

maintain the same amount of profit as earned in 2018-19. Assume that the variable cost per unit and the fixed expenses remain same.

$(1 + 5) + (3 + 3) = 12$

7. (a) For venturing into two Projects A and B, initial capital investments of Rs.10,00,000 each is made. Both the Projects have a life of 5 years. Net expected earnings for the projects are given in the table below. All other factors governing the project implementation and execution are identical.

Which project should be chosen? (Consider discount rate of 10%).

Year	Expected Earnings (Rs.)	
	Project A	Project B
1	3,00,000	4,00,000
2	3,00,000	4,00,000
3	4,00,000	2,00,000
4	3,00,000	4,00,000
5	3,00,000	2,00,000

- (b) Give a comparative analysis of Debt financing and Equity financing.

$7 + 5 = 12$

**Group – E**

8. (a) What is a company? Bring out the differences between a private and a public company.

- (b) Zyla Ltd. furnishes its capital structure as on 31<sup>st</sup> march 2019. You are requested to calculate the Weighted Average Cost of Capital.

Source of Capital	Amount (Rs. Crores)	Cost (%)
Equity Share Capital	500	20
Preference Share Capital	150	10
Reserves & Surplus	50	-
Debentures	200	8
Secured Loan from Bank	100	12

$(2 + 4) + 6 = 12$

9. Write short notes (any three)

1. IMF and World Bank
2. Balance of Trade
3. Difference between SLM and WDV method of depreciation
4. Decision making using marginal costing.

$4 \times 3 = 12$

**ECONOMICS FOR ENGINEERS**

(HMTS 3101)

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

Candidates are required to answer Group A and any 5 (five) from Group B to E, taking at least one from each group.

Candidates are required to give answer in their own words as far as practicable.

**Group – A**  
(Multiple Choice Type Questions)

1. Choose the correct alternative for the following:  $10 \times 1 = 10$

- (i) In Economics, \_\_\_\_\_ means that additional satisfaction derived from consumption of each successive units falls  
 (a) Economies of scale (b) Diminishing marginal utility  
 (c) Demand elasticity (d) Conspicuous consumption.
- (ii) In the given Demand - Supply curve (Figure 1), at price P \_\_\_\_\_

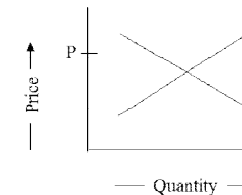


Figure 1

- (a) Demand > Supply (b) Supply > Demand  
 (c) Demand = Supply (d) Demand ≥ Supply.
- (iii) \_\_\_\_\_ is the rate at which the RBI lends money to commercial banks in case of shortage of funds.  
 (a) Repo rate (b) Reverse repo rate  
 (c) Base rate (d) Bank rate.
- (iv) The ratio between present value of cash inflow and initial cash outlay is \_\_\_\_\_  
 (a) Profitability ratio (b) Earnings ratio  
 (c) Benefit-cost ratio (d) Net Benefit-cost ratio.
- (v) All assets of a firm falls under  
 (a) Personal Accounts (b) Nominal Accounts  
 (c) Real Accounts (d) Management Accounts.
- (vi) What is the cost of goods sold if purchase is Rs. 60,000; carriage inwards is Rs. 5,000; wages is Rs. 10,000 and closing stock is Rs. 7,000?  
 (a) Rs. 82,000 (b) Rs. 68,000  
 (c) Rs. 38,000 (d) Rs. 48,000.

- (vii) The present value of a perpetuity of Rs. 1,00,000 at 10% interest rate is \_\_\_\_
  - (a) Rs.10,00,000
  - (b) Rs. 2,00,000
  - (c) Rs. 5,00,000
  - (d) Rs. 10,000.
- (viii) A machine was purchased for Rs. 50,000 on 1.4.2017. If the depreciation is charged @10% p.a. on the reducing balance method what is its written down value on 31.3.2019?
  - (a) Rs. 40,500
  - (b) Rs. 36,450
  - (c) Rs. 35,000
  - (d) Rs. 25,000.
- (ix) If the quantity sold is greater than  $Q_0$  (Figure 2), the business will operate in

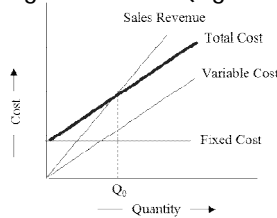


Figure 2

- (a) Loss Zone
  - (b) No Profit, No Loss Mode
  - (c) Profit Zone
  - (d) Gestation Mode.
- (x) Current ratio is
    - (a) Liquidity ratio
    - (b) Solvency ratio
    - (c) Activity ratio
    - (d) Profitability ratio.

**Group – B**

- 2. (a) Describe the salient causes of inflation.
- (b) State the concepts of Needs and Wants. Explain the difference between the two with suitable examples.
- (c) Enumerate the different structures of Market and state the features of Monopsony market.

4 + 4 + 4

=12

- 3. (a) Define Economics. What are the central problem of all economies?
- (b) Mr. Ritam, a sole trader dealing in garments, made the following transactions for his business styled as Ritam Fashions during the month of October 2019. Record the transactions in the format of Journal.

3 <sup>rd</sup> Oct	Bought goods from Shyam Traders Rs. 20,000
7 <sup>th</sup> Oct	Sold goods for cash Rs. 60,000
12 <sup>th</sup> Oct	Purchased furniture for office use Rs. 6,000
16 <sup>th</sup> Oct	Introduced Rs. 50,000 in business as capital
24 <sup>th</sup> Oct	Deposited Rs. 20,000 into business bank account from office cash
26 <sup>th</sup> Oct	Paid Shyam Traders the amount due less 5% cash discount
30 <sup>th</sup> Oct	Paid office rent Rs. 3,000
31 <sup>st</sup> Oct	Withdrew cash for personal use Rs. 5,000

(1 + 3) + 8 = 12

**Group – C**

- 4. (a) Draw up a flexible budget for production at 75% and 100% capacity on the basis of following data for 50% activity level which is for 500 units.  
(Note : Costs should be segregated into FC, VC & SVC)  
Material cost - Rs. 80 per unit  
Labour - Rs. 50 per unit  
Direct Expense - Rs. 10 per unit  
Administration expense (50% fixed) – Rs. 60,000  
Selling & Distribution expense (60% fixed) – Rs. 80,000  
Fixed Expense : Depreciation – Rs. 8,000  
Insurance – Rs. 3,000  
Present production (50% activity level) – 500 units
- (b) M/s. Zakaria & Co, has invested Rs. 2,00,000 in their plant to produce an item whose variable cost per unit is Rs. 50 and sales price is Rs. 70 per unit. What should be the profit or loss if the Company sells 10,000 units?

9 + 3 = 12

- 5. (a) What is the meaning of market? What are the characteristics of perfectly competitive market?
- (b) From the following information calculate:
  - i. Current ratio
  - ii. Working capital
  - iii. Debtors turnover
  - iv. Stock holding period
  - v. Gross profit ratio
  - vi. Debt-equity ratio

All figures are in Rs. Crores

Stock Rs. 30; Debtors Rs. 20; Bank balance Rs. 60; Cash in hand Rs. 10; Creditors Rs. 40; Outstanding expenses Rs. 20; Equity share capital Rs. 100; Reserves & Surplus Rs. 20; 9% Debentures Rs. 25; Long term loan Rs. 15; Sales (assume all on credit) Rs. 200; Gross profit Rs. 50.

2 + 4 + 6 = 12

**Group – D**

- 6. (a) What is inflation? List out and explain the causes that may bring about inflation.
- (b) A company sold 4,000 units in 2018-19. The selling price and the variable cost per unit were Rs. 25 and Rs. 18 respectively. The fixed expenses were Rs. 16,800. Calculate the profit earned in 2018-19.  
Due to competition, the company is forced to reduce its selling price by 20% in 2019-20. What is the number of extra units the company has to sell in the current year if it wants to