Questions for exam of course rate
"Technology of mechanical engineering", part 1
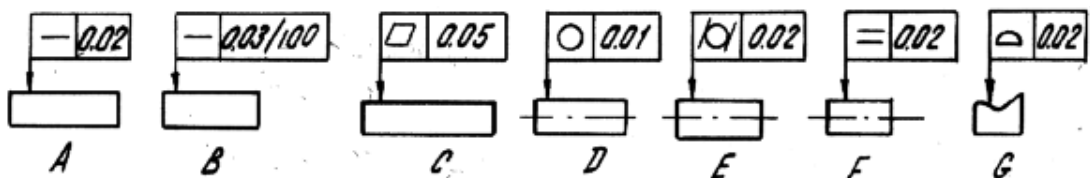
Name: _____ Gr. _____ Date: _____

1. How to check and set the indicating hole gage?

_____
_____
_____
_____
_____

2. For what purposes are the gage blocks used? Describe the procedure for building the gage block combinations (for example, 125.673 mm).

_____
_____
_____
_____
_____
_____
_____

3. For what are the purposes limits gages used? Enumerate its principal kinds.

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_____
_____
_____
_____
_____

4. Explain the following symbols:

A̅ _____

_____

B _____

_____

C_____

_____

D_____

_____

E_____

_____

F_____

_____

G_____

_____

_____

5. Explain the following symbols:
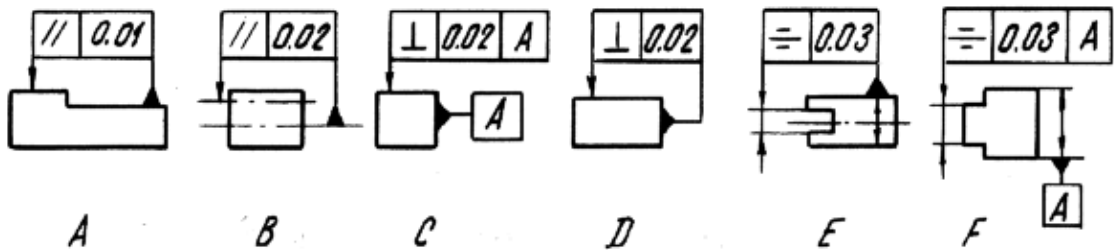
A_____

_____

B_____

_____

C_____

_____

D_____

_____

E_____

_____

F_____

6. Explain the following symbols:

$$\boxed{\oplus\ |0.1|\ \textcircled{M}\ |A|} \qquad \boxed{\oplus\ |0.1|A|\ \textcircled{M}} \qquad \boxed{\oplus\ |0.1|\ \textcircled{M}} \qquad \boxed{\oplus\ |0.1|\ \textcircled{M}|\ \textcircled{M}}$$

A   B   C   D

$\overline{A}$_____

_____

_____

B_____

_____

_____

C_____

_____

_____

D_____

_____

_____

_____

7. Complete the following sentences:

1) The roughness average is

_____

_____

_____

Ra =

2) The standard values of the roughness sampling length ℓ are (mm):

_____

_____

3) The height of the profile roughness by ten points is

_____
_____
_____

Rz =

8. How to measure a part (d=75.1 mm) by the method of relative measurements?

_____
_____
_____
_____
_____
_____

9. Define the minimum and maximum clearances for the fit 20H7/g6

_____
_____
_____
_____

10. Define the limiting interferences for the fit 80H7/s7

_____
_____
_____
_____

11. Define the limiting interference and clearance for the fit 50H7/n6

_____
_____
_____
_____

12. Define the deviations of limit gages to check the shaft and the hole of the fit 30H7/g6.

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_____
_____
_____

_____
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_____
_____

13. Define limit diameters of a screw and a nut for the thread junction M16 x 2–7H/6g.

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_____
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_____
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_____
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_____
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_____
_____
_____

14. What does 7-6-7-Ca/V -128 mean?

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_____
_____
_____
_____
_____
_____

Answer (question 12): 30H7 NOT-GO $\rightarrow$ 30.023$_{-0.004}$ mm

30H7 GO $\rightarrow$ 30.005$_{-0.004}$ mm

30H7 GO$_{wear}$ $\rightarrow$ 30.005$_{-0.007}$ mm

30g6 NOT-GO $\rightarrow$ 29.978$^{+0.004}$ mm

30g6 GO $\rightarrow$ 29.988$^{+0.004}$ mm

30g6 GO$_{wear}$ $\rightarrow$ 29.988$^{+0.007}$ mm

Answer (question 13): $D_{min} = 16$ mm

$d = 16^{-0.038}_{-0.318}$ mm

$D_2 = 14.701^{+0.265}$ mm

$d_2 = 14.701^{-0.038}_{-0.163}$ mm

$D_1 = 13.835^{+0.475}$ mm

$d_{1max} = 13.707$ mm