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END SEMESTER EXAMINATION, JUNE- 2024**Course Name: Principles of Management****B. Tech. (CSE) Semester – VI****Course Code: HMG361****Time allotted: 03 Hours****Max. Marks: 100****Note: Read all the instructions carefully.****Q.1. Attempt all.****(10×2=20)****CO**

- Describe the 'paired comparison' method in performance appraisal.
- Define 'group dynamics' in an organizational context.
- What is a 'forced distribution' method in performance appraisal?
- Explain what 'worker participation in management' means.
- Describe one method of non-verbal communication used in business.
- Analyze the role of a personnel Manager in conflict resolution?
- Discuss the importance of feedback in performance appraisal?
- Define the term 'job satisfaction'.
- What is the main objective of training in an organization?
- Define the term 'management by objectives'.

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2**Q.2. Attempt any five out of Seven.****(5×4=20)****CO**

- How does e-learning contribute to employee training and development?
- Describe the advantages of on-the-job training over traditional training methods.
- Explain how simulation and role-playing can be effective training methods.
- Explain the role of performance appraisals in improving employee motivation?
- Discuss the impact of group discussions and brainstorming in decision-making.
- Discuss the significance of mentoring and coaching in employee development.
- Describe the difference between training and development, analyzing their distinct roles in an organization.

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4**Q.3. Attempt any three out of four.****(3×10=30)****CO**

- What is organizational behavior and how do individual determinants like personality and attitudes influence it?
- Discuss the impact of perception and learning on employee behavior in the workplace. How do these factors affect organizational outcomes?
- What is performance appraisal? Discuss its role in enhancing employee performance and motivation.
- Define Manpower Planning. Explain the various steps involved in the process of manpower planning.

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5**Q.4. Attempt any two out of three.****(2×15=30)****CO**

- Your organization is undergoing rapid expansion, including new technology adoption for business processes, focusing on automation of task and integrating IOT devices for enhancing productivity, changing the traditional methods of operation. Evaluate and describe how you would modify the existing Human Resource Planning process to accommodate this growth.
- Discuss the challenges and opportunities of implementing a performance management system in a diverse and dynamic workforce.
- Discuss the impact of effective communication strategies in conflict resolution within an organization, evaluating their impact on resolving workplace conflicts.

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END SEMESTER EXAMINATION, JUNE- 2024**B. Tech. (CSE) Semester – VI****Course Name: Computer Networks****Course Code: CCS364****Time allotted: 03 Hours****Max. Marks: 100****Note: Read all the instructions carefully.****Q.1. Objectives Type****(Very short/ Short Answer, MCQ, One-liners, Fill in the Blank, True/ False) Attempt all. (10×2=20)**

a	What is a MAC address?	CO1	PO1
b	Define the Data Link Layer in a computer network.	CO2	PO1
c	What is role of UDP?	CO4	PO1
d	Describe the purpose of error detection in the Data Link Layer.	CO2	PO3
e	What is role HTTP?	CO5	PO1
f	What is Subnetting?	CO3	PO1
g	What is DES?	CO5	PO3
h	Define IP address and its importance in networking.	CO3	PO2
i	What is the purpose of a computer network?	CO1	PO1
j	What is cryptography?	CO5	PO2

Q.2. Short notes / Short Answer Type (Attempt any five out of Seven)**(5×4=20)**

a.	What is computer network and explain its types?	CO1	PO1
b.	What is router? Explain the link state routing protocols.	CO3	PO3
c.	Could you explain what transmission modes are and how they work?	CO1	PO1
d.	Explain flow control.	CO2	PO2
e.	Write function and working of FTP and HTTP.	CO5	PO1
f.	Write a short note on point to point network.	CO4	PO1
g.	Write a short note on ALOHA.	CO2	PO2

Q.3. Structured Question (Attempt any three out of four)**(3×10=30)**

a.	What is ATM? Draw UNI cell Format and NNI cell format. Explain ATM layer?	CO1	PO3
b.	What is DES? Explain the types of DES. Describe the triple DES.	CO5	PO3
c.	What is the role of CMSA? How many types in use in CMSA? Explain p-Persistent.	CO2	PO1
d.	What do understand by transmission media? Write a short note on unguided media? If you were to favor optical fiber over copper wire, why would that be the case?	CO1	PO1

Q.4. Long Answer / Essay type (Attempt any two out of three)**(2×15=30)**

a.	(i) Explain in detail about network and its types with example. (ii) Explain encoding methods. What is difference in RZ and NRZ?	CO1	PO1
b.	(i) What is network security and also describes encryption techniques. (ii) Explain E-mail and its working with the advantage and disadvantage of E-mail. And what is role of SMTP and POP in E-mail.	CO5	PO3
c.	(i) Explain CDMA and CDMA\CD. (ii) In GB4, if every 6th packet being transmitted is lost and if we have to spend 10 packets then how many transmissions are required?	CO2	PO2

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END SEMESTER EXAMINATION, JUNE- 2024

B. Tech. (CSE) Semester – VI

Course Name: Data Base Management System

Course Code: CCS243

Time allotted: 03 Hours

Max. Marks: 100

Note: Read all the instructions carefully.

Note: Attempt all Sections & Questions.

Section (A)

Q. 1. Attempt all questions.

(10 x 2 = 20)

- a. List the limitations of DBMS.
- b. Write two DDL commands of SQL.
- c. Define the term data and information.
- d. Define Durability in transaction.
- e. Define functional dependency
- f. Differentiate between Super key and a candidate key.
- g. What do you mean by relation?
- h. Explain alter command in SQL with example.
- i. Define redundancy.
- j. Define First Normal Form.

Section (B)

Q. 2. Attempt any 5 questions.

(5x7 = 35)

- a. Define the term Specialization, Generalization with example.
- b. Discuss about different types of Data models?
- c. What is join? Explain different type of join with different example.
- d. Construct an E-R diagram for Library Management System. Clearly highlight the entities, relationships, primary key and the constraints.
- e. Illustrate Join dependencies and Fifth normal form with example?
- f. What is a Schedule? Write differences between serial and serializable Schedule.
- g. Define all the properties of Transactions with the help of examples

Section (C)

(3 x 15 = 45)
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Attempt any 3 questions.

Q. 3. a. Write SQL queries for the following -

Employee (e_id, e_name, e_city, e_sal)

- i) Add new column age to Employee.
- ii) Retrieve all records for employee who belongs to a particular city.
- iii) Assign value to age for each record.
- iv) Change e_sal of all employee to 30000 if e_sal range between 25000 to 30000.
- v) Write a query to find the e_sal citywise.

b. What do you mean by View serializable Transactions?

Q. 4. a. Explain different types of database users and write the functions of DBA?

b. What do you mean by constraints in relational model? With the help of suitable example, explain all types of constraints.

Q. 5. a. Consider the following set of FD in schema R

$A \rightarrow BC$

$CD \rightarrow E$

$B \rightarrow D$

$E \rightarrow A$

Find the prime & non-Prime attributes of R.

b. Describe the first and second normal form with the help of an example.

Q. 6. a. Illustrate different set operations in Relational algebra with an example?

b. What do you mean by concurrent transaction? How Share and exclusive locks differ? Explain.

Q. 7. a. Define the terms:

I. Data Consistency

II. Data Integrity

III. Schema.

b. Discuss the various type of join operations? Why these are join required.

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END SEMESTER EXAMINATION, JUNE- 2024**B. Tech. (CSE) Semester - VI****Course Name: Compiler Design****Course Code: CCS362****Time allotted: 03 Hours****Max. Marks: 100****Note: Read all the instructions carefully.****Q.1. Objectives Type****(Very short/ Short Answer, MCQ, One-liners, Fill in the Blank, True/ False) Attempt all. (10×2=20)**

		CO	PO
a.	Describe the role of lexical analysis in compiler design.	1	1
b.	Explain about Language Processor in compiler Design.	1	1
c.	List the various error recovery strategies for a lexical analysis.	2	2
d.	The postfix form of $A*B + C/D$ is.....	2	2
e.	Does the compiler program translate the whole source code in one step? YES / No	2	1
f.	Which tool is used for grouping of characters in tokens in the compiler? (a) Parser (b) Code optimizer (c) Code generator (d) Scanner	4	1
g.	Which derivation is generated by the bottom-up parser? (a) Right-most derivation in reverse (b) Left-most derivation in reverse (c) Right-most derivation (d) Left-most derivation	2	2
h.	Which parser is most powerful in the following parsers? (a) Operator Precedence (b) SLR (c) Canonical LR (d) LALR	2	1
i.	Which graph describes the basic block and successor relationship? (a) Control graph (b) DAG (c) Flow graph (d) Hamilton graph	4	1
j.	When is type checking done? (a) During lexical analysis (b) During syntax-directed translation (c) During syntax analysis (d) During code optimization	3	1

Q.2. Short notes / Short Answer Type (Attempt any five out of Seven) (5×4=20)

a.	Differentiate compiler and interpreter.	1	1
b.	Differentiate between top down and bottom-up parsing techniques.	2	1
c.	Eliminate immediate left recursion for the following grammar: $E \rightarrow E+T \mid T$ $T \rightarrow T * F \mid F$ $F \rightarrow (E) \mid id$	2	2
d.	Define left most derivation and right most derivation with example.	2	1
e.	Explain intermediate code representations.	4	1
f.	Explain various storage allocation strategies with examples.	3	1
g.	Write the principal sources of optimization.	5	1

P.T.O/-

Q.3. Structured Question (Attempt any three out of four)

(3×10=30)

a.	Translate the following expression: $(a + b) * (c + d) + (a + b + c)$ into (i) Quadruples (ii) Triples	4	1
b.	(i) Illustrate loop optimization with suitable example. (ii) Explain machine dependent and machine independent optimization.	5	1
c.	(i) Explain about Global data flow analysis. (ii) Define Symbol table. Explain different types of Data structure for symbol table.	5	2
d.	(i) Construct the DAG for following statement. $a+b*c+d+b*c$. (ii) Give the applications of DAG.	3	1

Q.4. Long Answer / Essay type (Attempt any two out of three)

(2×15=30)

a.	Discuss about the following: (i) Copy Propagation (ii) Dead code Elimination (iii) Code motion	5	1
b.	(i) Construct the DAG for the following basic blocks- 1. $t1 := 4*i$ 2. $t2 := a[t1]$ 3. $t3 := 4*i$ 4. $t4 := b[t3]$ 5. $t5 := t2*t4$ 6. $t6 := prod + t5$ 7. $prod := t6$ 8. $t7 := i + 1$ 9. $i := t7$ 10. if $i \leq 20$ goto 1 (ii) Construct CLR parse table for grammar: $S \rightarrow L = R \mid R$ $R \rightarrow L$ $L \rightarrow *R \mid id$	4	1
c.	(i) Write a note on bootstrapping. (ii) Explain the role of symbol table in various phases of compiler.	2	1

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END SEMESTER EXAMINATION, JUNE- 2024**B. Tech. (CSE) Semester – VIII/B. Sc. (Hons.) in Data Science Semester – VI****Course Name: Entrepreneurship Development****Course Code: OCS483/GDS362****Max. Marks: 100****Time allotted: 03 Hours****Note: Read all the instructions carefully.****Q.1 VERY SHORT ANSWER QUESTIONS (write a short note)– Attempt All. (10x2 = 20 Marks)**

a.	Creativity	CO1
b.	Slack	CO1
c.	Sole Proprietorship	CO1
d.	Critical activities	CO1
e.	Industry attractiveness	CO1
f.	Product focus	CO1
g.	Trend analysis	CO1
h.	Problem solving	CO1
i.	Trends	CO1
j.	Innovation	CO1

Q.2 SHORT ANSWER QUESTIONS – Attempt any Five. (5x4 = 20 Marks)

Q.2 SHORT ANSWER QUESTIONS – Attempt any Five.							CO1
a.	What are major ways of identifying opportunities for new business idea?						CO2
b.	Elaborate on characteristics of successful entrepreneurs.						CO2
c.	How does entrepreneurs impact society in general?						CO2
d.	How entrepreneur perform competitive analysis?						CO3
e.	For following project cashflow given determine the NPV for the discount rate of 10%.						CO3
	Option	Investment (Rs.)	Year 1	Year 2	Year 3	Year 4	
	A	350,000	50,000	90,000	120,000	60,000	
f.	What are various government policies that assist for entrepreneur development?						CO5
g.	What are major factors of failure of entrepreneurship?						CO5

Q.3 STRUCTURED QUESTIONS – Attempt any Three. (3x10 = 30 Marks)

a.	What various business models an entrepreneurs can apply for new business?	CO4
b.	Explain the term entrepreneurship and elaborate more on entrepreneurship development process.	CO2
c.	What are various legal ways of forming new business?	CO3
d.	Mr. Harsh has started a pilot project of renting bicycles in area near university. He had developed miniature cycle tracking and prepaid device to control the usage of bicycle. From last six months the feedback from user is positive and Mr. Harsh is willing to expand his business at other nearby university but is worried about funds for expansion. Assist him regarding what are various ways of arranging finance for his enterprise.	CO3

P.T.O./-

Q.4	Case Analysis/ Situation Based QUESTIONS – Attempt any Two.	(2x15 = 30 Marks)
a	Automated Order-picking system at Coleman Inc. R. C. Coleman distributes a variety of food products that are sold through grocery store and supermarket outlets. The company receives orders directly from the individual outlets, with a typical order requesting the delivery of several cases of anywhere from 20 to 50 different products. Under the company's current warehouse operation, warehouse clerks dispatch order- picking personnel to fill each order and have the goods moved to the warehouse shipping area. Because of the high labor costs and relatively low productivity of hand order-picking, management has decided to automate the warehouse operation by installing a computer-controlled order-picking system, along with a conveyor system for moving goods from storage to the warehouse shipping area. First the team has to determine equipment needs according to the space available and material nature to be handled. This activity might take on an average 1 week to complete through a consultant. Depending on equipment needed the proposals will obtained from various vendors. The proposal gathering will take 2 weeks. After proposal evaluation and negotiation process vendor will be selected for the ordering system. Due to negotiation process the vendor selection might take next 3 weeks to complete. As per vendor analysis the order will be placed for the computer systems and equipment and its will take 4 weeks to receive the system. After vendor selection, vendor simultaneously works on the design of the new warehouse layout (1 week) design of computer interface (2 weeks). After designing the warehouse, the complete warehouse will be rearranged and remodeled to equip the automated ordering system. This will take around 5 weeks. As soon as system is received, completion of warehouse design, and computer interface design, the vendor starts working on installing and synchronizing the complete system (3 weeks). The testing department of vendor then conduct testing on system (1 weeks). After successful testing, the operators are trained on various aspects and modules of the system (2 weeks) and then system is handed over to company. I. Develop precedence relationship table with duration. (Assign Alphabets to the activities). II. Draw a network diagram for this project. Identify all the paths through the network diagram. III. Also develop the Earliest and Latest schedule for the activities. Determine the critical path and project completion time. IV. Write a small report on schedules of the activities, when to be started earliest, by how much the activity can be delayed.	CO 2
b	Miss. Neha has an idea for a unique android application for tourist which will provide detail weather reports and current situation of most visited places. Explain how should she perform the fesibility analysis of her idea	CO4
c	Two graduates form SRHU are planning to implement their idea for a unique android application for tourist which will provide detail weather reports and current situation of most visited places in Uttarakhand. Develop detailed Business plan for their idea.	CO5
