

**B.Tech. (AEROSPACE ENGINEERING)
(BTAE)**

Term-End Examination

December, 2017

BAS-004 : WORKSHOP TECHNOLOGY

00302

Time : 3 hours

Maximum Marks : 70

Note : Answer any seven questions. All questions carry equal marks.

1. Explain with the help of sketches the following : 10
 - (a) Clearance Fit.
 - (b) Interference Fit.
 - (c) Transition Fit.

2. Write short notes on the following : 10
 - (a) Stainless Steels
 - (b) High Speed Steels
 - (c) Cemented Carbides

3. (a) What is the main function of a Lathe ? List various Types of Lathes. 4
(b) Describe the different machining operations performed on a Lathe by holding workpieces between centres or chucks. 6

4. Sketch and describe in brief a radial drilling machine. List various drilling machine operations. 10

5. Answer the following in brief : 10
- (a) What do you understand by gas welding ?
 - (b) Describe in brief the equipments required for oxy-acetylene welding.
 - (c) How are neutral, oxidizing and reducing flames obtained in a welding torch ?
6. Describe with neat sketches the construction and uses of : 10
- (a) Tenon Saw
 - (b) Socket Chisel
 - (c) Wooden jack plane
 - (d) Smoothing plane
 - (e) Bow Saw
7. Sketch and describe the working principle and uses of the following : 10
- (a) Outside Micrometer
 - (b) Vernier Caliper
8. (a) Define "Numerical control". State the advantages of numerical control machine tools over conventional machine tools. 5
- (b) What are the important components of NC systems ? Describe. 5
9. (a) Distinguish between Green Sand Moulding and Dry Sand Moulding. 5
- (b) Draw a sketch of typical mould and name its principal parts. 5
10. (a) Differentiate between plain and universal milling machines. 5
- (b) How does Knurling differ from taper turning in a lathe machine ? Explain. 5
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