Code No.2918/AICTE/M

FACULTY OF ENGINEERING

B. E. (CE/EE/Inst./CSE) IV – Semester (AICTE) (Main) Examination,

December 2020

Subject: Finance and Accounting

Time: 2 hours **Max. Marks: 70**

Note: (Missing data if, any can be assumed suitable)

PART – A

Answer any five questions. **(5 x 2 = 10 Marks)**

1. State Trial balance
2. Tell about advantages
3. Define capital expenditure
4. Define the term drawings
5. What is Money market
6. Elaborate NSE
7. What is capital budgeting?
8. Tell about IRR
9. What is the importance of ratio analysis
10. Recall Debt – Equity ratio

PART – B

Answer any four questions. **(4 x 15 = 60 Marks)**

11. Journalize the following transactions in the books of Vijay
    (a) Vijay started his business with cash Rs.5,00,000
    (b) Borrowed from Anwar Rs.1,00,000
    (c) Purchased furniture Rs.50,000
    (d) Purchased furniture from Mahesh on credit Rs.50,000
    (e) Purchased goods for cash Rs.10,000
    (f) Purchased goods from Hakeem on credit Rs.15,000
    (g) Sold goods for cash Rs.20,000
    (h) Sold goods to Mohan on credit Rs.5,000
    (i) Received cash from Mohan Rs.2,000
    (j) Paid cash to Hakeem Rs.15,000

……2

12. Prepare final accounts from the books of Ramco traders as on 31-03-2019.

	Debit (Rs.)	Credit (Rs.)
Z's capital		1,50,000
Sales		2,20,000
Sundry Creditors		28,000
Bills payable		12,000
Purchases	1,00,000	
Opening Stock	1,20,000	
Wages	10,000	
Salaries	12,000	
Office expenses	8,000	
Sundry debtors	80,000	
Cash	6,000	
Plant and machinery	40,000	
Rent	4,000	
Bad Debts	2,000	
Receivables	8,000	
Goodwill	20,000	
	4,10,000	4,10,000

Adjustments:

The value of closing stock was Rs. 1,20,000.

13. Define financial system. Explain the various components of Indian financial system.

14. (a) What is PBP payback period?

(b) A company considering two projects X and Y each costing Rs.18,00,000 and have expected life of 3 years.

The cash flows after taxes are

Year	Project X (Rs.)	Project Y (Rs.)
1	6,00,000	12,00,000
2	10,00,000	8,00,000
3	12,00,000	6,00,000

Decide which project should be selected on the basis of NPV?

The companies requires rate of return is 15%.

15. (a) How to calculate EPS? Earning per share.

    (b) ABC Limited has a current ratio of 1.5:1. Its stock is Rs.1,20,000 and its current liabilities are Rs.2,40,000. Calculate the current ratio.

16. Explain the objectives and basic concepts of accounting.

17. (a) What is petty cash book?

    (b) From the following information, prepare BRS of Madhu traders as on Dec 31, 2018

    (i). Bank balance as for cash book Rs. 50,000

    (ii) Cheque issued but not presented for payment Rs.19,000

    (iii) Cheques deposited into bank but not credited up to Dec 31, 2018 Rs.10,600

    (iv) Bank credited Rs. 7,000 for receiving dividend through electronic clearing system.

    (v) Bank charges debited by bank Rs.400.

* * *

Code No. 2930/AICTE/M

FACULTY OF ENGINEERING

B.E. (ECE/M/P/AE)) (AICTE) IV – Semester (Main) Examination, December 2020

Subject: Industrial Psychology

Time: 2 Hours **Max.Marks: 70**

Note: (Missing data if, any can be assumed suitable)

PART – A

Answer any five questions. **(5 x 2 = 10 Marks)**

1 What is “Industrial Engineering”?

2 Define an “Organization”.

3 Mention “types of motivation”.

4 What are the human needs? Mention a theory regarding this.

5 What is “JOB SATISFACTION” and “JOB MOTIVATION”?

6 What are the effects of “Advertising”?

7 Define “Efficiency” at work.

8 What is “Fatigue” and “Boredom”?

9 What is “Pollution”? Indicate the types of pollution.

10 What are the human and monetary costs in accidents?

PART – B

Answer any four questions. **(4 x 15 = 60 Marks)**

11 a) Compare in a tabular form the various theories regarding organizations.

b) Define “span of control” and based on this classifying organizations.

12 a) List all the categories of human needs in their order of importance, and explain them.

b) How is an employee selected in an organization? Explain by means of block diagram?

13 a) How is as customer informed about a product manufactured by your company? Mention the effects of such action.

b) What do you understand by morale in industry? How can it be boosted?

14 a) Describe the “work curve”. What is the effect of working hours, on the performance of an employee in an industry?

b) Define a work environment. Which are the factors effecting it.

……2

15 a) What is the importance of training, placement and promotion to the career of an employee?

b) What is the importance of counselling, job satisfaction to an employee?

16 Why does one need to advertise? Mention the various modes of advertisement, their advantages and disadvantages.

17 a) What are the human factors considered while designing a product?

b) What is an accident? How can it be prevented? What are the human and economic costs of an accident?

****

Code No. 2948/AICTE/M

FACULTY OF ENGINEERING

B.E. (AICTE)(IT) IV – Semester (Main) Examination, December 2020

Subject: Operations Research

Time: 2 hours **Max. Marks: 70**

Note: (Missing data if, any can be assumed suitable)

PART – A

Answer any five questions. **(5 x 2 = 10 Marks)**

1. What are the advantages and limitations of Operations research models.
2. What is meant by a feasible solution of an LPP?
3. What is the significance of dual variables in a LP model?
4. State various steps involved in dual simplex algorithm.
5. What is assignment problem? Give two applications.
6. Explain the method to solve an unbalanced transportation problem.
7. What are the assumptions made in theory of games.
8. Describe some important replacement situations.
9. Define (a) Reneging (b) Balking (c) Jockeying
10. What is no passing rule in sequencing algorithm.

PART – B

Answer any four questions. **(4 x 15 = 60 Marks)**

11. (a) List the areas in which operations research technique can be applied.

    (b) Solve by graphical method.

    Max $Z = 5X_1 + 7X_2$

    STC $X_1 + X_2 \leq 4$

    $3X_1 + 8X_2 \leq 24$

    $10X_1 + 7X_2 \leq 35$

    $X_1, X_2 \geq 0$

12. (a) Define sensitivity analysis.

    (b) Use dual simplex method solve following LPP

    Min $Z = X_1+2X_2+3X_3$

    STC $X_1 – X_2 + X_3 \geq 4$

    $X_1 + X_2 + 2X_3 \leq 8$

    $X_2 – X_3 \geq 2$

    $X_1,X_2,X_3 \geq 0$

…..... 2

13. Obtain the optimum solution of the following transportation problem after getting a basic feasible solution by VAM.

	D1	D2	D3	D4	Supply
S1	5	2	4	3	60
S2	6	4	9	5	60
S3	2	3	8	1	90
Demand	50	65	65	30	

14. (a) Explain the theory of dominance in solving a given game.

(b) Solve the following game whose payoff matrix is given.

		B		
		I	II	III
A	I	-2	15	-2
	II	-5	-6	-4
	III	-5	20	-8

15. (a) Write a brief note on replacement.

(b) The cost per year of running a vehicle, whose purchase price is Rs.50,000 is given below. Running cost increases by Rs.2000, but resale value remains constant Rs. 2000. At what age is the replacement due.

Year	1	2	3	4	5	6	7
Running cost	5000	6000	7000	9000	11500	16000	18000
Resale Value	30000	15000	7500	3750	2000	2000	2000

16. (a) Explain the assumptions made in sequencing problems.

(b) A T.V repair man finds that the time spend on his job have an exponential distribution with mean of 30 minutes. If he repairs set in the order in which they come in and if the arrival of sets is approximately poisson with an average rate of 10 per 8 hour day, What is the repair man's expected idle time each day? How many jobs are ahead of the average set just brought in?

17. Write short notes on

(a) MPSO technique (b) Pure strategy in game theory.

* * *