

30.05.2024

(Total Marks: 80)

(Time: 3 Hours)

Note:

1. Question No.1 is compulsory.
2. Attempt any three out of the remaining Five questions.
3. Assume suitable data if necessary.

- Q. 1. Answer any FOUR of the following: (20)
- (a) Define Environmental Objective as per ISO 14001
 - (b) What are the challenges in implementation of ISO 14000 standards?
 - (c) Unawareness or ignorance of environmental protection will lead to detrimental consequence, comment. Justify the statement.
 - (d) Write short note on Global Warming as a Global Environmental Concern.
 - (e) Discuss on Applications of Environmental Management System..
 - (f) Discuss the key success factors for applied to almost all the operation for EMS implementation. (10)
- Q. 2. (a) What is Wafer (P & CP) Act? Give its objectives. (10)
- (b) Discuss in short about Environment Protection Act. (10)
- Q. 3. (a) Discuss roles of Government as regulatory agency for Environmental Management. Enlist 3 points. (10)
- (b) Explain limiting factors and carrying capacity as related to Ecosystems. (10)
- Q. 4. (a) What is Total Quality Environment Management Concept? (10)
- (b) How is CSR related to Environmental Management? Explain with an example. (10)
- Q. 5. (a) Elaborate the ISO-14001 EMS Model for Municipalities. (10)
- (b) Discuss in short about EMS certification. (10)
- Q. 6. Answer the following (20)
- (a) Discuss on Wildlife protection Act.
 - (b) What are the guidelines to conduct and Environmental audit?



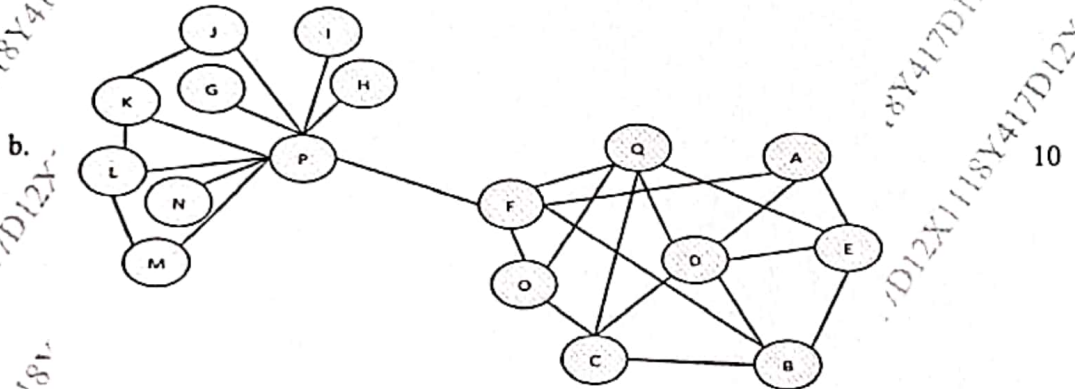
Duration: - 3 Hours

Marks: 80 Marks

- N.B. : (1) Question No 1 is Compulsory.
 (2) Attempt any three questions out of the remaining five.
 (3) All questions carry equal marks.
 (4) Assume suitable data, if required and state it clearly.

- Q.1 20
 a. What is predictive analytics? 5
 b. What is text analytics, and why it is useful? 5
 c. What is search engine analytics? 5
 d. Explain the steps needed to formulate a social media strategy. 5

- Q.2 a. Differentiate among social media, Web 2.0, and social network sites. 10
 How degree distribution is plotted for the graph? Show degree distribution of the following graph.



- Q.3 a. Explain Social Media Action Analytics, Common Social Media Actions and Actions Analytics Tools. 10
 b. Explain tools of Hyperlink Analytics. 10

- Q.4 a. List all the location analytics tools and also explain working of every tool. 10
 b. What is social media risk? Explain the four steps in social media risk management 10

- Q.5 a. Discuss various privacy attributes of Social Media Sites. 10
 b. What is Location analytics? Explain its significance in context of social media analytics? 10

- Q.6 Write short notes on any two 20
 a. Centralization in social media analytics with example.
 b. Challenges of social media analytics.
 c. Automated, Traditional and Social recommender systems.
 d. Social Media Risks Management Framework.



Time: 3 hours

Max. Marks: 80

Instructions:

- 1) Only Four question need to be solved.
- 2) All question carries equal marks.
- 3) Illustrate your answers with neat sketches wherever necessary.
- 4) Figures to the right indicate full marks.
- 5) Assume suitable additional data, if necessary and clearly state it.
- 6) All sub-questions of the same question should be grouped together.

- Q.1 (a) What is Evidence? Explain the various types of digital evidence. 05
(b) Discuss the significance of ICCID, IMSI, MSISDN and LAI. 05
(c) What are the potential challenges or limitations associated with conducting Windows registry analysis? 05
(d) Define digital forensics and explain its goal in detail. 05
- Q.2 (a) What constitutes a computer security incident? What objectives are pursued through incident response? Elaborate on the concept of CSIRT. 10
(b) What are the challenges of acquiring Volatile Memory (Live Acquisition)? Give the tools used for Acquiring Volatile Memory. 10
- Q.3 (a) What are the potential risks involved in hard drive imaging during digital forensic investigations? Explain. 10
(b) How does Autopsy utilize advanced file carving techniques to recover deleted or fragmented files? 10
- Q.4 (a) Explain the process of conducting a static acquisition of digital evidence from a storage device. 10
(b) Explain in detail the process of reviewing pertinent logs in Unix systems investigation. 10
- Q.5 (a) How does forensic analysis of Microsoft Edge differ from other Web browsers, such as Google Chrome or Mozilla Firefox? 10
(b) What is GPS forensic? Explain the structure of the GPS device. Explain GPS Exchange Format (GPX). 10
- Q.6 (a) What is data carving, and how does it contribute to digital forensic investigations? 10
(b) Explain what SIM cards Forensics means. Explain the SIM architecture and file structure. Explain evidence extraction in SIM card forensics. 10

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B.E / comp / sem - VIII / May, 2024

Date: - 14-05-2024

Duration: 3Hrs

[Max Marks: 80]

- N.B.: (1) Attempt any four questions
(2) All questions carry equal marks
(3) Assume suitable data, if required and state it clearly

- Q1 A Explain any five data centric consistency models with example data stores. [10]
B Explain different load estimation policies and process transfer policies used in load balancing approach of distributed system. [10]
- Q2 A What is Remote Procedure Call? Describe the working of RPC in detail. [10]
B Explain Bully election algorithm. [10]
- Q3 A Discuss design and implementation issues of distributed shared memory. [10]
B What are desirable features of a good DFS? [10]
- Q4 A Discuss various issues and goals related to design of distributed system. [10]
B What is distributed mutual exclusion? Explain how Suzuki-Kasami's broadcast algorithm achieves distributed mutual exclusion. [10]
- Q5 A What is need of code migration? Explain the role of process to resource and resource to machine binding in code migration. [10]
B Explain various file caching schemes. [10]
- Q6 A What is physical clock? Explain any one physical clock synchronization method. [10]
B What is fault tolerance? Describe different types of failure models. [10]



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Paper / Subject Code: 53386 / Environmental Management (HAC - II)

B.E / Mech / Sem - VIII / May - 2024

30-05-2024

(Time: 3 Hours)

(Total Marks: 80)

Note:

1. Question No.1 is compulsory
2. Attempt any three out of the remaining Five questions.
3. Assume suitable data if necessary.

- Q. 1. Answer any FOUR of the following: (20)
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 - (b) What are the challenges in implementation of ISO 14000 standards?
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 - (e) Discuss on Applications of Environmental Management System.
 - (f) Discuss the key success factors for applied to almost all the operation for EMS implementation.
- Q. 2. (a) What is Water (P & CR) Act? Give its objectives. (10)
- (b) Discuss in short about Environment Protection Act. (10)
- Q. 3. (a) Discuss roles of Government as regulatory agency for Environmental Management: Enlist 3 points. (10)
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Time: 3 hour

Max. Marks: 80

Note-

1. Question one is compulsory.
2. Solve any three out of remaining five.

Q.1 Explain any four of the following. 20

- a Definition of Product quality and service quality.
- b Significance of Quality management
- c Draw diagram Root-cause analysis
- d List out Barriers to TQM work
- e Explain Win -Win policy with supplier.

Q.2 a The data shows the sample mean and range for 10 samples for size 5 each. Find the control limits for mean chart and range chart. 10

Sample	1	2	3	4	5	6	7	8	9	10
Mean	21	26	23	18	19	15	14	20	16	10
Range	5	6	9	7	4	6	8	9	4	7

Q.3 a Explain Quality management system certification process 10
 b Explain Six sigma definition, concept and methodology 10
 b Explain various steps involves implementing TQM in manufacturing industries with case study 10

Q.4 a What is ISO 9000? Explain ISO 9000 system implementation process. 10
 b Describe the contribution of Taguchi to quality management. 10

Q.5 a Explain the purpose of giving Malcom Baldrige quality award. 10
 b Explain the following charts 10
 (i) Producer risk
 (ii) Consumer risk
 (iii) AQL
 (iv) LTPD

Q6 a 1.Explain the Barriers of TQM 5
 2. Write note on cost of quality 5
 b What is BPR concept? List out the process involves in the BPR concept implementation 10

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BE/Mech/Sem-VIII/May-2024

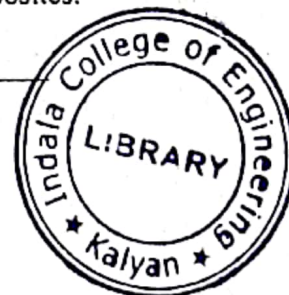
Date: - 24.05.24

Time: 3 hours

Marks: 80

- Note: 1. Assume suitable data if necessary
2. Figures to the right indicate full marks
3. Question No. 1 is compulsory
4. Solve any three out of the remaining five questions

- Q1. Solve any four
- | | | |
|---|--|---|
| A | Write short note on scope of composite materials in various sectors. | 5 |
| B | Explain the stiffness and compliance matrix for Isotropic and Anisotropic materials. | 5 |
| C | Explain the Plain stress assumption for composite lamina | 5 |
| D | Write short note on Strength ratio | 5 |
| E | Explain with suitable examples various criteria for composites repair works. | 5 |
| F | Explain with neat sketch various the levels of a generic repair design. | 5 |
- Q2.
- | | | |
|---|--|----|
| A | Derive an expression of Hook's law for a 2D Unidirectional lamina. | 10 |
| B | Explain with neat diagram the working of hand lay-up method for composite materials with advantages and disadvantages. | 5 |
| C | Write short note on Powder metallurgy route for ceramic and metal matrix composites | 5 |
- Q3.
- | | | |
|---|--|----|
| A | Differentiate between Resin Transfer Moulding and Vacuum Infusion techniques for composite manufacturing on the basis of diagram, set-up, operation, advantages, disadvantages and applications. | 10 |
| B | Write short note on surface preparation for composites. | 5 |
| C | Illustrate with neat sketch the matrix cracks repair method in composites. | 5 |
- Q4.
- | | | |
|---|--|----|
| A | Derive an expression of failure criteria with failure envelope according to Maximum Stress theory. | 10 |
| B | Illustrate with neat sketch the ultrasonic method of inspection for composites. | 5 |
| C | Explain the laminates codes of [0/-45/70/-45/0] and [0/45/-30]s | 5 |
- Q5.
- | | | |
|---|--|----|
| A | Differentiate between the passive and active methods of thermography inspection based on principle, construction, working, pros and cons of methods. | 10 |
| B | Explain Tsai-Hill failure theory for 2D composite lamina | 5 |
| C | Illustrate with neat sketch of autoclave technique for composites preparation | 5 |
- Q6.
- | | | |
|---|---|----|
| A | Classify and briefly elaborate various types of defects may occur in composite parts. | 10 |
| B | Explain repair techniques for Delaminations in composites. | 5 |
| C | Explain various types of laminates with their codes. | 5 |



BE/ Mech/ sem VIII / May 2024 Date: - 14.05.24

Duration: 3 Hours

Total Marks: 80

1. Question 1 is Compulsory
2. Attempt any three questions out of the remaining five.
- 3.. All questions carry equal marks
- 4.. Assume suitable data, if required and state it clearly.

Q 1 Answer any four questions

20

1. Draw Production systems line sketch and list out production system components
2. List out Production planning and control functions
3. Explain Product Life cycle with diagram
4. Explain various terms associated with line balancing.
5. Write notes on MRP flow chart
6. Explain the objectives of Facility planning.

2 a) A company manufactures the consumer durable products and the company intends to develop an aggregate plan for six months starting from January through June. The following information is available.

10

Month	Jan	Feb	Mar	Apr	May	Jun
Demand	500	600	650	800	900	800
Working days	22	19	21	21	22	20

Cost Details

Materials Rs. 100/unit, Inventory carrying cost - Rs. 10/unit/month,
 Cost of stock out Rs. 20/unit/month, cost of subcontracting Rs.200/unit,
 Hiring and training cost Rs. 50/worker, Lay off cost Rs.100/ worker,
 Labor hours required Rs. 4/unit, Regular time cost (for first 8hours) Rs.12.50/-per hour
 Over time cost Rs.18.75/- Per hour, Beginning inventory 200 units. Safety stock required -Nil

Work out the cost of the constant work force - Varying inventory and allow shortages Strategy

Q2 b) Define (i) Design capacity (ii) System capacity (iii) Installed capacity (iv) Licensed capacity (v) Rated capacity

10

Q3 a) Define process design and explain the framework of process design by means of a block diagram?

10

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Q3 b) The following data refers to the past sales of one product. 10

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Sales in Lakhs	3.9	5.4	6.2	7.3	8.5	10	9.5	10.5	12

Use Least square method and estimate sales forecasting of year 2024

Q4 A) Seven jobs are to be processed through three machines A, B and C in the sequence ABC. The processing times are given in hrs to process each one of the jobs through all the three machines. Find the optimal sequence of the jobs that minimizes the total elapsed time and find idle time associated with machines B and C 10

Jobs	J1	J2	J3	J4	J5	J6	J7
A	3	8	7	4	9	8	7
B	4	3	2	5	1	4	3
C	6	7	5	11	5	6	12

Q4 B) Explain the various terms associated with MRP. Explain the steps of creating MRP master schedule with any end item X. 10

Q5 A) 4.) A small project is composed of time activities whose time estimates are given below 10

Activity	A	B	C	D	E	F	G	H	I
t_o	2	2	4	2	2	3	2	5	3
t_m	2	5	4	2	5	6	5	8	6
t_p	8	8	10	2	14	15	8	11	15

Optimistic time, t_o Most likely time, t_m Pessimistic time, Activity A, B and C can start simultaneously. Activity D follows activity A while E follows B. Activity D and E are followed by activity G while F is dependent on C, H depends on D and E While I depends on F and G (i) Construct the network diagram (ii) determine Expected time and variance (iii) What is the critical path and expected project duration of the project

Q5 B) Define plant layout? What are the various types of layout? Explain the application of each layout 10

Q6 (A) Explain ERP modules for operation planning and materials management 10

Q6 B) Explain Agile Manufacturing systems with block diagram and features compare with other production system 10

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