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BE (5th Semester)
Examination, April - May, 2017

[New Scheme]

Manufacturing Science-II

Time Allowed : 3 hours *Maximum Marks* : 80

Minimum Pass Marks : 28

Note : (*i*) Part (*a*) of each question is compulsory. Attempt any **two** parts from (*b*), (*c*) and (*d*). Answer very briefly and to the point. Neat sketches will be given credit.

(*ii*) The figures in the right-hand margin indicate marks.

1. (*a*) Define importance of extrusion process. [2]

(*b*) State briefly the following methods of forging : [7]

(*i*) Drop forging

(*ii*) Press forging

(*iii*) Machine forging

(*c*) What are different defects in a forging? State the design considerations in a forging. [7]

(*d*) What is the importance of jigs and fixtures? Differentiate between them. [7]

4. (*a*) Explain dressing and turning of a grinding wheel. [2]

(*b*) Explain the factors to be kept in mind in selecting a grinding wheel. [7]

(*c*) With a neat sketch explain briefly external and internal cylindrical grinding and surface grinding. [7]

(*d*) What are the constituents of a grinding wheel? Explain the procedure of manufacturing a grinding wheel. [7]

5. (*a*) What is MRR? In which process MRR is high? [2]

(*b*) Describe the various process parameters that effect the EDM process. [7]

(*c*) Name seven unconventional machining. Describe any one with neat sketch, advantage, disadvantage and application. [2+5=7]

(*d*) Explain the following terms in USM (Ultra Sonic Machine) : [7]

(*i*) Feed mechanism

(*ii*) Tool

(*iii*) Abrasive slurry