

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE****Supplementary Semester Examination – Summer 2022****Course: B. Tech.****Branch : Mech Engg****Semester :VII****Subject Code & Name: Industrial Engineering & Management BTMEC704B****Max Marks: 60****Date: 24/08/2022****Duration: 3.45 Hrs.****Instructions to the Students:**

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

(Level/CO) Marks

**Q. 1 Answer Any Two of the following questions**

- A) Define Management. What are the basic steps in scientific management as suggested by F. W. Taylor? **CO1** 6
- B) Explain “Unity of Command” as the ‘principle of management’ suggested by Henry Fayol. **CO1** 6
- C) Explain Porter’s five competitive forces by considering an example of Toothpaste Manufacturing Company. **CO2** 6

**Q.2 Attempt Any One of the following.**

- A) Explain Porter’s five competitive forces by considering an example of Toothpaste Manufacturing Company. **CO1** 12
- B) Define ‘authority’ & explain the four levels of authority. **CO3** 12

**Q. 3 Write short notes on Any Two of the following.**

- A) Facility Layout **CO2** 6
- B) Capacity Planning **CO2** 6
- C) Product design process. **CO2** 6

**Q.4 Solve Any one of the following.**

- A) If surface finishing of part involves following steps, prepare flow process chart (material type)  
i) Parts were brought from store 20m away from machine (1 min)  
ii) Waiting for operator to be free from present work (20 min)  
iii) Part loaded on the machine (3 min)  
iv) One surface was machined (3 min)  
v) Part was unloaded from machine (1 min)  
vi) Activities from step ii to step v were repeated till the component was machined on all four sides.  
vii) Do the inspection of part 25m away from machine  
viii) Check the accuracy of surface finishing (5 min)  
ix) Place the parts in rack for further use (1 min). **CO4** 12
- B) Study the following case study and answer the questions following it. **CO4** 12

Jeevak Pharmaceutical Co. Ltd.

Jeevak Pharmaceutical Co. Ltd. was started as a Private Limited

*Company by three technocrats having specialized training in pharmacy and chemistry at Jalgaon to manufacture and market pharmaceutical formulations – branded tablets, capsules, ointments, oral liquids some five years back. With expansion in sales, the company went public after first three years of operations and is now a company with turnover of Rs. 25 crores, a field-force of 250 representatives, some 300 workers, and a dealer network of 60 authorized stockiest all over the country. The company is poised for further growth by entering bulk drug production consisting of anti – TB and anti-diarrhea drugs. The company has adopted product management type of staff function in its marketing set up.*

### Questions

- i] How would you appreciate the decision of the company to introduce ‘product management type’ of structure?
- ii] Suggest the suitable type of organization chart for this company which has gone into substantial diversification.

### Q. 5 Solve Any Two of the following.

- |   |            |          |
|---|------------|----------|
| A) Explain ergonomically correct “work place layout”.                   | <b>CO2</b> | <b>6</b> |
| B) Explain Producibility & Manufacturability in concurrent engineering. | <b>CO2</b> | <b>6</b> |
| C) Explain Therblings   | <b>CO2</b> | <b>6</b> |

\*\*\* End \*\*\*