

DR.KALAM POLYTECHNIC COLLEGE –AVANAM
SPECIAL MACHINES
UNIT-I

TWO AND THREE MARKS QUESTIONS

1. Define: plastic?
2. Name the types of plastics?
3. What is polymer?
4. What is matrix?
5. What is calendaring?
6. What are elastomers?
7. What is composite?
8. Write main constituents of composite?
9. What is sand which moulding?
10. List the properties of plastic?
11. List the methods of processing of plastic?
12. What are liquid crystal polymers?

TEN MARKS QUESTIONS

1. Difference between thermosetting and thermoplastics?
2. What are the design considerations for plastic components?
3. Explain gas injection moulding?
4. Explain rotational moulding?
5. Explain reciprocating screw injection moulding?
6. Explain pultrusion process?
7. Explain the futures of single screw extruded?
8. Explain glass fibre manufacturing process?
9. Explain liquid composite process?
10. Explain injection moulding of thermo setting materials?

UNIT-II

TWO AND THREE MARKS QUESTIONS

1. Name the types of planers?(oct 03,04,06,14)
2. Specify the planer?(apr 01, oct 13,14)
3. Explain the types of shaper?(apr 15)
4. Explain the types of quick return mechanism of slotter?(oct 05, apr 14)
5. Explain the three broaching operations?(oct 04,05,14,15,apr 14)
6. Explain the construction pit planner?(apr 16)
7. Explain draw cut shaper?(apr 01,oct 01,06)
8. Explain the shaping machine is specified?(oct 03,07, apr 14,16)
9. Name the types of broaches?(oct 04, apr 05, 07)
10. Difference shaper and planer?(apr 03, 15. Oct 03,04,06,13,15)

TEN MARKS QUESTIONS

1. Explain the construction and working of double housing planer?(oct 05,15)
2. Explain the open and cross belt drive mechanism of planer?(apr 05,15, oct 06)
3. Explain the feed mechanism in a planer?(oct 01,04,05 ,apr 02)
4. Explain the work holding device in a planer?(apr 01,06, oct 15)
5. Explain the hydraulic drive in a planer?(oct 02,03,14, apr 07,16)
6. Explain the whitworth quick return mechanism?(oct 02,13,15)
7. Explain vertical broaching machine?(apr 01,05,06,15,oct 01)
8. Explain pull broach with nomenclature?(oct 06,15, apr 14,16)

UNIT-III

TWO AND THREE MARKS QUESTIONS

1. Name the types of milling machine?(apr 03,07,oct 04)
2. Differ plain and universal milling machine?(oct 02, apr 06)
3. Explain gang milling?(apr 02, oct 03.13,14)
4. Explain straddle milling?(oct 02,03,06,13, apr 04,07)
5. Name the types of material used for gear making?(oct 01,02,06,15, apr 06,07)
6. Explain uses of T SLOT milling cutter?(apr 02.07, oct 03)
7. Compare up milling and down milling?(oct 03.05,14, apr 04)
8. What is stub arbor ?(apr 01,05)
9. What is indexing head?(apr 14)
10. Explain vertical milling attachment?(apr 03)

TEN MARKS QUESTIONS

1. Explain construction and working of column and knee type milling machine?(oct 05,14, apr 15)
2. Explain gear hobbing process?(apr 02, 03, 05,07,16, oct 03,04,13)
3. Explain gear burnishing and gear grinding process?(apr 03,04,06,14, oct 04,05,15)
4. Explain gear lapping process?(apr 04,05,07)
5. Explain the types of milling operations?(apr 05,15, oct 15)
6. Explain milling cutter ?(oct 01,06, apr 16)

UNIT-IV

TWO AND THREE MARKS QUESTIONS

1. Write a sketch explain abrasive belt grinder?(oct 05)
2. Explain the principle of cylindrical grinding?(oct 05)
3. Explain the planetary type internal grinder with sketch?(apr 04, oct 05)
4. Name the different types of bonds used for making grinding wheels?(apr 03,04,05,07. Oct 03,06)
5. Explain the terms grit, grade and structure of grinding wheels?(oct 01,14, apr 04.05)
6. What are the points to be considered in selection of grinding wheel?(oct 01,06, apr 07)
7. Explain dressing and truing of grinding wheel?(apr 01,03, oct 13)
8. Write short notes on mounting of grinding wheels?(oct 01,05,14, apr 04,15)
9. What are the applications , advantages of ultrasonic machining?
10. List out the applications, advantages of laser beam machining?

TEN MARKS QUESTIONS

1. Explain any one type of cylindrical grinder with neat sketch?(apr 02,05,14, oct 04,14,15)
2. Explain the principles of working of a centreless grinder with neat sketch?(apr 01,06,oct 13)
3. Explain any one type of surface grinder with neat sketch?(apr 15,16)
4. Draw a neat sketch of various grinding wheel shapes and explain their applications?(oct 02)
5. Explain the principle of operation of ultrasonic machining process?(oct 13,15, apr 14,15)
6. Explain the principle of operation of electro chemical machining process?(apr 15,16)
7. Explain with neat sketch the operation of electro chemical grinding process?
8. Explain the principle of operation of electrical discharge machining with neat sketch?(oct 13, apr 16)

UNIT-V

TWO AND THREE MARKS QUESTIONS

1. What is an NC component? What are the components?(oct 14,15)
2. List out the features of CNC machines?(apr 15)
3. List out the application of CNC?
4. What are the merits and demerits of CNC systems?(apr 14,16, oct 14)
5. What are the requirements of slide way systems(oct 14)
6. Write short notes on friction slide ways and antifriction slide ways?(apr 16)
7. Explain any four tool materials used in CNC?(apr 15)
8. List out the various mechanical structure of CMM?
9. Explain in-process probing?
10. List out the tool inserts and their applications in CNC ?(apr 15)

TEN MARKS QUESTIONS

1. Explain the working principle of CNC systems?(apr 14,15, oct 14)
2. Explain components of a MCU in CNC systems?
3. Compare NC systems with CNC systems?(oct 15)
4. Explain the construction and working of CNC turning center?(apr 16)
5. Explain the construction and working of CNC machining center?(apr 15, oct 15)
6. What is CMM? Explain the working of CMM with neat sketch?(apr 15, oct 15)
7. What is automatic tool changer? Explain its working principle?(apr 14,15)
8. Explain the linear transducers are used to get feedback signals?