Reg. No. :

Question Paper Code : X11009

B.E./B.Tech. DEGREE EXAMINATIONS, NOV/DEC 2020 AND APRIL/MAY 2021
Fifth/Sixth/Seventh Semester
Mechanical Engineering
PR 8592 – WELDING TECHNOLOGY
(Common to Production Engineering/ Mechanical Engineering(SW))
(Regulations 2017)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions

PART – A **(10×2=20 Marks)**

1. State the electroslag welding process.
2. Classify the flames of oxy-acetylene.
3. Write down the various metal joining process.
4. What are the advantages of resistance welding ?
5. Write the various stages of mechanism of diffusion bonding.
6. List the limitations of ultrasonic welding.
7. Mention the applications of LBM.
8. Give chemical reaction in thermit welding.
9. Differentiate liquid penetrate testing and magnetic particle testing.
10. State the limitations of ultrasonic testing.

PART – B **(5×13=65 Marks)**

11. a) Explain the working principle of Metal Inert Gas Welding and their components with a neat sketch. **(13)**

(OR)

b) With a neat sketch explain the construction and working of Carbon Arc Welding B. **(13)**

12. a) Explain the working of Resistance Spot Welding (RSW) and their advantages and limitations. **(13)**

(OR)

b) Describe the construction and working of High frequency Resistance Welding with a neat sketch. **(13)**

13. a) What is the working principle of Roll Welding ? Explain with a neat sketch. Also mention the advantages and disadvantages. **(13)**

(OR)

b) Discuss the working principle of Cold Pressure Welding process with a neat sketch. **(13)**

14. a) Draw a neat sketch and explain Friction Stir Welding (FSW) and the steps involved. **(13)**

(OR)

b) Write short notes on welding automation in surface transport vehicle. **(13)**

15. a) Draw neat sketches and explain the welding symbols and sectional representation and form of weld. **(13)**

(OR)

b) Explain the working of ultrasonic testing and radio graphic testing with suitable sketch. **(13)**

PART – C **(1×15=15 Marks)**

16. a) Write down the process parameters involved in Diffusion Welding and explain them in details. **(15)**

(OR)

b) Explain the various welding methods are used in aerospace industry and nuclear reactor. **(15)**

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