190809

B.VOC. AUTOMOTIVE MECHATRONICS

Subject: Manufacturing Automation & Ergonomics
Subject Code: ABME-204
Semester: 4th (Regular)
Batch: 2017-20
Theory (External): 35 Marks
Time: 03 hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. Section B comprises 6 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

Roll Number

SECTION –A (OBJECTIVE TYPE QUESTIONS)

(10x1=10 Marks)

Q1 All questions are compulsory

a) Write the advantages of automation.

b) What is the role of controller in automation?

c) What do you mean by automated flow line?

d) What is line balancing?

e) Define a robot.

f) Describe the type of automation.

g) Describe the various applications of robots in industries.

h) What are the configurations of robots?

i) Define fixed and flexible automation.

j) What is manipulator?

SECTION –B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

Q1 Describe mechanical buffer storage control function.

Q2 Describe the latest technology used for implementation in industry 4.0 to achieving higher efficiency.

Q3 Explain the working principle of SEM with neat sketch.

Q4 Give the classification of industrial robot. Also discuss the various industrial applications of robots.

Q5 Discuss the scope and evolution of ergonomics.

Q6 Write short notes on

(i) Application of Nanotechnology

(ii) Pneumatic manipulator

*****END OF PAPER*****