USN : 2GI20IS002 Course Code : 18IS71

Seventh Semester B.E. Semester End Examination, DECEMBER_FEBRUARY_2023-24

ENTREPRENEURSHIP & MANAGEMENT

Time: 3 hrs. Max. Marks :100

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Module.
2. Use of suitable examples preferred and not mandatory unless mentioned.

MODULE 1

	L	CO	PO	M
1a. List all the functions of a management with brief note. Illustrate management process with the correct sequence of these functions.	[3]	[1, 2]	[1, 2]	[8]
1b. What do you mean by 'Modern Management Approaches'? Explain 'Contingency Approach' that integrates management thoughts.	[2]	[1]	[1]	[7]
1c. Distinguish the words 'Management' and 'Administration' with suitable context, meaning and the responsibilities.	[4]	[1]	[1]	[5]

OR

2a. What is planning process? Classify types of plans with a brief note on each of them.	[2]	[1, 2]	[2]	[7]
2b. "In order to develop a sound and efficient organization structure, certain principles need to be followed"- In support of this statement, list any 5 important organizing principles with suitable explanation.	[2]	[1]	[1]	[6]
2c. Elaborate topics concerned to the standard statement saying- "Management is partly an art and partly a science". Use of appropriate example preferred.	[2]	[2, 3]	[3]	[7]

MODULE 2

3a. Describe Process of Directing, Nature of Directing, Need & its importance.	[2]	[2]	[1]	[6]
3b. Define Controlling in context of organizational management. Explain the 3 steps in Control process.	[2]	[2]	[2]	[6]
3c. Write a descriptive note on the following topics: **i)** Meaning & Importance of Communication **ii)** Motivation theories	[2]	[2]	[1]	[8]

OR

4a. List any 5 methods of training for the industry personnel towards work empowerment. Describe any 2 of them with systematic approach or method followed towards the objective.	[2]	[1, 2]	[1]	[7]
4b. What are the 'Leadership Qualities' required for Technical Domains. Compare the 'Leadership Styles' using relevant factors towards the motive.	[3]	[2]	[2]	[7]
4c. What is the importance of staffing in organization? List all important points towards nature of staffing with a brief note.	[2]	[1]	[1]	[6]

MODULE 3

5a. Define the 'Entrepreneurship' with proper meaning of an entrepreneur. Distinguish with a descriptive note on 5 main concepts of entrepreneurship.

[4] [3] [2] [7]

5b. Write a note on 'Significance of Intellectual Property Rights', narrating importance of innovation in the industrial domain.

[2] [3] [2] [7]

5c. Distinguish different stages of Entrepreneurial process. Explain any 3 of them with relevant details.

[2] [3] [3] [6]

OR

6a. Categorize types of entrepreneurs. Describe 3 of them with brief description and details of the subcategories involved.

[4] [3] [7, 11] [8]

6b. Classify the functions of an entrepreneur. Describe atleast 5 key functions among them.

[4] [3] [3] [7]

6c. What is the meaning of 'Intrapreneur'. How do you distinguish the same with 'Entrepreneur'?

[2] [3] [1, 7] [5]

MODULE 4

7a. Considering the Indian scenario, enlist all advantages of SSI to the society with a description on all the specific points that are necessary.

[2] [4] [1] [6]

7b. Write a note on Impact of Liberalization, Privatization and Globalization on SSI.

[2] [4] [2] [6]

7c. Write a note on Institutional Support provided towards entrepreneurial development by:

i) NSIC

ii) SIDBI

[2] [3] [2] [8]

OR

8a. Define Small Scale Industry (SSI). What are the characteristics of SSI? Explain 5 of them.

[2] [4] [1] [6]

8b. Distinguish and discuss the Internal & External problems faced by MSMEs in India.

[4] [4] [2] [7]

8c. Describe the 'Steps to Start SSI' with feasibility, motto, finance and resource taking into account.

[2] [4] [2] [7]

MODULE 5

9a. Elaborate the contents of good project report with a brief note on all of its titles.

[2] [3] [11] [7]

9b. What are the steps in Project Selection Method? Describe atleast 2 of them.

[2] [3] [11] [7]

9c. What is the meaning of Enterprise Resource Planning (ERP)? List functional areas of ERP with a brief note on each of them.

[2] [2] [11] [6]

OR

10a. What are the needs and significance of project report? Summarize the contents of Project Appraisal Process.

[2] [2] [11] [7]

10b. Describe Supply Chain Management (SCM). Name the supporting factors of ERP to the SCM.

[2] [3] [3] [7]

10c. Explain the Guidelines by Planning Commission of India for the Project report.

[2] [3] [11] [6]

USN : 2GI20IS009 Course Code : 18IS72

Seventh Semester B.E. Semester End Examination, DECEMBER_FEBRUARY_2023-24

SOFTWARE TESTING

Time: 3 hrs. Max. Marks :100

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Module.

MODULE 1

	L	CO	PO	M
1a. Explain next date function with problem statement implementation using pseudo code.	[2]	[1]	[1]	[10]
1b. Explain Commission problem with problem statement and implementation using pseudo code.	[2]	[1]	[1]	[10]

OR

2a. Explain the following:
- **i.** input and output fault,
- **ii.** the logic faults.
- **iii.** computation faults
- **iv.** interface faults
- **v.** data faults

[2] [1] [1] [10]

2b. Explain the IEEE error and fault taxonomy and IEEE standard anomaly process. [2] [1] [1] [10]

MODULE 2

3a. Define the problem statement of simple ATM system with relevant interactive user interface screens. [3] [2] [2] [10]

3b. Define the problem of currency converter with a neat block diagram. [3] [2] [2] [10]

OR

4a. Illustrate generalizing boundary value analysis for two variables X1 and X2 with a neat diagram. [3] [2] [2] [10]

4b. Analyze robust testing and worst-case testing using two variables X1 and X2. [4] [2] [2] [10]

MODULE 3

5a. Analyze equivalence class test cases for the commission problem. [4] [3] [2] [10]

5b. Analyze equivalence class test cases output range of the commission program using the data - 45 locks, 30 stocks, 25 barrels. [4] [3] [2] [10]

OR

6a. Illustrate decision table technique within a general example for conditions, rules, and actions - use tabular format. [2] [3] [1] [10]

6b. Explain decision table testing for triangle problem. [2] [3] [1] [10]

MODULE 4

7a. Define and Explain with triangle program pseudo code for a. Program graph b. DD path.

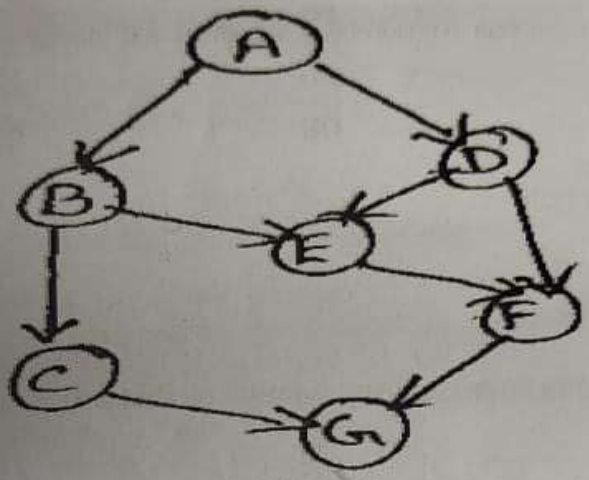
[2] [4] [1] [10]

7b. Illustrate "trillions of paths" with general program graph, and a chain of nodes in a directed graph.

[3] [4] [1] [10]

OR

8a. Identify and Explain a set of basis path for the following graph.



[3] [4] [3] [10]

8b. What is Basis Path Testing? Explain McCabe's basis path method for any control graph, as an example, and find out the cyclomatic complexity to calculate nearly independent circuits.

[3] [4] [3] [10]

MODULE 5

9a. Develop DU paths for Commission program.

[3] [5] [1] [10]

9b. Illustrate DU path test coverage metrics.

[3] [5] [1] [10]

OR

10a. Explain slice-based testing with an example of Commission program.

[3] [5] [2] [10]

10b. List guidelines and observations for data flow testing.

[1] [5] [1] [10]

USN : 2GI20IS002 Course Code : 18IS73

Seventh Semester B.E. Semester End Examination, DECEMBER_FEBRUARY_2023-24

CRYPTOGRAPHY AND NETWORK SECURITY

Time: 3 hrs. Max. Marks :100

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Module.

MODULE 1

	L	CO	PO	M
1a. Discuss about the different types of attacks on Encrypted messages.	[2]	[1]	[1]	[10]
1b. Discuss the three independent dimensions on which Cryptographic systems are characterized along with cryptanalysis and brute force attack.	[2]	[1]	[1]	[10]

OR

2a. Explain DES algorithm in detail with the help of a neat diagram.	[2]	[1]	[1]	[10]
2b. Solve using the following cryptographic techniques i) Play fair cipher to obtain cipher text for plain text "most welcome" using keyword MONARCHY ii) Transposition technique to decrypt the plain text "get up early and do your exercise regularly" for the key 4321657	[3]	[1]	[2]	[10]

MODULE 2

3a. Show how public key cryptosystem can be used to apply authentication during transmission with the help of a neat diagram.	[3]	[2]	[2]	[10]
3b. Discuss the Diffie-Hellman key exchange algorithm with neat block diagram.	[2]	[2]	[1]	[10]

OR

4a. Show the steps involved in RSA algorithm. Solve to obtain the cipher text given plain text M=18, p=5, q=11 and e=7.	[3]	[2]	[2]	[10]
4b. Explain the characteristics of a public key cryptosystem (asymmetric) with a neat diagram. Describe the 3 applications of public key cryptosystems.	[2]	[2]	[1]	[10]

MODULE 3

5a. Explain application gateways, Circuit gateways and MAC Layer firewalls in detail.	[2]	[3]	[1]	[10]
5b. With the help of a neat diagram Discuss Screened Subnet Firewalls(with DMZ).	[2]	[3]	[1]	[10]

OR

6a. Outline some of the best practices for firewall use in general.	[2]	[3]	[1]	[10]
6b. Discuss the different types of attacks on cryptosystems and the way to defend.	[2]	[3]	[1]	[10]

MODULE 4

7a. Explain the benefits and Routing applications of IPSec. [2] [4] [1] [10]

7b. Explain a typical IP Security Scenario with the help of a neat diagram along with its applications. [2] [4] [1] [10]

OR

8a. List the IPSec Services. Explain the different categories of IPSec documents. [2] [4] [1] [10]

8b. List and explain the different parameters in a Security Association Database (SAD) entry. [2] [4] [1] [10]

MODULE 5

9a. Explain the different Wireless Network threats in detail. [2] [5] [1] [10]

9b. Explain the different Security Threats for Mobile devices. [2] [5] [1] [10]

OR

10a. Discuss the MIME transfer encodings and cryptographic algorithms used in S/MIME. [2] [5] [3] [10]

10b. Explain the five header fields defined in MIME along with its content types. [2] [5] [1] [10]

USN : 2GI20IS002

Course Code : 18IS744

Seventh Semester B.E. Semester End Examination, DECEMBER_FEBRUARY_2023-24

ADHOC SENSOR NETWORKS

Max. Marks :100

Time: 3 hrs.

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Module.

MODULE 1

	L	CO	PO	M
1a. Describe the challenges of Mobile Adhoc networks.	[2]	[1]	[1]	[10]
1b. Explain The Wireless Routing Protocol and The Optimized Link State Routing Protocol.	[2]	[1]	[2]	[10]

OR

2a. Describe propagation of the query message in TORA. Summarize the quintuple elements of TORAs metric.	[2]	[1]	[2]	[10]
2b. Describe the Source Tree Adaptive Routing Protocol.	[2]	[1]	[1]	[10]

MODULE 2

3a. Describe the flooding generated broadcast storm.	[2]	[2]	[2]	[10]
3b. Elaborate area based methods and probability based methods in rebroadcasting schemes.	[2]	[2]	[1]	[10]

OR

4a. Explain the characteristics of broadcast problem.	[2]	[2]	[2]	[10]
4b. Describe Scalable Broadcast Algorithm (SBA).	[2]	[2]	[2]	[10]

MODULE 3

5a. Define TCP. Describe the descriptive terms associated with TCP.	[2]	[3]	[2]	[10]
5b. Explain the TCP-Feedback and The ELFN Approach.	[2]	[3]	[3]	[10]

OR

6a. Summarize the Fast Retransmit and Fast Recovery.	[2]	[3]	[2]	[10]
6b. Describe Fixed RTO and The ATCP Protocol.	[2]	[3]	[2]	[10]

MODULE 4

7a. Describe sensing and communication range. [2] [4] [3] [10]

7b. Elaborate on Sensing transducer, A/D Converter, Transmission Energy, Receiver Energy and computation. [2] [4] [2] [10]

OR

8a. Describe the different types of regularly placed sensors. [2] [4] [2] [10]

8b. Explain heterogeneous Wireless Sensor Networks. [2] [4] [3] [10]

MODULE 5

9a. Describe A Remote Ecological Micro-Sensor Network. [2] [5] [2] [10]

9b. Explain the characteristics of Environmental Monitoring. [2] [5] [2] [10]

OR

10a. Summarize Drinking Water Quality and Disaster Relief Management. [2] [5] [4] [10]

10b. Describe Soil Moisture Monitoring. Explain Body Area Network and its applications. [2] [5] [4] [10]

USN : 2GI20IS002 Course Code : 18IS752

Seventh Semester B.E. Semester End Examination, DECEMBER_FEBRUARY_2023-24

MOBILE COMPUTING AND APPLICATIONS

Time: 3 hrs. Max. Marks :100

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Module.

MODULE 1

	L	CO	PO	M
1a. Explain the functions of mobile computing with suitable diagram.	[2]	[1]	[1]	[10]
1b. With a neat diagram explain three tier architecture for mobile computing.	[2]	[1]	[1]	[10]

OR

2a. Explain the characteristics of mobile computing.	[2]	[1]	[1]	[10]
2b. With a suitable diagram explain Client Context Manager.	[2]	[1]	[1]	[10]

MODULE 2

3a. Write a short note on the following. **i.** GSM mobile station **ii.** GSM Base station subsystem	[2]	[2]	[1]	[10]
3b. Explain GSM Addresses and Identifiers.	[2]	[2]	[1]	[10]

OR

4a. Explain the unique characteristics of SMS.	[2]	[2]	[1]	[10]
4b. Explain SMS as an Information Bearer.	[2]	[2]	[1]	[10]

MODULE 3

5a. With a neat diagram explain protocol architecture of the GPRS transmission plane.	[2]	[2]	[1]	[10]
5b. Explain type of data services supported by GPRS.	[2]	[2]	[1]	[10]

OR

6a. Explain IS-95 architecture.	[2]	[2]	[1]	[10]
6b. Write a short note on **i)** Soft Handoff **ii)** Softer Handoff	[2]	[2]	[1]	[10]

MODULE 4

7a. With a neat diagram explain smart client architecture.	[2]	[3]	[1]	[10]
7b. With a neat diagram explain Wireless internet architecture.	[2]	[3]	[1]	[10]

OR

8a. What is WAE? Explain its elements.	[2]	[3]	[1]	[10]
8b. Discuss the functionalities of WAP protocol stack.	[2]	[3]	[1]	[10]

MODULE 5

9a. What is provisioning? Explain.	[2]	[4]	[1]	[10]
9b. Explain MIDlet life cycle.	[2]	[4]	[1]	[10]

OR

10a. Explain Generic communication framework in MIDP.	[2]	[4]	[1]	[10]
10b. Write a java module to implement Key pressed event.	[3]	[4]	[12]	[10]

USN : 2GS20ES002 Course Code : 18CV761

Seventh Semester B.E. Semester End Examination, DECEMBER_FEBRUARY_2023-24

ENERGY AND ENVIRONMENT

Time: 3 hrs. Max. Marks :100

Instructions :1. Answer any FIVE Full Questions selecting at least ONE Question from Each Module.

MODULE 1

	L	CO	PO	M
1a. Explain the present Indian energy scenario.	[2]	[2]	[6, 7]	[10]
1b. Compare between Fixed dome type biogas plant and Floating drum type biogas plant. [Any Five Points].	[2]	[3]	[6, 7]	[10]

OR

2a. Explain the uses/applications of Biogas.	[2]	[3]	[6, 7]	[10]
2b. Explain the Biomass availability issues.	[2]	[3]	[6, 7]	[10]

MODULE 2

3a. Explain the classification of hydroelectric power plants.	[2]	[3]	[6, 7]	[10]
3b. Explain with neat sketch closed cycle system for ocean thermal energy conversion.	[2]	[3]	[6, 7]	[10]

OR

4a. Explain the following: i. Submergence ii. Ecological Imbalance	[2]	[3]	[6, 7]	[10]
4b. Explain the merits and demerits of tidal energy.	[2]	[3]	[6, 7]	[10]

MODULE 3

5a. Explain the term solar constants and solar radiation at earth's surface.	[2]	[3]	[6, 7]	[10]
5b. List types of wind energy collectors & Explain the Horizontal axis type.	[2]	[3]	[6, 7]	[10]

OR

6a. Explain the advantages and disadvantages of solar energy.	[2]	[3]	[6, 7]	[10]
6b. Explain the basic principles of wind energy conversion.	[2]	[3]	[6, 7]	[10]

MODULE 4

7a. Explain the components of nuclear reactors with a neat sketch. [2] [3] [6, 7] [10]

7b. Explain the classification of geothermal energy. [2] [3] [6, 7] [10]

OR

8a. Write short note on nuclear disaster with an example. [2] [1] [6, 7] [10]

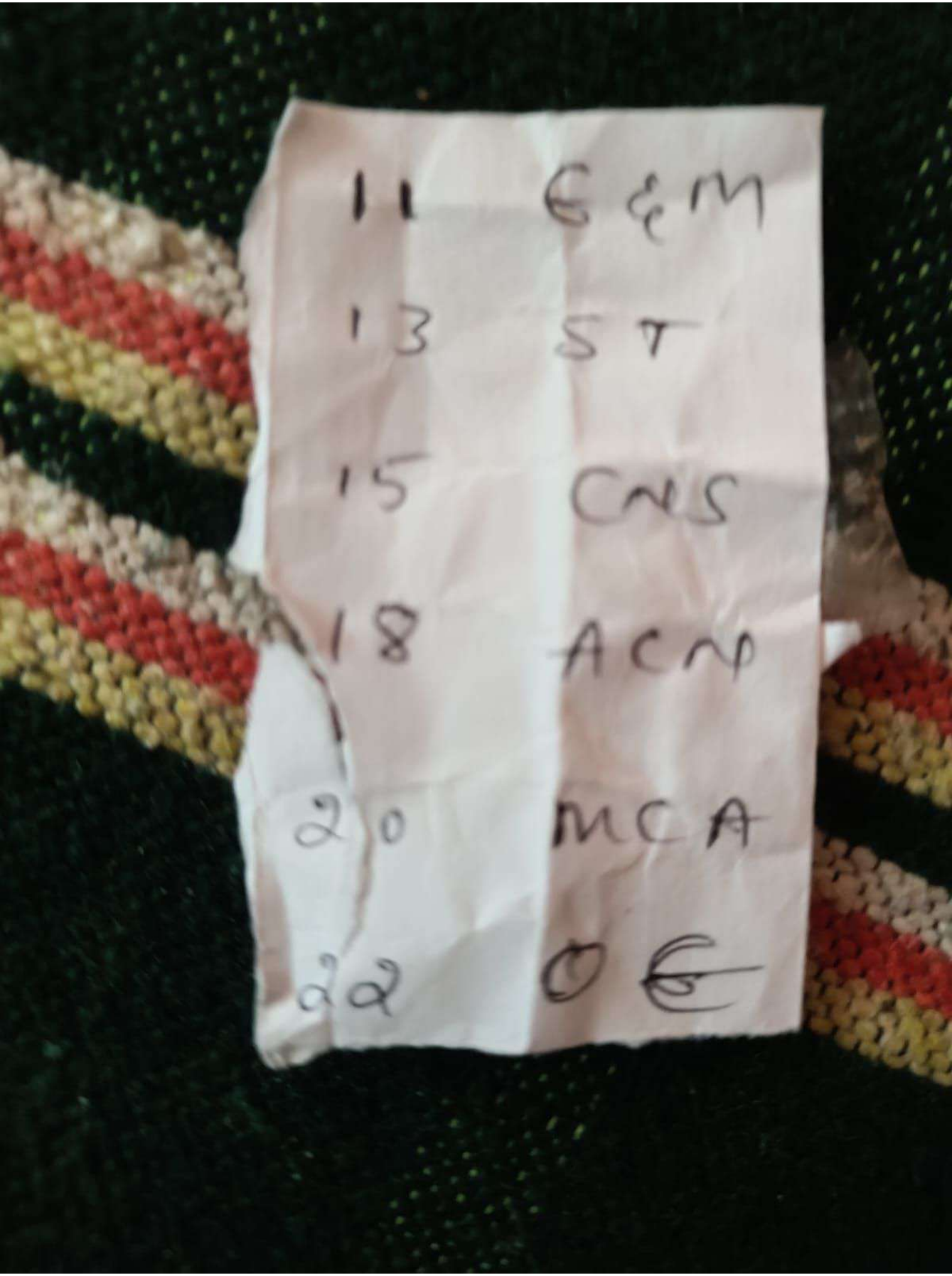
8b. Explain the merits and demerits of geothermal energy. [2] [3] [6, 7] [10]

MODULE 5

9. Write a short note on:
   a. Climate change
   b. Global warming [2] [1] [6, 7] [20]

OR

10. Write short notes on
   a. Noise pollution
   b. London Smog [2] [1] [6, 7] [20]


11 E&M
13 ST
15 CNS
18 ACN
20 MCA
22 O