

**BACHELOR OF ENGINEERING (ELECTRICAL ENGINEERING) FOURTH YEAR SECOND SEMESTER**

**EXAMINATION 2023**

**Subject: ECONOMICS AND INDUSTRIAL MANAGEMENT**

**PART I**

**TIME 3 HOURS**

**FULL MARKS 100 [50 MARKS FOR EACH PART]**

**ANSWER ANY FOUR**

**12.5 X 4 = 50**

1. Briefly explain law of Demand and its determinants. What is elasticity of demand?
2. What is Market? State the classification of market with example.
3. Discuss the Meaning and Scope of Economics.
4. State the role RBI OR Functions of Commercial banks.
5. What is Inflation? State major measures of Inflation in India
6. Define tax revenue. State its advantages and disadvantages..
7. State the Canons of Taxation.

[ Turn over

**B. E. ELECTRICAL ENGINEERING EXAMINATION, 2023**

(4th Year, 2nd Semester)

**ECONOMICS & INDUSTRIAL MANAGEMENT**

Time: Three Hours

Full Marks: 100

Use a separate Answer-script for each Part

**PART-II (50 marks)**Answer *any three* questions*Two marks* are reserved for neatness and well organized answer script

1. a) Define the term "Industrial Management". 2
- b) Mention the common management problems in an organization and the ways to overcome those problems. 6
- c) Aqua Plastics manufactured 200,000 units of thermos flasks in the last financial year. It utilized 10- workers and 5- machines working for 8-hours per day (h/d) during 200-working days of the year in the production of these flasks. What is the productivity of the company with respect to labour and machine inputs together? 8

2. a) Discuss the criteria for evaluation to select a most suitable vendor for a manufacturing plant. 4
- b) Calculate the Vendor Rating for the following. The item under consideration is the same and identical from all the Vendors.

Vendor's Data	A	B	C
Quantity Supplied	108	90	80
Equivalent Quantity Accepted	102	90	75
Price of Each Item	Rs.1/-	Rs.1.2/-	Rs.1.1/-
Delivery Promised	3-weeks	4-weeks	4-weeks
Actual Deliveries Made In	2.7 weeks	5-weeks	4.4 weeks
Response to Suggestion	90%	85%	100%

- c) Mention the advantage and disadvantage in the selection of a plant location for (i) Urban Area and Rural Area. 8  
(2) + (2) =4
3. a) Discuss the relevant aspects of "Production Functions". 3
- b) Depict break-even analysis with related costs and BEP. 3
- c) The table below shows the monthly demand over 6-months period for a product.

Month	1	2	3	4	5	6
Demand (in units)	120	130	110	140	110	130

- (i) Determine the forecast of demand for the 7<sup>th</sup> month using 3-month simple moving average method.
- (ii) If the weightage given for the demand for 6<sup>th</sup>, 5<sup>th</sup> and 4<sup>th</sup> months are 0.5, 0.3 and 0.2 respectively, determine the forecast for 7<sup>th</sup> month using weighted moving average method.

10

- 4. a) Define the term “Method Study”. 2
- b) Mention the steps that are involved in “Method Study”. 4
- c) The elemental times (in minutes) for 4 cycles of an operation using a stop watch are presented below:

Elements	Cycle time in minutes			
	I	II	III	IV
1	1.5	1.5	1.3	1.4
2	2.6	2.7	2.4	2.6
3	3.3	3.2	3.4	3.4
4	1.2	1.2	1.1	1.2
5	0.51	0.51	0.52	0.49

Calculate the Standard time for the operation if

- (i) Elements 2 and 4 are machine elements
- (ii) For other elements , the operator is rated at 110 %
- (iii) Total allowances are 15 % of the normal time 10

- 5. a) What do you understand by the term “Industrial Relations”? 2
- b) Mention the objectives of “Industrial Relations”. 4
- c) Discuss in brief the “Characteristics & Objectives” on account of “Wage and Salary Administration”.

(5) + (5) =10