VRK/KS/14/3160/3478

Faculty of Engineering & Technology
Eighth Semester B.E. (Mech. Engg.)/Eighth Semester B.E.P.T. (Mech.) Examination
ADVANCED MANUFACTURING TECHNIQUES
Elective—III
Sections—A & B

Time—Three Hours] [Maximum Marks—80

INSTRUCTIONS TO CANDIDATES

(1) All questions carry marks as indicated.

(2) Answer **THREE** questions from Section A and **THREE** questions from Section B.

(3) Due credit will be given to neatness and adequate dimensions.

(4) Assume suitable data wherever necessary.

(5) Diagrams and Chemical equations should be given wherever necessary.

(6) Illustrate your answers wherever necessary with the help of neat sketches.

SECTION—A

1. (A) Explain Non-traditional machining process based on need, classification and historical development. 7

(B) Explain belt grinding. Also explain hot and cold machining. 6

2. (A) Explain the mechanics of Abrasive jet machining with neat sketch. 6

(B) Explain Ultrasonic machining process; its parameters and control. Also explain its effect on materials. 7

3. (A) Explain Electro-chemical grinding with neat sketch. 6

(B) Explain with neat sketch Electro-chemical machining. States its advantages, limitations and applications. 7

4. (A) Explain with neat sketch Electric Discharge machining. Also state its advantages, limitations and applications. 7

(B) Explain with neat sketch Laser Beam machining alongwith its advantages and disadvantages. 6

5. Write short notes on (Any **THREE**) :

(i) Creep Feed grinding.

(ii) Water Jet machining.

(iii) Plasma Arc machining

(iv) Electron Beam machining. 14

SECTION—B

6. (A) Explain the principle of Electroforming alongwith its applications. 7

(B) Explain dallising process of finishing operation with its application. 6

7. (A) Describe working of MIG with its applications. 6

(B) Explain with neat sketch Electron Beam welding. Also states its application. 7

8. (A) Explain with neat sketch, Atomic Hydrogen welding. State its advantages and application. 7

(B) Discuss Electro Slag welding with neat sketch. Also state its advantages and application. 6

9. (A) Distinguish between Ultrasonic welding and friction welding with reference to principle of working, advantages, limitation and application. 6

(B) Discuss the recent development in non-traditional process for welding. Also brief its economics and application. 7

10. Write short notes on (Any **THREE**) :

(i) Burnishing process

(ii) Plasma arc welding

(iii) Submerged arc welding

(iv) Adhesive bonding

(v) Spot welding. 14