Technology Of Machine Tools 8th edition Krar Solutions Manual

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ANSWERS TO TEXTBOOK REVIEW QUESTIONS

UNIT 1

1. Beginning over 50,000 years ago, tools were made of wood, animal bone, or stones. Between 4500 and 4000 B.C., copper and bronze tools replaced stone spears and axes. Around 1000 B.C., iron tools replaced bronze tools. Around 300 years ago, the iron age became the machine age.
2. more efficient production, greater product accuracy, high standard of living
3. addition of hydraulics, pneumatics, fluidics, electronics
4. chip producing, non-chip-producing, new generation
5. (a) drilling, reaming, countersinking, counterboring, tapping
   (b) turning, facing, tapering, boring, threading
   (c) flat and contour surfaces, gears, drilling, boring, reaming
6. surface, cylindrical, cutter and tool, bench or pedestal
7. speed, accuracy, efficiency, reliability
8. A chucking center is for parts held in chuck or driving device. A turning center is for shaft-type parts that must be supported by a center.
9. vertical, horizontal
10. (a) internal and external shapes
    (b) die sinking
11. to machine space-age materials and produce shapes impossible by other methods
12. increased productivity, improved part quality
13. handling materials, changing machine accessories
14. cutting and welding all types of materials; accurate measuring and sensing devices

UNIT 2

1. better quality goods, lower cost, an increase in nation's resources, generation of wealth
2. artificial intelligence, computer-integrated manufacturing, flexible manufacturing systems, robotics
3. conventional machining, CNC machining, CAD/CAM techniques, maintenance, automation, flexible manufacturing
4. a person working under skilled people to learn a trade
5. completion of high school, mechanical ability, good use of English
6. A machinist operates all machine tools; a machine operator operates only one machine tool.
7. A jobbing shop does a variety of work. A production shop makes identical parts.
8. a highly skilled person who makes dies, jigs, molds, fixtures
9. serve an apprenticeship, demonstrate above-average mechanical ability, operate all machine tools, become skilled in all machining processes, and acquire mathematics and print reading knowledge
10. A CNC programmer must possess all the skills of a CNC machine operator and also be skilled in print reading, knowledgeable of computer programming, be able to visualize processes and operations.
11. A technician makes cost estimates, prepares technical reports, programs CNC machines. A technologist assists engineer with design studies, does production planning, performs laboratory experiments, supervises technicians.
12. An inspector checks production parts for accuracy. An instrument maker works with scientists and engineers, and makes prototype parts.
13. B.S. degree, industrial experience, pass qualifying exam
14. metallurgy, aerospace, mechanical, electronics

UNIT 3

1. type of work you like, work done with success, skills acquired at school, skills in part-time work
2. read books on subject, talk to people in same work, talk to school guidance counselor, see state and federal agencies
3. Résumé should list name, address, education, special training; interests, hobbies, sports; organizations the applicant is active in; previous employment; references.
4. Submit résumé with cover letter to personnel manager, request an interview in writing or request an interview by phone.
5. Know name and position of person; be neatly dressed, groomed, and on time; be honest during interview; know about the company and its products.
6. Thank interviewer, call company after 10 days, apply to other companies, learn from each interview.

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