

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024

Subject Code:3161501

Date:22-05-2024

Subject Name: Materials Management

Time:10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) What is the rationale for learning the subject of Materials Management? **03**
- (b) Write the scope of materials management. **04**
- (c) How standardization and variety reduction concepts are used in material management? **07**
- Q.2** (a) What is the necessity of physical verification of stores? **03**
- (b) How to do classification and codification help in store management? **04**
- (c) What are the advantages of centralization of stores? Also, state the advantages of decentralization of stores. **07**
- OR**
- (c) Consider a case study of the College Library, and explain whole store management. **07**
- Q.3** (a) What is a “Bill of Material”? **03**
- (b) How does Make or Buy Decision help in purchase management? **04**
- (c) Explain ABC analysis in detail with a graph. **07**
- OR**
- Q.3** (a) What is a selection of sources and vendor rating? **03**
- (b) Define (i) lead time (ii) buffer stock **04**
- (c) Explain the procedure and documentation for international purchases. **07**
- Q.4** (a) Why a firm does not want to hold the inventory? **03**
- (b) Explain the cost of holding inventory. **04**
- (c) An oil engine manufacturer purchases lubricant at the rate of Rs 42 per piece from a vendor. The requirements for these lubricants are 1800 per year. What should be the ordering quantity per order, if the cost per placement of an order is Rs. 16 and inventory carrying charges per rupee per year is 20 paise? **07**
- OR**
- Q.4** (a) Discuss the two-bin system for inventory control **03**
- (b) Compare the P and Q systems of the inventory model. **04**
- (c) Given that (i) Annual usage = 60 units (ii) procurement cost = Rs. 15 per order (iii) cost per piece = Rs.100 (iv) cost per inventory carrying, a percentage including expenditure on obsolescence, taxes, insurance, deterioration, etc. = 10%. Calculate EOQ. **07**

- Q.5** (a) What do you understand by materials research? **03**
(b) Explain the principles of good store layout. **04**
(c) Explain the appraisal method of purchasing capital equipment. **07**

OR

- Q.5** (a) Differentiate between the deterministic and probabilistic types of inventory models. **03**
(b) Explain any FOUR legal aspects of purchasing. **04**
(c) Discuss the identification and control of waste. **07**
