

- Q.26 Explain tolerance and its types.
- Q.27 Describe the process of vacuumizing.
- Q.28 Discuss about various types of hand tools used in the moulding process.
- Q.29 Explain the working principle of cupola furnace.
- Q.30 Write a short note on Go and Not-Go gauges.
- Q.31 What are the main precautions to be taken while operating a lathe machine?
- Q.32 Write a short note on various casting defects and explain their remedies.
- Q.33 Write a short note on galvanizing.
- Q.34 Write down various work holding devices used on a lathe machine.
- Q.35 Discuss about the types of moulding sands.

#### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What are different types of pattern used in manufacturing? Also explain storage of patterns.
- Q.37 Describe working and constructional details of shaper machine.
- Q.38 Discuss various lathe operations with neat and clean diagram.

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Time : 3Hrs. M.M. : 100

#### SECTION-A

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

- Q.1 Core sand is also known as \_\_\_\_\_  
a) Parting sand b) Oil sand  
c) Green sand d) Dry sand
- Q.2 Angular measurement is done by \_\_\_\_\_  
a) Sine bar b) Micrometer  
c) Dual gauge d) Vernier steel
- Q.3 Base of the shaper machine made up of  
a) Cast iron b) Concrete  
c) Wrought iron d) Stainless steel
- Q.4 It is the different between the maximum and minimum size of a machine part.  
a) Deviation b) Tolerance  
c) Fit d) Allowance

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Q.5 Defects caused by patterns and moulding box Equipment

- a) Fins                                      b) Crush
- c) Mismatch                                d) All of these

Q.6 Gate cutter is a \_\_\_\_\_ shaped piece of thin sheet.

- a) U    b) V
- c) Circular                                   d) Rectangular

Q.7 Clapper box is used for

- a) To ensure cutting action
- b) To lift tool in cutting stroke
- c) To lift tool in return stroke
- d) To hold the tool

Q.8 In an oil paint, turpentine oil is used as a

- a) Base                                        b) Pigment
- c) Solvent                                    d) Vehicle

Q.9 The angle between the lathe centres is

- a) 30°    b) 45°
- c) 60°    d) 90°

Q.10 In shaper machine cutting action takes place

- a) During forward stroke
- b) During idle stroke
- c) Return stroke
- d) None of these

## SECTION-B

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

Q.11 Define fit.

Q.12 HSS stands for \_\_\_\_\_

Q.13 Define cope.

Q.14 Define knurling.

Q.15 List any two types of foundry sand.

Q.16 Unilateral tolerance.

Q.17 List two defects of casting.

Q.18 Write least count of vernier caliper.

Q.19 Write functions of chuck in the lathe machine.

Q.20 Names of any two types of melting furnaces.

## SECTION-C

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

Q.21 Explain the working of cupola furnace.

Q.22 Describe the process of electroplating.

Q.23 What are the applications of different pipe fittings?

Q.24 Explain the process of powder coating along with its advantages.

Q.25 Explain the speed and feed of cut for lathe machine along with its formula.