BAS-004

B.Tech. (AEROSPACE ENGINEERING) (BTAE)
Term-End Examination

DD671

June, 2019

BAS-004 : WORKSHOP TECHNOLOGY

Time : 3 hours   *Maximum Marks : 70*

*Note : Answer any **five** questions. All questions carry equal marks.*

1. (a) Describe with the help of a sketch, the radial drilling machine.   *8*

    (b) Explain the difference between drilling and boring.   *6*

2. (a) What do you understand by plain carbon steel ?   *5*

    (b) Briefly explain the influence of the following elements on steel :   *3×3=9*

    (i) Nickel

    (ii) Chromium

    (iii) Carbon

3. (a) Explain Quick Return Mechanism of a shaper machine with the help of a sketch. *8*

(b) Explain briefly any two principal parts of a shaper machine. *6*

4. (a) What is the principle of operation of electric arc welding ? *7*

(b) What do you understand by gas welding ? Describe in brief the equipment required for oxy-acetylene welding. *7*

5. Define/Explain the following : $4 \times 3\frac{1}{2} = 14$

(a) Fits

(b) Tolerances

(c) Limits

(d) Allowances

6. (a) Sketch a screw thread and label the different parts. *7*

(b) Explain clearly the following : $3\frac{1}{2} + 3\frac{1}{2} = 7$

(i) Pitch

(ii) Lead

7. Explain the difference between the following : $4 \times 3\frac{1}{2} = 14$

(a) Elastic limit and Proportional limit

(b) Toughness and Resilience

(c) Hardness and Brittleness

(d) Ductility and Malleability