BOARD OF TECHNICAL EDUCATION

PORVORIM-GOA

November, 2008 Examinations

Programme: PRODUCTION ENGINEERING

Course/Subject: MACHINE TOOLS & PRODUCTION PROCESS-III (4075)

Time Duration: 3 Hrs. Max. Marks: 100

INSTRUCTIONS: 1.All Questions are compulsory.
2.Figures to the right indicate full marks.
3.Assume suitable additional data if required.

Q.No.1. Answer any five: (5x4=20)

a. What is the difference between capstan & Turret lathe ?
b. How are automats classified ?
c. What are natural and artifical abrasives ? Which of them are prefered more ?
d. What type pf grinding wheels are used on a Tool and cutter Grinder ?
e. What do you understand by Broaching ?
f. What is the difference between Left Hand and Right Hand threads ?
g. How do Lapping and Honing differ ?

Q.No.2. Answer any Two: (2x8=16)

a. With the help of a neat sketch describe the working of a collet chuck.
b. Describe any two tools used on capstan & Turret lathes.
c. What materials are used in the manufacture of grinding wheels What properties they impart to the wheel ?

Q.No.3. Answer any Two: (2x8=16)

a. Describe 'Single Spindle automat' giving a neat sketch.
b. What do you mean by 'Automatic loading device' ? What is its purpose ?
c. Describe:- (i) Surface grinding
(ii) Cylindrical grinding.

Q.No.4. Answer any Two: (2x8=16)

a. Describe the setup on Tool & Cutter grinder to sharpen a turning tool.
b. State the advantages and limitations of broaching.
c. Describe:- (i) Push broaching.
(ii) Surface broaching.

Q.No.5. Answer any Two: (2x8=16)

a. Describe the procedure of producing threads with die-heads.
b. Sketch and describe any two types of threads.
c. What is superfinishing ? How does it differ from Lapping and Honing ?

Q.No.6. Write notes on any Four: (4x4=16)

a. Applications of automats.
b. Balancing of Grinding Wheels.
c. Continuous broaching machine.
d. Thread rolling.
e. Selection of grinding wheel.

BOARD OF TECHNICAL EDUCATION

PORVORIM-GOA

May/June, 2009 Examinations

Programme: PRODUCTION/AUTOMOBILE ENGG.

Course/Subject: MACHINE TOOLS & PRODUCTION PROCESSES-III (4075)

Time Duration: 3 Hrs. Max. Marks: 75

INSTRUCTIONS: 1.All Questions are compulsory.
2.Figures to the right indicate full marks.
3.Assume suitable additional data if required.

Q.No.1. Answer any five:- (5X3=15)

a) Name any three tools used on capstan or turret lathe.
b) What is the difference between automatic and semiautomatic lathes?
c) Why are grinding wheels made of different shapes and sizes?
d) Name any three parts of a Tool and cutter grinder and write the functions of each.
e) What is the function of burnishing teeth provided on broaches?
f) Describe thread chasing.
g) Differentiate between lapping and Honing.

Q.No.2. Answer any two:- (2X6=12)

a) Explain the turret indexing mechanism.
b) Sketch any two tool holding devices of a turret lathe and state their use.
c) Describe the procedure of making tool layout for a job on single spindle automat.

Q.No.3. Answer any two:- (2X6=12)

a) Explain the construction and working of swiss automat.
b) Describe - (i) Pull broaching (ii) Surface broaching.
c) Describe the constructional features of a broaching tool giving a neat sketch.

Q.No.4. Answer any two:- (2X6=12)

a) State advantages and disadvantages of centreless grinding.
b) Explain any three bonding processes used in the manufacture of grinding wheels.
c) What are abrasives? How are they classified?

Q.No.5. Answer any two:- (2X6=12)

a) Describe the machine setup used to sharpen following tools on Tool and cutter grinder -
i) Turning tool ii) twist drill.
b) Differentiate between thread rolling and thread milling.
c) Describe different types of threads giving neat sketches.

Q.No.6. Write notes on any three:- (3X4=12)

a) Advantages of capstan and turret lathes over centre lathes.
b) Tool holders on automats.
c) Selection of grinding wheels.
d) Producing threads with die heads.
e) Honing.

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