

2023(New)

Time : 3 hours

Full Marks : 70

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

The figures in the margin indicate full marks.

Answer from both the Groups as directed.

Group – A

Answer any **four** questions of the following :

10×4 = 40

- ✓ 1. Describe Financial Management. Explain its objectives and scope.
2. Explain different source of Business Finance.
- ✓ 3. Prepare Trial Balance from the following information : (Figure in lacs)

Land	100	Creditors	3
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4. Define the term Planning. Describe, in brief, the process of planning.
5. What is Organisation and explain its importance ?
6. What is Delegation ? Can responsibility be delegated ?
7. What is Staffing ? Explain the different steps involved in staffing process.
8. What is Leadership ? What are essential qualities of a good leader ?

Group – B

Answer all questions of the following : $3 \times 10 = 30$

9. What is Motivation ?
10. What is Communication ?
11. Define Co-ordination.
12. Define Centralisation.
13. Define Control.

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(2)

Contd.

14. Define Direction.
15. Is Management a Science or an Art, or both ?
16. What is informal organisation ?
17. What is Administration ?
18. Define Ethics.



SX – 192/2 (500)

(3)

UG – BCA
(C – 602)

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Answer from both the Groups as directed.

Group – A

Answer any four questions of the following :

10×4 = 40

1. Define Management and explain its importance.
2. Describe the different levels of Management and explain their functions.
3. Explain the principles of Management as propounded by Henry Fayol.

- (g) What do you mean by Depreciation ?
- (h) What do you mean by General Reserve ?
- (i) What is Money Measurement Concepts ?
- (j) What do you mean by Intangible Assests ?



1. Building	200	14. Purchases return	1
2. Capital	150	15. Sales return	5
3. Sales	500	16. Debtors	32
4. Drawing	11	17. Prepaid salaries	2
5. Bills receivable	10	18. General Reserve	5
6. Bills Payable	2	19. Furniture	4
7. Rent	12	20. Computer	2
8. Salaries	40	21. Cash	10
9. Fixed deposit	15	22. Out standing rent	
10. Stock	20	23. Interest on fixed deposite	1
11. Purchases	200		

4. Explain the Advantage and Limitation of Financial Accounting.

5. Give Journal Entries :

	Rs.
1 / 4 / 23 Goods Purchases for	5 lacs
2 / 4 / 23 Goods sold to Mr. X for	6 lacs
4 / 4 / 23 Rent Paid	10, 000

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(2)

Contd.

	Rs.
8 / 4 / 23 Furniture purchases	50,000
10 / 4 / 23 Bank loan taken	70,000

6. What do you mean by Financial Accounting. Explain its main objectives.
7. Explain the classification of Assets and Liabilities.
8. Explain briefly Fundamental Accounting concepts and principles.

Group - B

(Short-answer Type Questions)

9. Answer all questions of the following : $3 \times 10 = 30$

- (a) What do you mean by Gross Profit ?
- (b) What do you mean by Trading and PL Account ?
- (c) What do you mean by Operating Activities ?
- (d) What is Double Entry System ?
- (e) What is Dividend ?
- (f) What do you mean by Equity Shares ?

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(3)

Contd.

16. What are knowledge workers ?

17. Management is an art of getting things done by others. Comment your view.

18. Name some important tools of MIS.



3. What is decision making ? In managing the business of a restaurant what are some decisions that must be made in the areas of :

- (a) Strategic planning
- (b) Managerial control
- (c) Operational control

4. What is Decision support system ? Describe different levels and components of DSS. List some important benefits and problems do you anticipate with the implementation and use of DSS.

5. Discuss the methods and major steps for implementation of MIS design. Are they overlapping or exclusive ? Explain.

6. Discuss any two of the following :

- (a) SCM
- (b) ESS
- (c) ERP

7. What are important characteristics of information ? Also distinguish between data and information.

8. Enumerate the important issues and soft spots in developing a Management Information System.

Group – B

Answer all questions :

3×10 = 30

9. Explain why information systems are so essential in business today.

10. What is the impact of IT in MIS ?

11. Explain cost/benefit analysis of information system.

12. Explain various methods to collect data (fact-finding techniques).

13. Explain how CRM benefit the business.

14. Why is MIS looked upon as a strategic need of Management today ?

15. Discuss why 'Feedback' and 'Control' are considered the 'Key system concepts' of any system.

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Answer from both the Groups as directed.

Group – A

Answer any **four** questions of the following :

10×4 = 40

1. What is MIS ? What are the various functions of MIS ? Explain in detail different characteristics of Management Information System.
2. What do you understand by information ? List and explain various types of Information in an organization.

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**UG — BCA
(C - 601)**

2023(New)

Time : 3 hours

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Answer from both the Sections as directed.

Section – A

Answer any four questions of the following :

10×4 = 40

1. Define Operation Research and discuss its scope.
2. Explain the guidelines on linear programming model formulation with an example.

SX – 191/3

(Turn over)

Section – B

9. Answer all questions of the following : $3 \times 10 = 30$

(a) Discuss the role of Computers in Operation research.

(b) What are the limitations of Operation Research ?

(c) Define linear programming problem.

(d) Define assignment model.

(e) Plot the graph for :

$$x - 2y \leq 1$$

$$x + 2y \geq 3$$

$$x, y \geq 1$$

(f) Define Non-degenerate basic feasible solution.

(g) How Assignment problem is different from Transportation problem ?

(h) Define Infeasible solution.

(i) What are the basic difference between PERT and CPM.

(j) Define float and give its types.

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(4)

UG – BCA
(C – 601)

3. Solve the linear programming problem graphically:

$$\begin{aligned} \text{Max. } Z &= 3x_1 + 5x_2 \\ \text{S.t. } x_1 + 2x_2 &\leq 20 \\ x_1 + x_2 &\leq 15 \\ x_2 &\leq 8 \\ x_1, x_2 &\geq 0 \end{aligned}$$

4. Solve the linear programming problem graphically:

$$\begin{aligned} \text{Min. } Z &= 3x_1 + 5x_2 \\ \text{S.t. } x_1 + 3x_2 &\geq 3 \\ x_1 + x_2 &\geq 2 \\ x_1, x_2 &\geq 0 \end{aligned}$$

5. Using simplex method to solve the linear programming problem:

$$\begin{aligned} \text{Max. } Z &= x_1 + 2x_2 + 3x_3 \\ \text{S.t. } 4x_1 + 2x_2 + x_3 &\leq 4 \\ x_1 + 2x_2 + 3x_3 &\geq 8 \\ x_1, x_2, x_3 &\geq 0 \end{aligned}$$

SX - 191/3

(2)

Contd.

6. Determine Basic feasible solution by North West corner method:

	W_1	W_2	W_3	W_4	W_5	Supply
F_1	3	4	6	8	9	20
F_2	2	10	1	5	8	30
F_3	7	11	20	40	3	15
F_4	2	1	9	14	16	13
Demand	40	6	8	18	6	

7. Find the optimal assignment for the assignment with the following cost matrix:

		Machines			
		I	II	III	IV
Jobs	A	5	3	1	8
	B	7	9	2	6
	C	6	4	5	7
	D	5	7	7	6

8. For a certain activity the total float is 12 weeks and the head event slack is 3 weeks. Compute the free float for this activity.

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(3)

(Turn over)

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Group – A

Answer any **four** questions of the following :

10×4 = 40

1. Define network security. Discuss different types of security services in detail.
2. Define cryptography and its benefits. What are the few major applications of cryptography in the modern world ?
3. Explain RSA cryptography algorithm with suitable example.

4. What is digital signature ? Explain the working of digital signature with a neat diagram.
5. What are the principles of authentication ? Explain Kerberos authentication protocol in detail.
6. What is Transport Layer Security (TLS) protocol ? Briefly explain the purpose of the TLS Handshake protocol.
7. Define Firewall. What are the benefits of Firewall ? List any two hardware and software firewall each.
8. Define virus and its types. What are the four phases of virus in network security ?

Group - B

9. Answer all questions of the following : $3 \times 10 = 30$
 - (a) What is Ransomware ?
 - (b) Differentiate between symmetric key cryptography and asymmetric key cryptography.

- (c) What is Data Encapsulation in computer network ?
- (d) Define Feistel Cipher.
- (e) What is Cryptanalysis ?
- (f) Define Secure Electronic Transaction (SET) Protocol.
- (g) What is Simple Network Management Protocol (SNMP) ?
- (h) What is Secure Socket Layer (SSL) ?
- (i) Define IPCONFIG command.
- (j) Define Intrusion Prevention System (IPS).

