

- Q.26 What is explosive compaction? Explain.
- Q.27 Describe electro-discharge forming
- Q.28 Write the applications of LBM.
- Q.29 Define ultrasonic machining. Also write its applications.
- Q.30 Draw the neat sketch of EBM.
- Q.31 Explain with the help of neat sketch, the working principle of Water Jet Machining.
- Q.32 Draw the neat sketch of chemical machining.
- Q.33 What is under water welding? Explain.
- Q.34 Explain the working principle of abrasive jet machining.
- Q.35 Write at least five disadvantages of EBM.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain with the help of neat sketch, the construction and working of Wire-Cut EDM.
- Q.37 Give the brief description of diffusion and photolithography process for manufacturing electronic devices.
- Q.38 Explain with the help of neat sketch, working of principle of plasma arc welding.

No. of Printed Pages : 4 202432/122432/062432
Roll No.

**3rd Sem / Branch :Mechatronics
Subject:- Non-Conventional Manufacturing
Processes/ Manufacturing Processes-I**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Which process utilize mainly mainly thermal energy for material removal?
- a) AJM b) ECM
c) LBM d) WJM
- Q.2 For machining Ceramics , glasses and plastic which method is not applicable ?
- a) AJM b) LBM
c) USM d) EDM
- Q.3 Ultra-sonic machining is best suited for _____.
a) Tool Steels b) Sintered carbides
c) Glass d) All of the above
- Q.4 Dielectric is used in _____.
a) USM b) EDM
c) ECM d) LBM
- Q.5 The flash burns in case of explosion injuryis due to _____.
a) Conduction b) Radiation
c) convection d) None of the above

- Q.6 What are the processes where AJM can be used?
- Cleaning
 - Cutting
 - Debussing
 - All of the above
- Q.7 In which process masking is used on the component to be machined?
- EBM
 - ECM
 - CM
 - LBM
- Q.8 In which categories explosive are used in highest amount?
- Coal mining
 - metal mining
 - non-metal mining
 - Construction
- Q.9 Substances used in thermal machining are _____.
- Ions
 - Plasma
 - Electrons
 - All of the above
- Q.10 Which is not an explosive material?
- KCN
 - RDX
 - TNT
 - PETN

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 An explosive forming method in which an explosive charge is placed at a certain height above the surface of the workpiece is called _____.
- Q.12 In Ecm tool does not touch the workpiece.
(True/False)

- Q.13 _____ is a method of protecting one metal by forming a layer of a second metal on to its surface by using techniques such as diffusion deformation and lasers.
- Q.14 The finer resolution in lithography can be obtained by using _____.
- Q.15 Photolithography is a type of patterning technique . (True/False)
- Q.16 Electro-hydro forming process is also known as _____.
- Q.17 In which process a jet of water at very high velocity strike the surface of workpiece to be cut?
- Q.18 Under water welding also known as _____. Welding involves welding at an elevated pressure.
- Q.19 In ECM heavy electrical sparks are created. (True/False)
- Q.20 _____ is a solid-state welding process which uses a controlled explosive detonation to force two dissimilar metals together at high pressure.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 What are the process parameters of EDM? Explain.
- Q.22 Draw the neat sketch of Electro-Chemical Machining process.
- Q.23 Write the applications of IBM.
- Q.24 Write short note on water hammer forming.
- Q.25 Describe the future possibilities of unconventional machining processes