



ENGINEERING DRAWING 1
5315

JUNE XXXX

INTERMEDIATE LEVEL

Centre No. & Name	
Candidate No.	
Candidate Name	

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

5315 ENGINEERING DRAWING 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 – 5315 ENGINEERING DRAWING 1.**”
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. A material made of Aluminum or its alloy is

A	a light material
B	a heavy material
C	a common material
D	Medium material

2. The sectioning convention for aluminium is represented by

A	
B	
C	
D	

3. Consider a piece made up in low carbon steel containing 0.13 percent of carbon, 0.1 percent of chromium and 0.5 percent of molybdenum. Give the corresponding designation of that material

A	13Cr Ni 4-5
B	13 Cr Mo 4-5
C	13 Cr Mo 6-8
D	13 Cr G 4-5

4. The elements below are chemical symbols. Choose the one corresponding to the aluminum

A	Si
B	Pb
C	Cu
D	Al

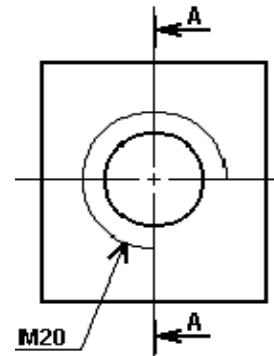
5 The interrupted line in drawing is used to represent

A	the hidden part of a view
B	the visible part of a view
C	the both part of a view
D	none of the above mention

6. The drawing paper whose dimensions are 297 x 210. is

A	A2
B	A5
C	A4
D	A1

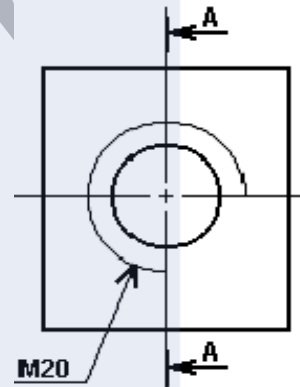
7. Let us consider the plane A-A on the figure below.



The line A-A is a.

A	plane of the circle A-A
B	plane of an axis A-A
C	plane of a hole A-A
D	Cutting plane A-A

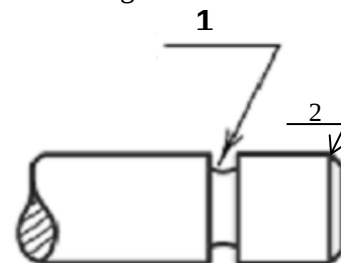
8. Let us consider the figure below.



M20 is the dimension of a.

A	Drilled hole
B	Tapered hole
C	Hole
D	Piece

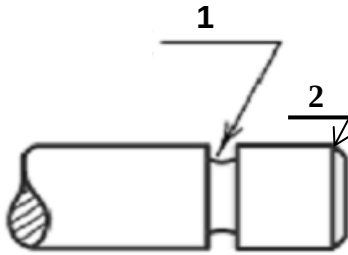
9. Let us consider the figure below.



The reference 1 represents.

A	Key way
B	Chamfer
C	Groove
D	Spline

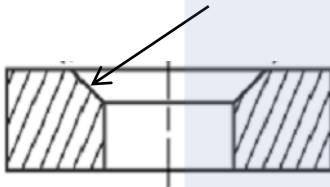
10. Let us consider the figure below.



The reference 2 represents

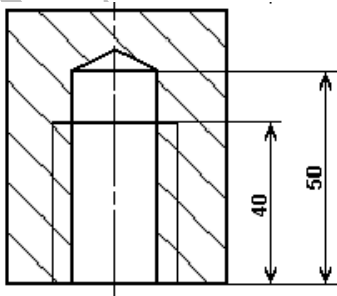
A	Internal chamfer
B	External chamfer
C	Internal way
D	Cone surface

11. From the figure below, the detail indicated by the arrow is called



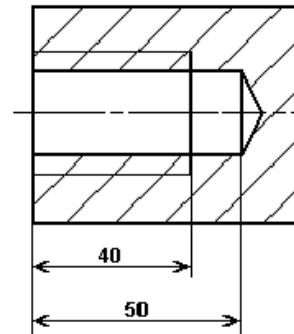
A	External chamfer
B	hole
C	Internal chamfer
D	External hole

12. From the sectional view of a piece shown below, the dimension 40 represents the length of a



A	Drilled hole
B	Drilled part
C	Tapered hole
D	Piece

13. The figure below presents a section view of a piece



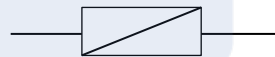
The dimension 50 represents the length of a

A	Drilled hole
B	Tapered piece
C	Tapered hole
D	Piece

14. The realization of a tapered hole carries two operations: drilling and tapering. Give the order of those operations.

A	Drilling before tapering
B	Tapering before drilling
C	The both at once
D	None of the above mention

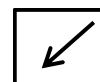
15. The element below is a type of a symbol of a link



Indicate the type

A	pivot linkage
B	embedded linkage
C	helical linkage
D	adherence linkage

16. The element below is a symbol of a seal used in the mechanisms.



Give the type of seal concerned

A	Double lip seal
B	Single lip seal
C	Thoric seal
D	Flat seal

17. The element below is the symbol of a bearing



Give the type of bearing concerned

A	Thrust ball bearing
B	Roller bearing
C	Taper bearing
D	Single ball bearing

18. The diagram below is a symbol of a concentricity.



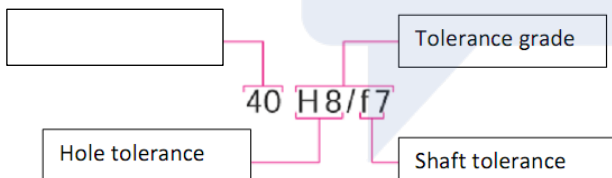
Give the nature of tolerance it belongs to

A	Form
B	Orientation
C	Position
D	Normalization

19. The sliding linkage present

A	2 Degree of freedom
B	1 degree of freedom
C	3 degree of freedom
D	6 degree of freedom

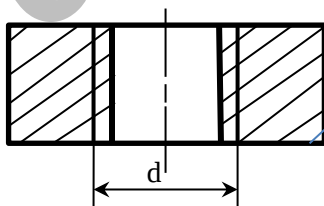
20. The figure below presents a fit;



The dimension 40 represents

A	Total dimension
B	Diameter of the tolerance
C	Dimension of the grade
D	Basic size of the fit

21. The figure presents a section of a tapered piece;



. d Represents the diameter of the

A	Drilled part
B	threaded part

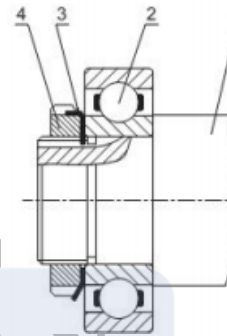
C	smoothed part
D	chamfered part

22. In calculation of fits, **EI** is the lower limit of the hole and **es** is the upper limit of the shaft.

EI - es is a.

A	Minimum clearance of a fit
B	Maximum clearance of a fit
C	Tolerance limit
D	Clearance

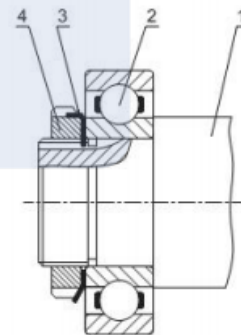
23. The figure below shows an assembly drawing of four pieces;



The piece of reference 4 is a

A	Grower washer
B	Block nut
C	Key washer
D	Simple nut

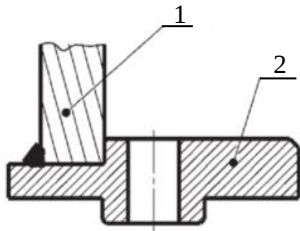
24. The figure below shows an assembly drawing of four pieces



Indicate a **character** of link between the pieces 1 and 2

A	Embedded linkage
B	Dismountable linkage
C	Pivot linkage
D	Sliding linkage

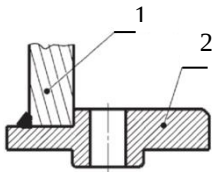
25. Following the figure below.



Give The type of link between the pieces 1 and 2 .

A	Sliding linkage
B	Pivot sliding linkage
C	Embedded linkage
D	Adherence linkage

26. The figure below shows an assembly of two pieces.



The pieces 1 and 2 are link by

A	Screw
B	Bolt
C	Welding
D	Ticking

27. Consider an assembly of 2 parts by the means of a screw, a flat washer and a nut.

Give the function of a flat washer in that assembly

A	Increase the tightening surface of the nut
B	Break the nut from loosening during the functioning
C	Prevent the well using of the nut
D	Prevent the well-functioning of the assembly

28. Consider an assembly of 2 parts by the means of a screw, a grower washer and a nut.

Give the function of a grower washer in that assembly

A	Increase the tightening surface of the nut
B	Prevent the nut from loosening during the functioning
C	Prevent the well using of the nut
D	Prevent the well-functioning of the screw

29. In a pulley and trapezoidal belt system.

The transmission of motion between two shafts is possible only when the shafts are.

A	Concurrent
B	Parallel
C	Perpendiculars
D	In contact

30. Lubrication in a mechanical devices is made of two types of lubricants.

Give the two convenient lubricants

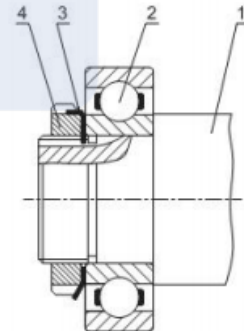
A	Oil and water
B	Grease and water
C	Grease and oil
D	Kerosene and water

31. An O ring seal is used to prevent the leakage of a mechanism.

Give the name of the material that the O ring seal is made up of.

A	Rubber
B	Steel
C	Aluminium
D	Copper

32. The figure below shows an assembly drawing of four pieces

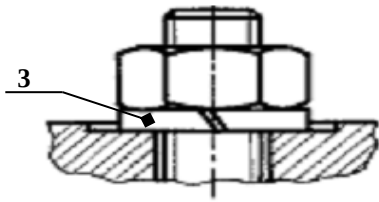


The piece of reference 3 is a

A	Key
B	Break washer
C	Grower washer
D	Flat washer

Turn over

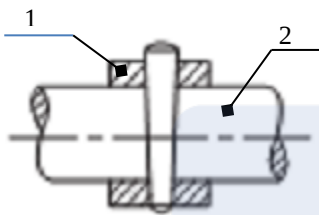
33. The figure below shows an assembly drawing.



The piece of reference 3 is a

A	Flexible ring
B	Flat washer
C	Grover washer
D	key washer

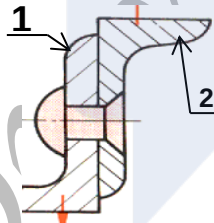
34 The figure below show an assembly drawing of 3 pieces.



The pieces 1 and 2 are linked with.

A	Cylindrical pin
B	Conical pin
C	Slotted pin
D	Parallel key

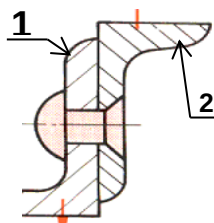
35. The figure below show an assembly drawing of 3 pieces.



The pieces 1 and 2 are linked with

A	Screw
B	Bolt
C	Rivet
D	Welding

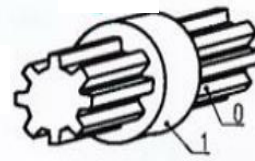
36. The figure below show an assembly drawing of 3 pieces



The type of linkage between 1 and 2 is

A	Sliding
B	Pivot sliding
C	Adherence

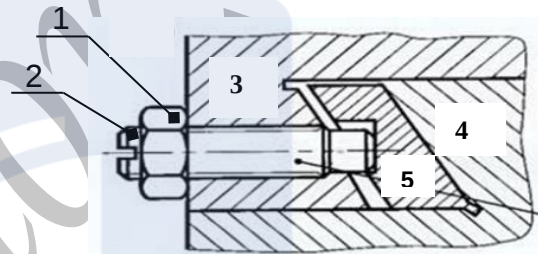
37. The figure below shows a set of two splined pieces



Give the nature of the possible motion between the 2 pieces

A	Rotation motion
B	Plane motion
C	Transversal motion
D	Translation motion

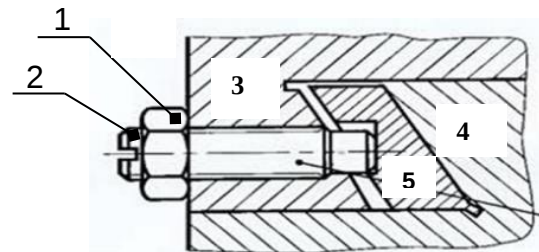
38. The figure below shows the assembly drawing of a adjustable dovetail guiding.



The function of the screw 2 is to.

A	Assembly the parts 4
B	Tight the parts 3
C	Adjust the clearance between 3 and 4
D	Transmit the motion on part 4

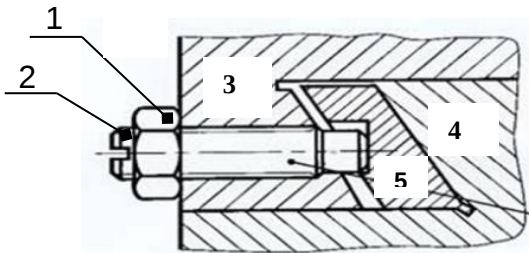
39 The figure below shows the assembly drawing of a adjustable dovetail guiding.



The device used to operate the screw 2 is a.

A	Star screw driver
B	Flat screw driver
C	Flat spanner
D	Socket spanner

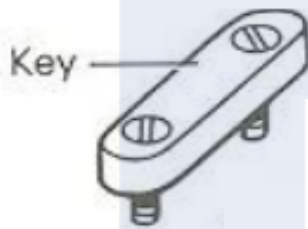
40 The figure below shows the assembly drawing of a adjustable dovetail guiding.



The function of the nut 1 is to.

A	Prevent the screw 1 from loosening
B	Assure the rotation of the screw 1
C	Enable the screw 1 to rotate
D	Enable the screw 1 to translate

41. The figure below presents a key



Give the type of key concerned.

A	A parallel key
B	A woodruff key
C	A gib head key
D	A feather key

42. The figure below presents a nut



The name of that nut is a.

A	Lock nut
B	Hexagonal nut
C	Wing nut
D	Square nut

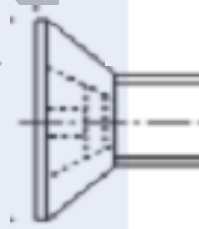
43. The figure below presents a nut



It can be operated with a.

A	Hand
B	Flat screw driver
C	Spanner
D	Star screw driver

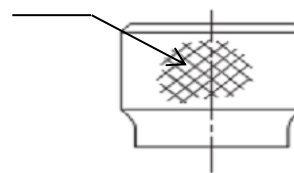
44. The figure below presents a head of a crew.



Give the type of the screw concerned

A	Hexagonal head screw
B	Square head screw
C	Countersunk head screw
D	Raised countersunk head screw

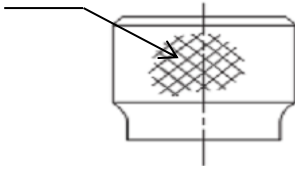
45.The figure below shows the end of an operating shaft.



Give the type of operation indicated on the shaft by the arrows

A	Freezes
B	Chamfers
C	Straight knurling
D	Diamond knurling

46. The figure below shows the end of an operating shaft.



The operation shows by the arrow is done for a

A	Well smoothing
B	Fast operating with the hand
C	Good protection
D	Good using of the spanner

47. The piece shown on the figure below is a ring



Give the name of that ring

A	Ring seal
B	External flexible ring
C	Sleeve ring
D	Internal flexible ring

48 The piece shown on the figure below is a ring



It is used on the d

A	plane motion
B	Rotating
C	Translation
D	Broken

49. In a chain of dimension, the conditional dimension is represented by a double arrow.

Choose the correct arrow direction.

A	 or 
B	 or 
C	 or 
D	 or 

50. The figure below shows four elements used in bearings.

ELEMENTS			
			
Ball	Roller	Taper	Needle

Those elements are

A	Spring elements
B	Outer ring
C	Rolling elements
D	Inner ring