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THIRD SEMESTER

B. Tech (AE)

SUPPLEMENTARY EXAMINATION

[FEB. 2019]

AE-205 MANUFACTURING MACHINES

Time: 3.00 Hrs

Max. Marks: 40

Note: Answer any **FOUR** questions. Assume suitable missing data, if any.

1[a] Sketch and explain the automatic feed mechanism of a centre lathe. 5

[b] What are the common mechanisms causing wear of a single point cutting tool? Also discuss crater wear and flank wear. 5

2[a] With a neat sketch explain the working of the crank and slotted link mechanism of a shaper. How are the length of stroke and position of stroke adjusted on this shaper? 5

[b] With the help of a neat sketch explain the working of a plain, external cylindrical grinder. 5

3[a] What are common operations which can be performed on a drilling machine? With neat sketches discuss them briefly. 5

[b] What is a twist drill? Sketch various views of a standard RH twist drill and explain its various elements and angles 5

4[a] List various milling operations Also sketch and discuss the following milling operations.

(i) Face milling (ii) Straddle milling 5

[b] Classify milling cutters. With neat sketches discuss any two of them. 5

[5] Write short notes on the following [Any Four]

(i) Capstan and turret lathe

(ii) Unconventional machining

(iii) Lapping and honing

(iv) Specification of a grinding wheel

(v) Cutting tool materials

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