mm
C	30mm
D	3mm