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6451**BOARD DIPLOMA EXAMINATION, (C-16)****MARCH / APRIL — 2021****DME — FOURTH SEMESTER EXAMINATION****PRODUCTION DRAWING***Time : Three Hours]**[Maximum Marks : 60***PART-A**

5×4=20

- Instructions :** (i) Answer **all** questions.
(ii) Each question carries **five** marks.

1. The dimensions of a shaft and a hole are given below :

$$\begin{array}{cc} -0.020 & +0.010 \\ \text{Shaft } 60^{-0.022} & \text{Hole } 60^{-0.005} \end{array}$$

Find out maximum allowance and minimum allowance.

2. Draw the symbolic representation for the following geometrical characteristics to be tolerance :
- Flatness
 - Parallelism
 - Position
 - Run-out
 - Circularity
3. Indicate the surface roughness limiting values for the following manufacturing processes :
- Sand casting
 - Hot rolling
 - Shaping
 - Honing
 - Super finishing

4. Write the meaning for the code designation of the components :

(a) Counter sunk screw $M8 \times 20$

(b) M16NL *

PART-B

Instructions : (i) Answer any **one** questions.

(ii) Each question carries **forty** marks.

(iii) All dimensions are in mm.

(iv) Choose suitable scale.

5. Study the given assembly drawing of the Stuffing box and

(a) Draw the component drawings

(b) Apply suitable tolerance and fits

(c) Apply suitable geometrical tolerances to components

(d) Show the surface roughness symbols

(e) List out the materials for the components

(f) Prepare the process sheet for gland

20+5+3+3+4+5

Bill of material :

Part No.	Name	Qty
1.	Gland	1
2.	Nut	2
3.	Stud	2
4.	Body	1
5.	Bush	1
6.	Shaft	1
7.	Packing	

