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Fifth Semester B.E. Degree Examination, June/July 2023 Management and Entrepreneurship for IT Industry

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define Management. List and explain roles of a manager. (10 Marks)
b. List and analyze the different steps involved in planning. (10 Marks)

OR

- 2 a. Define organization. Explain the nature and purpose of an organization. (10 Marks)
b. Explain in brief sources of recruitment and steps in the selection procedure. (10 Marks)

Module-2

- 3 a. Explain Maslow's need hierarchy theory of motivation along with its merits and demerits. (10 Marks)
b. Analyze the following leadership styles:
(i) Traits approach
(ii) Behavioural approach
(iii) Contingency approach. (10 Marks)

OR

- 4 a. What is communication? By make use of a diagram explain the importance of communication. (10 Marks)
b. Analyze the different steps in controlling. (10 Marks)

Module-3

- 5 a. Define Entrepreneur. Explain the characteristics of an entrepreneur. (10 Marks)
b. Explain the functions of Entrepreneur. (10 Marks)

OR

- 6 a. Analyze the various stages in Entrepreneurial process. (10 Marks)
b. Write an explanatory note on the following :
(i) Barries to Entrepreneurship.
(ii) Entrepreneurship in India. (10 Marks)

Module-4

- 7 a. List and explain various factors to be considered for selection of a project. (10 Marks)
b. What is ERP? Explain the importance of ERP. (10 Marks)

OR

- 8 a. What is a project report? List and explain the different guidelines provided by the planning commission for the preparation of project report. (10 Marks)
b. Write short notes on :
(i) Supply chain management.
(ii) Types of project report. (10 Marks)

Module-5

9 a. Explain the following :

- (i) KSFC
- (ii) KSSIDC
- (iii) TECSOK
- (iv) NSIC

(10 Marks)

b. Explain characteristics and advantages of micro and small enterprise.

(10 Marks)

OR

10 a. Write a short note on:

- (i) Five years plan
- (ii) Sri N.R. Narayana Murthy

(10 Marks)

b. What is Intellectual property? Why promote and protect intellectual property?

(06 Marks)

c. Discuss objectives of KIADB.

(04 Marks)

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18CS52

Fifth Semester B.E. Degree Examination, June/July 2023 Computer Networks and Security

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain briefly about the network application architectures with neat diagram. (10 Marks)
b. Explain the transport services provided by internet. (10 Marks)

OR

- 2 a. Compare non persistent and persistent HTTP connections. (06 Marks)
b. Explain importance of cookies and web caching with neat diagram. (08 Marks)
c. Explain about DNS services. (06 Marks)

Module-2

- 3 a. Explain about connection oriented multiplexing and de-multiplexing with a neat diagram. (10 Marks)
b. Explain UDP connection-less transport protocol and briefly explain TCP-segment structure. (10 Marks)

OR

- 4 a. Explain about Go-back-N and Selective repeat protocols with neat diagram. (10 Marks)
b. Write a short note on TCP congestion control with fairness. (10 Marks)

Module-3

- 5 a. Explain DHCP client server interaction with neat diagram. (07 Marks)
b. Explain Network Address Translation (NAT) operations with neat diagram. (07 Marks)
c. Explain ICMP with error message types. (06 Marks)

OR

- 6 a. Discuss briefly four component functionalities of generic router architecture with neat diagram. (10 Marks)
b. Explain BGP inter-AS routing protocol with a neat diagram. (10 Marks)

Module-4

- 7 a. Briefly explain various threats of network security. (10 Marks)
b. Explain R.S.A algorithm with suitable example. (10 Marks)

OR

- 8 a. Explain Diffie-Hellman key-exchange algorithm with example. (10 Marks)
b. Brief importance of Firewall in securing network with neat diagram. (10 Marks)

Module-5

- 9 a. Explain 3 types of multimedia network applications with advantages. (10 Marks)
b. Explain content distribution network operation with neat diagram. (10 Marks)

OR

- 10 a. Explain Voice-Over-IP : (i) Packet-loss (ii) Packet-delay and (iii) Packet Jitter (10 Marks)
b. Explain SIP protocol with neat diagram. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

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18CS53

Fifth Semester B.E. Degree Examination, June/July 2023 Database Management Systems

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With neat diagram, describe "Three Schema Architecture" and "Data Independence". (06 Marks)
- b. Discuss the different types of user friendly interfaces and the types of user who typically use each. (06 Marks)
- c. With a neat diagram, explain the component modules of DBMS and their interactions. (08 Marks)

OR

- 2 a. Explain with the block diagram, the different phases of database design. (06 Marks)
- b. Draw an ER diagram of Banking Database. Assume your own entities (minimum 4), attributes and relationships. Specify 3NF tables. (14 Marks)

Module-2

- 3 a. Briefly discuss different type of update operations on relational database. Show an example of a violation of the referential and entity integrity in each of the update operation. (08 Marks)
- b. Consider the two tables. Show the result of the following :

T ₁		
A	B	C
10	a	5
15	b	8
25	a	6

T ₂		
P	Q	R
10	b	6
25	c	3
10	b	5

i)

$$T_1 \bowtie T_2$$

$$T_1.B = T_2.Q$$

ii)

$$T_1 \bowtie T_2$$

$$T_1.A = T_2.P$$

iii)

$$T_1 \bowtie T_2$$

$$(T_1.A = T_2.P) \text{ AND } (T_1.C = T_2.R)$$

iv)

$$T_1 - T_2$$

- c. List and explain the characteristics of Relations. (08 Marks)

(04 Marks)

OR

- 4 a. Define the following :

i) Primary key

ii) Super key

iii) Foreign key

iv) Candidate key. (04 Marks)

- b. Discuss all the forms of ALTER Commands with example. (06 Marks)

(06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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- c. Consider the following tables :
- Works (Pname , Cname , Salary)
 - Lives (Pname , Street , City)
 - Located – in (Cname , City)
- Write the following queries in Relational algebra :
- i) List the names of the people who work for the Company 'Wipro' along with the cities they live in.
 - ii) Find the names of the persons who do not work for 'Infosys'.
 - iii) Find the people whose salaries are more than that of all of the 'Oracle' employees.
 - iv) Find the persons who works and lives in the same City.
 - v) Find the names of the companies that are located in every city where the Company Infosys is located. **(10 Marks)**

Module-3

- 5 a. Describe the six clauses in the syntax of an SQL retrieval query. Show what type of constructs can be specified in each of six clauses. Which of the six clauses are required and which are optional? **(04 Marks)**
- b. How are Triggers and Assertions defined in SQL? Explain. **(06 Marks)**
- c. Consider the following tables :
- Branch (Bname , Bcity , Assets)
 - Account (Accno , Bname , Accbal)
 - Loan (Loan no , Bname , LoanAmt)
 - Customer (Cname , Cstreet , CCity)
 - Depositor (Cname , Accnum)
 - Borrow (Cname , Loannum)
- Write the following queries in SQL :
- i) Find all loan numbers for loans made at cantonment branch with loan amounts greater than 20000.
 - ii) Find the names of all customers whose street address includes 'Main'.
 - iii) Find the average balance for each branch, if average balance is greater than 12000.
 - iv) Find the Customers who have an account, at all the branches located in "Mysure".
 - v) Find all Customers who do not have loan at the bank, but do have an account. **(10 Marks)**

OR

- 6 a. How is view created and dropped? What problems are associated with updating view? **(06 Marks)**
- b. What is Cursor? With program segment, explain retrieving of tuples with embedded SQL in C. **(06 Marks)**
- c. Explain the concept of Create , Passing parameter , Call stored procedure from JDBC. **(08 Marks)**

Module-4

- 7 a. Briefly explain the informal design guidelines used as measure to determine the quality of relations schema design. **(08 Marks)**
- b. What do you mean by Closure of Attributes? Write an algorithm to find closure of attributes. **(06 Marks)**
- c. Given below are two set of FDs for a relation R(A, B, C, D, E). Are they equivalent?
- i) $A \rightarrow B$, $AB \rightarrow C$, $D \rightarrow AC$, $D \rightarrow E$
 - ii) $A \rightarrow BC$, $D \rightarrow AE$. **(06 Marks)**

OR

- 8 a. What do you mean by Multivalued Dependency? Explain the 4NF with example. (06 Marks)
 b. Define First, Second and Third Normal forms by taking an example. (06 Marks)
 c. Consider the following Relation $R(A, B, C, D, E, F, G, H, I, J)$ with
 FDs $\{A, B\} \rightarrow C$, $A \rightarrow \{D, E\}$, $D \rightarrow J$, $B \rightarrow \{F, G\}$, $F \rightarrow \{H, I\}$.
 How would you Normalize completely? (08 Marks)

Module-5

- 9 a. Describe the problems that occur when concurrent execution uncontrolled. Give examples. (06 Marks)
 b. Explain the transaction support in SQL. (06 Marks)
 c. Consider the three transactions T_1 , T_2 and T_3 and schedule S_1 & S_2 given below. Determine whether each schedule is serializable or not? If serializable, write down the equivalent serial schedule (S).
 T_1 : $R_1(x)$, $R_1(z)$, $W_1(x)$;
 T_2 : $R_2(x)$, $R_2(y)$, $W_2(z)$, $W_2(y)$;
 T_3 : $R_3(x)$, $R_3(y)$, $W_3(y)$;
 S_1 : $R_1(x)$, $R_2(z)$; $R_1(z)$; $R_3(x)$; $R_3(y)$; $W_1(x)$; $W_3(y)$; $R_2(y)$; $W_2(z)$; $W_2(y)$;
 S_2 : $R_1(x)$; $R_2(z)$; $R_3(x)$; $R_1(z)$; $R_2(y)$; $W_1(x)$; $W_2(z)$; $W_3(y)$; $W_2(y)$; (08 Marks)

OR

- 10 a. What is Schedule? Explain Conflict and view Serializability schedule with example. (08 Marks)
 b. Briefly discuss the two phase locking protocol used in concurrency control. (06 Marks)
 c. Briefly explain ARIES recovery process. (06 Marks)

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18CS55

Fifth Semester B.E. Degree Examination, June/July 2023 Application Development using Python

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Demonstrate with example print(), input() and string replication. (06 Marks)
b. List the salient features of python programming language. (06 Marks)
c. Explain local and global scope in python programs. Illustrate different scenarios, with an example. (08 Marks)

OR

- 2 a. What are Comparison and Boolean operators? List all the comparison and Boolean operators in python and explain the use of these operators with suitable examples. (06 Marks)
b. Define a python function with suitable parameters to generate prime number between two integer values m and n (note $n > 0$, $m > 0$ and $m < n$). Suitable error messages should be displayed if the conditions for input values are not followed. (06 Marks)
c. What is Exception handling? How exceptions are handled in python? Write a python code to solve divide-by-zero error situation. (08 Marks)

Module-2

- 3 a. What is Dictionary in Python? How is it different from list data type? Explain how a for-loop can be used to traverse the keys of the dictionary with an example. (06 Marks)
b. Write a python program that accepts a sentence and find the number of words, digits, uppercase letters and lowercase letters. (06 Marks)
c. Illustrate the procedure to add Bullets to Wiki Markup with code snippets in python. (08 Marks)

OR

- 4 a. Write python program to create a user defined function to find maximum and minimum letter in string. Also find the length of the string without using inbuilt function. (06 Marks)
b. With example code, explain join() and split() string methods. (06 Marks)
c. Discuss the following dictionary methods with examples:
(i) get() (ii) items() (iii) keys() (iv) values() (08 Marks)

Module-3

- 5 a. Describe the following with suitable code snippet:
(i) Greedy and non-greedy pattern matching (08 Marks)
(ii) findall() method of Regex object.
b. With code snippet, explain saving variables using the shelve module and PPrint Pformat() function. (06 Marks)
c. Explain the following file operations in Python with suitable examples:
(i) Copying files and folders
(ii) Moving files and folders
(iii) Permanently deleting files and folders (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, $42+8=50$, will be treated as malpractice.

OR

- 6 a. What is meant by compressing files? Explain reading, extracting and creating ZIP files with code snippet. (08 Marks)
- b. List out the different character classes and its representation also regular expression symbol and its meaning. (06 Marks)
- c. Explain functions of Shutil Module with examples. (06 Marks)

Module-4

- 7 a. What is class? How do we define class? How to instantiate the class and members are accessed? (08 Marks)
- b. Demonstrate pure functions and modifiers with examples. (06 Marks)
- c. Explain `__init__` and `__str__` methods with an example. (06 Marks)

OR

- 8 a. Explain operator overloading with example. (08 Marks)
- b. Illustrate the concept of inheritance with example. (06 Marks)
- c. Define polymorphism. Demonstrate polymorphism with function to find histogram to count the number of times each letter appears in a word and in sentence. (06 Marks)

Module-5

- 9 a. Explain in details how to parse HTML with the Beautiful Soup. (08 Marks)
- b. Describe the `getText()` function used for getting full text from a .docx file with example code. (06 Marks)
- c. Write a python program to access cell in a worksheet. (06 Marks)

OR

- 10 a. Demonstrate JSON module with python program. (08 Marks)
- b. How do we extract, decrypt, copy and encrypt PDF files in Python? (06 Marks)
- c. Explain Selenium's web drive methods for finding elements. (06 Marks)

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18CS56

Fifth Semester B.E. Degree Examination, June/July 2023

UNIX Programming

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain with neat diagram, architecture of UNIX operating system. (10 Marks)
b. List and explain the salient features of UNIX operating system. (10 Marks)

OR

- 2 a. Explain basic file types in UNIX. What is relative and absolute pathname? (10 Marks)
b. Explain the following commands :
i) printf ii) passwd iii) date iv) who (10 Marks)

Module-2

- 3 a. Which command is used for listing of file attributes? Explain the significance of each field. (10 Marks)
b. With the help of an example, explain grep command with all the options. (10 Marks)

OR

- 4 a. Explain 3 standard redirection files with respect to UNIX OS. (10 Marks)
b. Define shell script. Write menu driven shell script which displays:
i) Current users of sys. ii) List of files
iii) Today's date iv) Process status
v) Contents of file. (10 Marks)

Module-3

- 5 a. Discuss how a program is started and terminated in various ways along with suitable diagram. (10 Marks)
b. Explain UNIX kernel support for process considering parent child relationship, show the related data structures. (10 Marks)

OR

- 6 a. Write a detailed description on wait and waitpid() with suitable programming example. (10 Marks)
b. Explain fork() and vfork() functions with programming example. (10 Marks)

Module-4

- 7 a. Explain implementation of system() function with its prototype. (10 Marks)
b. What are pipes? What are its limitations? Write a program to send data from parent to child over a pipe. (10 Marks)

OR

- 8 a. What is FIFO? With neat diagram, explain client-server communication using FIFO. (10 Marks)
b. Explain setuid and setgid functions with example and explain various ways to change user-ids. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
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Module-5

- 9 a. What is daemon process? Explain coding rules with program. (10 Marks)
b. What are signals? Mention different source of signals write a program to setup signal handlers for SIGINT and SIGALRM. (10 Marks)

OR

- 10 a. Discuss how error logging is done by daemon process with suitable diagram. (10 Marks)
b. Explain prototypes of following APIs:
(i) signal
(ii) kill
(iii) alarm
(iv) sigaction (10 Marks)

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Fifth Semester B.E Degree Examination, June/July 2023

Environmental Studies**(COMMON TO ALL BRANCHES)**

Time: 2 hrs.]

[Max. Marks: 100

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the hundred questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

-
1. How many parts are there in the forest ecosystem?
a) One b) Two c) Three d) Four
 2. On which factor forest type is mainly dependent
a) Abiotic b) Size of forest
c) Shape of Trees d) Production from the trees
 3. The forest cover in India has recently increased due to
a) Increase in natural forest growth
b) Increase in net sown area
c) Plantation by different agencies
d) None of the above
 4. What is not entirely correct about desert?
a) It is dry and hot b) Waterless
c) Without shelter d) All of these
 5. Who have learnt to live under very hot and dry conditions
a) People b) Plants c) Animals d) All of these
 6. The term wet land implies
a) Land covers by rain water only
b) Slow moving water covered wet ground
c) Water logged wet ground
d) Fast moving water covered wet ground
 7. World Wetland day celebrated every year on _____ February
a) 2nd b) 3rd c) 4th d) 15th

8. World's most saltiest sea is
a) Mediterranean Sea b) Dead Sea c) Callibben Sea d) Black Sea
9. Atmosphere contains 79 percent Nitrogen and 21 percent Oxygen by
a) Volume b) Weight c) Density d) All of these
10. In complex ecosystem the degree of species diversity is
a) Poor b) High c) Medium d) None
11. The organisms who directly feed on producers are called
a) Herbivores b) Carnivores c) Decomposers d) Sprophytes
12. Abiotic component includes
a) Soil b) Water c) Temperature d) All of these
13. Which of the following is the climatic factor
a) Pressure b) Humidity c) Temperature d) All of these
14. The basic requirements of human beings are provided by
a) Industrialization b) Agriculture c) Nature d) Urbonization
15. Which atmospheric sphere is closest to the earth surface?
a) Troposphere b) Stratosphere c) Mesosphere d) Exosphere
16. A food web consists of
a) A portion of a food chain
b) An organism position in a food chain
c) Interlocking food chains
d) A set of similar consumers
17. The pyramid of energy is
a) Always upright b) Always inverted
c) Both upright and inverted d) None of these
18. Which is the most stable ecosystem
a) Mountain b) Desert c) Forest d) Ocean
19. 'Earth Day' is held every year on
a) June 5th b) November 23rd c) April 22nd d) Jan 10th
20. Which of the following is absorbed by green plants from the atmosphere?
a) Carbon dioxide b) Water c) Nutrients d) All of these
21. The most commonly used chemicals in the artificial cloud seeding
a) Silver iodide b) Sodium chloride c) Dry ice d) All of these
22. Bhopal disaster is a kind of _____
a) Natural disaster b) Manmade disaster c) None of (a) & (b) d) Other
23. National disaster management is headed by
a) Prime minister b) President of India
c) Governor of states d) Chief minister of states.

24. Disaster management includes
a) Mitigation b) Reconstruction c) Rehabilitation d) All of these
25. Floods can be prevented by _____
a) Afforestation b) Cutting the forest
c) Tilling the land d) Removing the top soil
26. Which of the following is not a type of primary source
a) Crude oil b) Coal c) Hydrogen energy d) Sunlight
27. Which of these energy resources are widely used in industries?
a) Coal and Gasoline b) Wood c) Biogas d) Crop residue
28. What does OTEC stands for?
a) Ocean thermal energy cultivation
b) Ocean thermal energy conversion
c) Ocean techno energy conversation
d) Ocean thermal energy consumption
29. What is the basic requirement for hydro electric power station?
a) Reservoir b) Turbine c) Power house d) Penstock
30. Photovoltaic cell converts solar energy into
a) Heat energy b) Electrical energy c) Mechanical energy d) Chemical energy
31. Which of the following is non-renewable resource?
a) Coal b) Forests c) Water d) Wildlife
32. Both power and manure is provided by :
a) Nuclear plants b) Thermal plants c) Biogas plants d) Hydroelectric plant
33. At what range of speed is the electricity from the wind turbine is generated
a) 100 – 125 Mph b) 450 – 600 Mph c) 200 – 250 Mph d) 30 – 35 Mph
34. What is used to turn wind energy into electrical energy
a) Turbine b) Generator c) Yaw motor d) Blades
35. What type of energy is wind energy?
a) Renewable b) Non-Renewable c) Conventional d) Commercial
36. How is OTEC caused?
a) By wind energy b) By geothermal energy
c) By solar energy d) By gravitational force
37. Series of parallel combination of the solar cell is known as _____
a) Solar array b) Solar light c) Solar sight d) Solar eye
38. Materials used for making solar cell is _____
a) Silicon b) Carbon c) Sodium d) Magnesium
39. Quarries are generally
a) Open pits b) Surface coal mines
c) Underground mines d) Explosive mines

40. When the minerals are located to deep in the ground, the method used for mining is
a) Open pit method b) Quarries c) Surface mining d) Sub surface mining
41. Major pollution causing agent is
a) Man b) Animals
c) Hydrocarbon gases d) None of these
42. The result of ozone hole is
a) Acid rain b) UV radiations c) Global warming d) Green house effect
43. Which of the following causes out break of jaundice
a) Air pollution b) Water pollution c) Thermal pollution d) Soil pollution
44. Minamata disease caused by pollution of water by
a) Mercury b) Lead
c) Tin d) Methyl ISD Cyanate
45. Noise is measured using sound meter and the unit is
a) Hertz b) Decibel c) Joule d) Sound
46. Air pollution causes
a) Global warming b) Respiratory problems
c) Soil erosion d) None of these
47. Intake of lead may primarily cause damage of the _____
a) Brain b) Liver c) Lung d) Kidney
48. According to WHO maximum permissible level of chlorides in drinking water is _____
a) 100 mg/L b) 600mg/L c) 800mg/L d) 200mg/L
49. The main source of water pollution is _____
a) Sewage water b) Industrial pollutants
c) Acid rain d) None of these
50. What is the health effects of excess fluoride in drinking water
a) Fluoros's b) Toothaches c) Lung disease d) Brain problem
51. Bacteria and micro organisms present in water will cause _____ in human and animals
a) Indigestion b) Intestinal tract c) Brain tumor d) Cancer
52. Why it is difficult to recycle plastics?
a) It is very hard
b) It comes in different sizes
c) It is adhesive
d) It contains different types of polymer resins
53. The disposable wastes contain
a) Solids b) Slurries c) Liquids d) All of these
54. Identify the following ones which can be recycled many times
a) Plastic b) Wood c) Aluminum d) Organic materials
55. Noise pollution limits at residential area
a) 80 dB b) 45 dB c) 90dB d) 120dB

56. Which of the following make e-waste hazardous in nature
a) Glass b) Plastic c) Lead d) Iron
57. What is the hazardous pollutant released from LED's?
a) Barium b) Arsenic c) Cobalt d) Cadmium
58. What is the hazardous pollutant released from batteries?
a) Arsenic b) Cadmium c) Copper d) Cobalt
59. What proportion of health care waste is hazardous waste
a) 25% b) 15% c) 50% d) 80%
60. What is the hazardous waste released from telephones
a) Barium b) Copper c) Lithium d) Lead
61. Which of the following contains most water
a) Atmosphere b) Biosphere c) Ground water d) Lakes and Rivers
62. Hard water contains large amount of _____
a) Lead b) Sodium c) Calcium d) Silicon
63. Water that is good enough to drink is called _____
a) Potable water b) Ground water c) Surface water d) Artesian water
64. The pH value of acid rain water is
a) 5.7 b) 7.0 c) 8.5 d) 7.5
65. The primary cause of acid rain around the world is _____
a) CFC b) SO₂ c) CO d) O₃
66. Acid rain can be controlled by
a) Reducing SO₂ and NO₂ emissions
b) Reducing oxygen emissions
c) Increasing number of lakes
d) Increasing the forest cover
67. The effect of acid rain
a) Reduces soil fertility
b) Increases atmospheric temperature
c) Causing respiratory problem
d) Skin cancer
68. Major compound responsible for the destruction of stratospheric ozone layer is
a) Oxygen b) CFC c) CO₂ d) Methane
69. Ozone layer thickness is measured in
a) PPM b) PPB c) Decibels d) Dobson units
70. Normal average thickness of stratospheric ozone layer across the globe is around
a) 5 PPM b) 300 DU c) 400 DU d) 500 DU
71. Chloro Fluoro Carbon's (CFC) are
a) Non-toxic b) Non – Flammable
c) Non Carcinogenic d) All of these

72. Breathing radon over time causes
a) Lung cancer b) Oral cancer c) Skin cancer d) All of these
73. Radon gas is
a) Inert b) Colorless c) Odorless d) All of these
74. Ozone depletion causes
a) Snow blindness b) Photochemical smog
c) Acid rain d) Vomiting
75. World ozone day is observed on
a) November 16 b) October 16 c) Jan 16 d) September 16
76. A great way to reduce acid rain is
a) Use of solar power
b) Use of wind power
c) User of hydropower
d) All of these
77. Ozone layer was first discovered over
a) Arctic b) Antarctica
c) Tropical Region d) Africa
78. Animal husbandry results in
a) Global warming b) Acid rain
c) Ozone depletion d) None of these
79. Formation of ozone layer is explained by
a) Rosenmund reaction
b) Henderson's reaction
c) Chapman's reaction
d) Perkin's reaction
80. The main cause of acid rain is
a) Soil pollution b) Water pollution c) Air pollution d) All of these
81. Remote sensing technique makes use of properties of _____
a) Electric waves b) Sound waves
c) Electromagnetic waves d) Wind waves
82. The attitude distance of a geostationary satellite from earth is about
a) 26,000 km b) 30,000 km c) 36000 km d) 44000 km
83. The changes in the reflectivity/emissivity with time is called
a) Spectral variation b) Spatial variation
c) Temporal variation d) None of these
84. Which one of the following helps to find objects on the earth surface
a) Atmospheric window b) Signature
c) Radiometric error d) None of these
85. Orbital radius of GPS satellites is approximately
a) 15000km b) 26600km c) 18400km d) 36100km

86. GIS stands for
a) Geographic Information System
b) Generic Information System
c) Geological Information System
d) Geographic Information Sharing
87. GIS deals with what kind and data
a) Numeric data b) Binary data c) Spatial data d) Complex data
88. Among the following _____ is example of hardware
a) Arc GIS b) Auto CAD c) Digitization d) Mouse
89. Among the following which do not come under components of GIS?
a) Hardware b) Software c) Compiler d) Data
90. The relation between velocity, wave length and frequency is
a) $\lambda = cf$ b) $\lambda = c/f$ c) $\lambda = c^2 f$ d) $\lambda = cf^2$
91. A short – term EIA (Environmental Impact Assessment) has a time period of
a) 2 – 5 years b) 10 – 15 years c) 5 – 10 years d) 5 – 7 years
92. EIA commenced in the year
a) 1960's b) 1890's c) 1880's d) 1950's
93. How many strategies are there in EIA
a) 5 b) 3 c) 2 d) 4
94. Which is the first Country to pass the Amendment in the Parliament to safeguard the environment?
a) India b) Brazil c) China d) Denmark
95. ISO 14000 standards are for the
a) Quality Management System
b) Environmental Management System
c) Administration
d) Supply Chain
96. Who among the following is the most celebrated environmental activist in contemporary India?
a) Anna Hazare
b) Medha Patkar
c) Vasundhara Raje
d) Arvind Kejriwal
97. What is the full form of NGO?
a) Non – Governmental Organization
b) No Governance Organization
c) Non-Governance Organization
d) Null Governmental Organization

98. When did Green peace founded
a) 1965 b) 1967 c) 1968 d) 1971
99. When did Wild Protection Act included in the Constitution of India.
a) 1980 b) 1972 c) 1920 d) 1992
100. When did World Nature Organization (WNO) be established?
a) 2000 b) 2001 c) 2010 d) 2014

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