Q.24 What are the factors which should be considered while selecting cutting tool material?

Q.25 Enlist the five advantage of jigs and fixtures.

Q.26 Explain the design principle for drilling jig.

Q.27 Explain the Taylor's principle of gauge design.

Q.28 Explain the working of a cutting die with diagram.

Q.29 Write a short note on closed die press.

Q.30 Differentiate between blanking die and piercing die.

Q.31 Explain the basic rules for die design of forging.

Q.32 Enlist the any five forging equipments and give their use.

Q.33 Write a short note on maintenance of dies.

Q.34 How the care of gauges is done?

Q.35 Write the various safety measures which should be considered in handling, cutting tools.

## SECTION-D

**Note :** Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 Explain the design principle & construction of milling fixture with neat sketch.

Q.37 Explain the following:-

a) GO and NO GO gauge standards

b) Taper gauges

Q.38 Explain the construction and working of blanking die with neat sketch.



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4th Sem, **Branch :** Mechanical Engg. (Production)

**Subject :** Tool Engg.

**Time : 3 Hrs.** **M.M. : 100**

## SECTION-A

**Note :** Multiple choice questions. All questions are compulsory. (10x1=10)

Q.1 Which of the following material can be used for coating on tools?

a) HSS b) TiCN

c) WC d) cBN

Q.2 With the use of Jigs and Fixture total cost of production.

a) Increases

b) Decreases

c) Remains same

d) Jigs are not used in any production process

Q.3 In which of the following operation jigs are preferred over fixture?

a) Drilling b) Turning

c) Milling d) Grinding

Q.4 'Go limit' applied to which limit condition?

a) Maximum material limit

b) Minimum material limit

c) Lower limit of shaft and upper limit of hole

d) Moderate material limit

Q.5 Which of the following is incorrect for the gauging faces of snap gauges?

a) Parallel to each other

b) Square to each other

c) Gauging point and work are in same plane

d) Work and gauging faces are at 60 degree

Q.6 Which one of the following precesing sequences will give the best accuracy as well as surface finish.

a) Drilling, Reaming, Grinding

b) Drilling, Boring, Grinding

c) Drilling, Reaming, Lapping

d) Reaming, Electroplating

Q.7 In bending operation the metal takes shape of _____

a) Die b) Punch

c) Average of two d) Could take any shape

Q.8 The type of force applied through die in forging is

a) Tensile force b) Compressive force

c) Shear force d) Any of the above

Q.9 Hot forging of a metal is caused out at

a) Melting point

b) Above recrystallization temperature

c) Below recrystallization temperature

d) At recrystallization temperature.



Q.10 Which of the following ways of cooling is used for the maintaining of die temperature?

a) Natural air cooling

b) Forced air cooling

c) Water channels cooling

d) Liquid nitrogen cooling

## SECTION-B

**Note :** Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Define tool bit.

Q.12 Write advantage of tool insert.

Q.13 Define fixture.

Q.14 Write the use of bush in drilling.

Q.15 Define calibration.

Q.16 Name any two press non-cutting operations.

Q.17 Describe fool proofing.

Q.18 Define recrystallization temperature.

Q.19 Define cutting tools.

Q.20 Write types of maintenance.

## SECTION-C

**Note :** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Explain the various factors which affect tool life.

Q.22 Differentiate single point cutting tool and multipoint cutting tools.

Q.23 Write a short note on tool coating.