

Printing Page : 1

Paper Code : PCS - 303

(A) SVSU : 2025-26/R

Enrollment No.

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Diploma in Engineering (CSE)
II YEAR, IIIrd SEMESTER EXAMINATION
COMPUTER NETWORK

[Time : 3 Hours]

[Max. Marks : 60]

- i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।
- ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।
- iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।

Ques.1	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a computer network? Explain its advantages.	
(b)	Describe different types of computer networks.	
(c)	What is the Internet? How does it work?	
Ques.2	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain the OSI model and its layers.	
(b)	Compare OSI and TCP/IP models.	
(c)	What is a protocol? Why is it important in networking?	
Ques.3	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain the role of the Physical layer in networking.	
(b)	Describe the Data Link layer and its functions.	
(c)	What does the Network layer do? Explain with examples.	
Ques.4	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is the Transport layer? Differentiate between TCP and UDP.	
(b)	Explain the functions of the Session layer.	
(c)	Describe the Presentation layer and its importance.	
Ques.5	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is the Application layer? Give examples of protocols used here.	
(b)	What is an IP address? Explain IPv4 addressing.	
(c)	What is the difference between IPv4 and IPv6?	
Ques.6	Write short notes on any four of the following: निम्नलिखित में से किन्हीं चार पर संक्षिप्त टिप्पणियाँ लिखें।	(4X2.5=10)
(a)	Define wireless networking.	
(b)	What is Wi-Fi?	
(c)	What are the common network cables used?	
(d)	What is a subnet mask?	
(e)	Explain the purpose of a gateway.	
(f)	What is network troubleshooting?	

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Diploma in Engineering (CSE)
II YEAR, IIIrd SEMESTER EXAMINATION
DATABASE MANAGEMENT SYSTEM

[Time : 3 Hours]

[Max. Marks : 60]

i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।		
ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।		
iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।		
Ques.1	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain the role of a Database Administrator (DBA).	
(b)	Describe different types of database users.	
(c)	What is data independence? Explain logical and physical data independence.	
Ques.2	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Draw and explain an ER diagram for a student management system.	
(b)	Explain the process of converting an ER model into a relational model.	
(c)	What are generalization and specialization in ER modeling?	
Ques.3	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is SQL? Explain its components (DDL, DML, DCL, TCL).	
(b)	Write SQL queries to create, insert, update, and delete records in a table.	
(c)	Explain the use of aggregate functions and GROUP BY clause in SQL.	
Ques.4	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is recovery in DBMS? Explain different recovery techniques.	
(b)	Explain checkpoint and log-based recovery in DBMS.	
(c)	What is cascading rollback? How can it be avoided?	
Ques.5	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a shadow paging technique in DBMS?	
(b)	What is a join? Explain different types of joins with examples.	
(c)	Explain aggregation in ER model with an example.	
Ques.6	Write short notes on any four of the following: निम्नलिखित में से किन्हीं चार पर संक्षिप्त टिप्पणियाँ लिखें।	(4X2.5=10)
(a)	What is a JOIN operation in SQL? Mention its types.	
(b)	Write an SQL query to display students with marks greater than 80.	
(c)	Explain aggregate functions in SQL with examples.	
(d)	Differentiate between 1NF and 2NF	
(e)	What are anomalies in DBMS? List their types.	
(f)	What is the purpose of normalization in database design?	

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DIPLOMA IN ENGG. (CSE)
II YEAR, III SEM. EXAMINATION
DIGITAL ELECTRONICS

[Time : 2:30 Hours]

[Max. Marks : 50]

Note/Instructions: Additional sheets may be used, if required.**i. Attempt all questions as per given instructions.** दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।**ii. Marks are indicated against each section.** प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।**iii. Assume missing data if any.** अनुपस्थित डेटा मान लें यदि कोई हो।

Ques.1	Answer ANY TWO of the following questionsनिम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Write down the application of Flip Flop? फ्लिप फ्लॉप के आवेदन को लिखिए?	
(b)	Write a Short note on Register and Explain Parallel Input Serial Output with the help of diagram? डायग्राम की सहायता से रजिस्टर और समानांतर इनपुट सीरियल आउटपुट पर एक संक्षिप्त नोट लिखें?	
(c)	Write down the Application and advantages of digital signal processing. डिजिटल सिग्नल प्रोसेसिंग के अनुप्रयोग और लाभ लिखिए।	
Ques.2	Answer ANY TWO of the following questionsनिम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Differentiate Between Synchronous and Asynchronous Counter?तुल्यकालिक और अतुल्यकालिक काउंटर के बीच अंतर?	
(b)	Design AND, OR, NOT gate by the help of NAND and NOR gate.NAND और NOR गेट की मदद से AND, OR और NOT गेट को डिजाइन कीजिये।	
(c)	Find the Expression using K-Map? a). $A'B'CD+AB'C'D+ABC'D'+A'BC'D$ b). $A'BC'D+A'BCD'+A'B'C'D+AB'C'D'+A'B'C'D'+ABCD$ के मैप का उपयोग कर अभिव्यक्ति का पता लगाएं? $A'B'CD+AB'C'D+ABC'D'+A'BC'D$ $A'BC'D+A'BCD'+A'B'C'D+AB'C'D'+A'B'C'D'+ABCD$	
Ques.3	Answer ANY TWO of the following questionsनिम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain Half Adder with the help of diagram and find out the expression of Sum and Carry? आरेख की सहायता से हाफ अड्डर की व्याख्या करें और सम और कैरी की अभिव्यक्ति का पता लगाएं?	
(b)	Explain 3 bit ripple Counter (UP COUNTER)?3 बिट रिपल काउंटर (UP COUNTER) की व्याख्या करें?	
(c)	Explain D Flip Flop with the help of diagram?आरेख की सहायता से D Flip Flop की व्याख्या करें?	
Ques.4	Answer ANY TWO of the following questionsनिम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain Binary Weighted type Analog to Digital Converter with the help of Circuit Diagram? सर्किट डायग्राम की सहायता से बाइनरी वेटेड टाइप एनालॉग टू डिजिटल कन्वर्टर बताएं?	
(b)	Draw and Explain Multiplexer with the help of diagram?आरेख की सहायता से मल्टीप्लेक्स को ड्रा और समझाएं?	
(c)	Convert the following numbers.दिए गए नंबरों को परिवर्तित करें। (i) $(749)_{10} = (?)_8$ (ii) $(356)_{10} = (?)_{16}$ (iii) $(42)_{10} = (?)_2$ (iv) $(82)_8 = (?)_{16}$ (v) $(111101)_2 = (?)_{10}$	
Ques.5	Answer ANY TWO of the following questionsनिम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain the SSI,MSI,LSI and VLSI.एसएसआई, एमएसआई, एलएसआई और वीएलएसआई की व्याख्या करें।	
(b)	Find 2's Complement of the given number.दिए गए नंबर का 2's Complement ज्ञात कीजिये। i) 110110 ii) 011010	
(c)	Implement the Boolean function by using basic logic gates. Basic लॉजिक गेट्स का उपयोग करके बूलियन फंक्शन को Implement करें। $F = A'B + AB' + A'B'$	

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Diploma in Engineering (CSE)
II YEAR, IIIrd SEMESTER EXAMINATION
OPERATING SYSTEM

[Time : 3 Hours]

[Max. Marks : 60]

i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।		
ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।		
iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।		
Ques.1	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What are the different types of Operating Systems? Explain each with examples.	
(b)	Explain the concept of system calls in Operating Systems.	
(c)	What are kernel and shell? Differentiate between them.	
Ques.2	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain long-term, short-term, and medium-term schedulers.	
(b)	Explain various CPU scheduling algorithms with examples.	
(c)	Compare preemptive and non-preemptive scheduling.	
Ques.3	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is the Banker's Algorithm? Explain its working with an example.	
(b)	How can deadlock detection and recovery be performed?	
(c)	Explain the concept of thrashing and how it can be avoided.	
Ques.4	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain demand paging with a suitable example.	
(b)	What are page replacement algorithms? Explain FIFO and LRU algorithms.	
(c)	Compare paging and segmentation.	
Ques.5	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain file access methods in detail.	
(b)	What are disk scheduling algorithms? Explain any two.	
(c)	Explain I/O system management in Operating Systems.	
Ques.6	Write short notes on any four of the following: निम्नलिखित में से किन्हीं चार पर संक्षिप्त टिप्पणियाँ लिखें	(4X2.5=10)
(a)	Define deadlock.	
(b)	What is virtual memory?	
(c)	What is the purpose of a file system?	
(d)	What is a scheduler?	
(e)	Define context switching.	
(f)	What is the difference between preemptive and non-preemptive scheduling?	

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(A) (SVSU) : 2023-2024/R

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DIPLOMA IN ENGG. (CS)
II YEAR, III SEM. EXAMINATION
DATA COMMUNICATION AND COMPUTER NETWORK

[Time : 2:30 Hours]

[Max. Marks : 50]

Note/Instructions: Additional sheets may be used, if required.

i) Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।		
ii) Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।		
iii) Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।		
Ques.1	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What is the internet address , explain class A ,class B and class C with diagram ?	
(b)	What is the WAN?	
(c)	What is the OSI model ,explain with diagram ?	
Ques.2	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What is topology .explain any two with diagram and advantage ?	
(b)	What is the WWW and also explain bus topology with advantage and disadvantage ?	
(c)	Explain difference between IPV4 and IPV6?	
Ques.3	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What is the half duplex mode explain with example ?	
(b)	What is the TCP/IP model ,explain ?	
(c)	What is the MAN explain with example ?	
Ques.4	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What is the TDM and FDM ?	
(b)	What is the star topology explain with advantage and disadvantage ?	
(c)	Explain about HTTP,SMTP and UDP protocol ?	
Ques.5	Answer ANY TWO of the following questions	(5X 2=10)
(a)	Explain LAN with example ?	
(b)	Explain about router ,Hub ,repeater and gateway ?	
(c)	What is the difference between TCP and UDP?	

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DIPLOMA IN ENGG. (CSE)
II YEAR, III SEM. EXAMINATION
DATA STRUCTURE USING C

[Time : 2:30 Hours]

[Max. Marks : 50]

Note/Instructions: Additional sheets may be used, if required.

i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।		
ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।		
iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।		
Ques.1	Answer ANY TWO of the following questions	(5X 2=10)
(a)	Explain different types of asymptotic notations.	
(b)	Difference between complexity and algorithm?	
(c)	Define the following:- (a) Similar tree and copies of tree (b) Parent and siblings	
Ques.2	Answer ANY TWO of the following questions	(5X 2=10)
(a)	Write an algorithm for bubble sort.	
(b)	What is data structure and define linear and non linear data structure?	
(c)	What is the Representation of array in memory?	
Ques.3	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What is AVL search tree? Define any one type of rotation.	
(b)	conversion of infix into postfix without using stack $A+(B-(C*D \uparrow F/G)+H)/I$	
(c)	What are trees? Explain about the representation of trees.	
Ques.4	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What do you understand by garbage collection?	
(b)	Write algorithm to convert infix expression into postfix expression using stack.	
(c)	What is queue? Also define its operations.	
Ques.5	Answer ANY TWO of the following questions	(5X 2=10)
(a)	What is BST explain with the help of an example?	
(b)	Consider the following list of elements – C,S,T,U,A,B,W,Z,R,Y,D Create a three way search tree.	
(c)	Consider the following list of elements in a queue:- (I) Delete 2 elements (II) Insert E, F (III) Delete 1 element (IV) Insert G, H Suppose the position of front =0 and rear =3.	

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(B) SVSU : 2025-26/R

Enrollment No.

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Diploma in Engineering (CSE)
II YEAR, IIIrd SEMESTER EXAMINATION
COMPUTER NETWORK

[Time : 3 Hours]

[Max. Marks : 60]

i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।

ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।

iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।

Ques.1	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a MAC address? How is it different from an IP address?	
(b)	Explain subnetting and its purpose.	
(c)	What is a subnet mask? How is it used?	
Ques.2	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Describe the function of a router in a network.	
(b)	What is a switch? How does it differ from a hub?	
(c)	Define network topology and explain star topology.	
Ques.3	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What are the advantages and disadvantages of bus topology?	
(b)	Explain ring topology with an example.	
(c)	What is the difference between client-server and peer-to-peer networks?	
Ques.4	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Describe the concept of packet switching.	
(b)	What is circuit switching? Compare it with packet switching.	
(c)	What is a firewall? Explain its purpose in a network.	
Ques.5	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Define VPN (Virtual Private Network) and its benefits.	
(b)	Explain DNS (Domain Name System) and how it works.	
(c)	What is DHCP? Describe its role in IP address assignment.	
Ques.6	Write short notes on any four of the following: निम्नलिखित में से किन्हीं चार पर संक्षिप्त टिप्पणियाँ लिखें	(4X2.5=10)
(a)	What is CN?	
(b)	What is TCP?	
(c)	Explain UDP.	
(d)	What is HTTP?	
(e)	What is FTP?	
(f)	What is the purpose of a modem?	

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Diploma In Engg (CSE)
II YEAR/ III SEMESTER EXAMINATION
INTERNET AND WEB TECHNOLOGY

[Time: 2:30 Hours]

[Max. Marks: 50]

Note/Instructions: Additional sheets may be used, if required.

i. Attempt all questions as per given instructions. दिये गये निर्देशों के अनुसार सभी प्रश्नों को हल करें।		
ii. Marks are indicated against each section. प्रत्येक खंड के लिए अंक उनके सामने दर्शाए गये हैं।		
iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।		
Ques.1	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain Domain Name Server and Internet Service Provider.	
(b)	vii. Explain E-mail facilities, lists and Services.	
(c)	What is difference between Intranet and Internet	
Ques.2	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is LAN, WAN, MAN?	
(b)	What is XML? Also Explain DTD.	
(c)	Describe Developers tools and How we use in detail.	
Ques.3	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is form? Explain the radio button and checkbox element of form.	
(b)	Differentiate between client side scripting and server side scripting.	
(c)	Create a HTML form to reserve a Railway ticket.	
Ques.4	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is BOOTSTRAP? Also define needs of Bootstrap in present scenario.	
(b)	What is drop down in web technology?	
(c)	What is JQuery? Describe its effects in detail.	
Ques.5	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is java script? How it make a web page dynamic?	
(b)	What is event in HTML?	
(c)	What is CSS? Define any two selectors with example.	

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Diploma in Engineering (CSE)
II YEAR, IIIrd SEMESTER EXAMINATION
DATABASE MANAGEMENT SYSTEM

[Time : 3 Hours]

[Max. Marks : 60]

- i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।
- ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।
- iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।

Ques.1	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a Database Management System (DBMS)? Explain its characteristics and	
(b)	Explain the difference between data, information, and metadata.	
(c)	What are the components of a DBMS? Explain each.	
Ques.2	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a data model? Describe different types of data models.	
(b)	Explain the Entity-Relationship (ER) model with an example.	
(c)	Define entity, attribute, and relationship with examples.	
Ques.3	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is the relational model? Explain its structure and advantages.	
(b)	Explain relational algebra operations (select, project, union, intersection, join).	
(c)	What are integrity constraints? Explain different types with examples.	
Ques.4	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a transaction? Explain its properties (ACID).	
(b)	Explain different states of a transaction.	
(c)	What is concurrency control? Why is it needed?	
Ques.5	Answer <i>ANY TWO</i> of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain different types of file organization (sequential, indexed, hashed).	
(b)	What is indexing? Explain primary and secondary indexing.	
(c)	What is hashing? Explain static and dynamic hashing.	
Ques.6	Write short notes on any four of the following: निम्नलिखित में से किन्हीं चार पर संक्षिप्त टिप्पणियाँ लिखें।	(4X2.5=10)
(a)	Define DBMS. What are its main functions?	
(b)	List any five advantages of using a DBMS.	
(c)	What is data abstraction in DBMS?	
(d)	Differentiate between data and information.	
(e)	What is data independence? Explain its types.	
(f)	What is the role of a Database Administrator (DBA)?	

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Paper Code : PCS – 301

(A) SVSU : 2025-26/R

Enrollment No.

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Diploma in Engineering (CSE)
II YEAR, IIIrd SEMESTER EXAMINATION
OPERATING SYSTEM

[Time : 3 Hours]

[Max. Marks : 60]

i. Attempt all questions as per given instructions. दिए गए निर्देशों के अनुसार सभी प्रश्नों का प्रयास करें।		
ii. Marks are indicated against each section. प्रत्येक खंड के खिलाफ निशान दर्शाए गए हैं।		
iii. Assume missing data if any. अनुपस्थित डेटा मान लें यदि कोई हो।		
Ques.1	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is an Operating System? Explain its main functions and objectives.	
(b)	Describe the major components of an Operating System.	
(c)	Explain the evolution of Operating Systems — from batch to modern systems.	
Ques.2	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Define a process and explain its different states with a neat diagram.	
(b)	Explain the process control block (PCB) and its components.	
(c)	What is process scheduling? Describe different types of schedulers.	
Ques.3	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is a deadlock? Explain the necessary conditions for a deadlock to occur.	
(b)	Describe methods for handling deadlocks in Operating Systems.	
(c)	Explain deadlock prevention and avoidance techniques.	
Ques.4	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	What is memory management? Explain its functions.	
(b)	Explain contiguous and non-contiguous memory allocation.	
(c)	What is fragmentation? Differentiate between internal and external fragmentation.	
Ques.5	Answer ANY TWO of the following questions निम्नलिखित प्रश्नों में से किसी दो का उत्तर दें	(5X 2=10)
(a)	Explain paging and segmentation in detail.	
(b)	What is virtual memory? Explain how it works.	
(c)	What are page faults? How are they handled?	
Ques.6	Write short notes on any four of the following: निम्नलिखित में से किन्हीं चार पर संक्षिप्त टिप्पणियाँ लिखें।	(4X2.5=10)
(a)	Define an operating system?	
(b)	Define process.	
(c)	Explain a deadlock?	
(d)	Explain virtual memory?	
(e)	Name any two functions of an operating system.	
(f)	What is the difference between primary memory and secondary memory?	
