

TED (15/19) 4026
(Revision-2015/19)

N22-09550

Reg.No.....
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**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2022**

PRODUCTION DRAWING

[Maximum marks: 100]

(Time: 3 Hours)

- [Note:- 1. Use of BIS tables and chart are permitted in the examination hall.
2. A2 size drawing sheet to be supplied and both sides can be used.
3. Missing dimensions to be suitable assumed.
4. Theory portions should be answered in the answer book.
5. All dimensions are in mm]

PART – A

Maximum marks : 20

I (Answer *all* questions. Each question carries 5 marks)

1. Draw the symbols for indicating the direction of lay in surface texture.
2. Describe about various process charts used in industrial purposes.
3. Briefly explain Shaft basis system.
4. Draw any five tolerance symbols.

(5 x 4 = 20)

PART – B

Maximum marks : 30

II (Answer any *two* of the following questions. Each question carries 15 marks)

1. Dimensions of a hole and its mating shaft are given below, according to the hole basis system:

Hole: 27.500mm, 27.575mm Shaft:27.470mm, 27.445mm

Find the values of hole tolerances, shaft tolerances and clearances. Check the calculated dimensions. Also represent these dimensions schematically.

(15)

2. A locating pin shown in Fig.1 is to be produced in a workshop. Prepare an operation process sheet incorporating the following details.

Part name	Locating pin
Part number	96002116
Drawing number	LP006004
Equipment	Drill Jig
Material	Steel
Specification	IS:666 PART-1
Qty.required	25Nos.

Also mention the details like department, weight per piece. Total number of operations, setup and operation time etc. (15)

3. A full sectional view of Gunmetal bush which is a light pressing fit in a CI bushing is shown in Fig.2. Draw the bush and indicate dimensions using symbols for tolerance. Also calculate the numerical values for the above tolerances and indicate them in basic size. (15)

PART – C

Maximum marks : 50

(Answer one full question from the following. Each full question carries 50 marks)

III.(a) Prepare a shop floor drawing on muff coupling as shown in fig.3 Its functional requirements are

1. Shaft and muff in light push fit
2. Keyway and key in light key fit
3. Keyway must be parallel with 0.03mm with shaft axis.
4. Shaft have roughness value of $0.8\mu\text{m}$
5. Inside portion of muff have $0.8\mu\text{m}$ and outside portion have $6.3\mu\text{m}$
6. All other portions have roughness values $3.2\mu\text{m}$ (50)

OR

- (b) Fig.4 shows the assembly of a socket and spigot joint. Draw the necessary views of the parts and mark suitable dimension as well as geometrical tolerances to result easy running fit between socket and spigot. The cotter and the hole are to be toleranced for normal running fit. Also give N7 finish to mating surfaces and N9 for the remaining. (50)

