CBCS SCHEME

USN ☐☐☐☐☐☐☐☐☐☐

18CS51

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
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. What is management? List the functional areas of management and explain any two in detail. **(10 Marks)**
   b. Explain the managerial skills and the skill-mix required at various levels of management. **(06 Marks)**
   c. Write a note on need and importance of staffing. **(04 Marks)**

OR

2 a. Discuss the importance of planning. Briefly explain the general steps involved in planning. **(10 Marks)**
   b. Briefly explain the different approaches of management. **(06 Marks)**
   c. Define recruitment. List sources of recruitment. **(04 Marks)**

Module-2

3 a. What is motivation? Explain Maslow's need hierarchy theory of motivation. **(10 Marks)**
   b. Explain major approaches of leadership. **(06 Marks)**
   c. Differentiate between co-ordination and co-operation. **(04 Marks**

OR

4 a. Define control. Briefly explain the methods of establishing control. **(08 Marks)**
   b. Explain Herzberg's motivation – hygiene theory. **(08 Marks)**
   c. Write a note no importance of communication. **(04 Marks)**

Module-3

5 a. Define entrepreneur. Explain the functions of entrepreneur. **(08 Marks)**
   b. What are the barriers of an entrepreneur? **(06 Marks)**
   c. Write a note on market and financial feasibility study. **(06 Marks)**

OR

6 a. Explain different type of entrepreneur. **(08 Marks)**
   b. Discuss the growth of industrial entrepreneurship in India. **(06 Marks)**
   c. Write a note on technical and social feasibility study. **(06 Marks)**

Module-4

7 a. What is a project? Explain in detail the various ways of project identification. **(08 Marks)**
   b. Explain the significance of project report. List down the guidelines by planning commission. **(06 Marks)**
   c. Write a note on functional areas of management–finance and accounting and human resources. **(06 Marks)**

OR

8 a. What is ERP? Explain the importance and need of a ERP for an organization. (08 Marks)
   b. Explain the factors involved in selection of a project. (06 Marks)
   c. Write a note on functional areas of management – marketing/sales and supply chain management. (06 Marks)

Module-5

9 a. Explain the steps involved in establishing micro and small enterprises. (10 Marks)
   b. Discuss the case study of air Deccan (Captain G.R Gopinath). (06 Marks)
   c. What is patent? List different types of patents. (04 Marks)

OR

10 a. Explain the following institutions :
      i)   KIADB
      ii) KSSIDC
      iii) NSIC
      iv) KSFC
      v)   DIC. (10 Marks)
   b. Discuss the case study of Infosgs (N.R. Narayana Murthy). (06 Marks)
   c. List the advantages of micro and small enterprises. (04 Marks)

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USN | | | | | | | | | | **18CS52**

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
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. What are the different transport services available to applications? Explain. **(07 Marks)**
   b. Explain HTTP request and response message format. **(08 Marks)**
   c. Write a note on FTP and discuss about FTP command and replies. **(05 Marks)**

OR

2 a. What are the steps involved between client and server in order to fetch 10 JPEG images, which are residing in the same server by using non-persistent HTTP connection. The URL for base HTML file is http : //www.xyz.edu/department/base.index. **(07 Marks)**
   b. With a neat diagram and explain, explain how DNS server will interact to various DNS server hierarchically. **(05 Marks)**
   c. Illustrate how user1 can send mail to user2, and how user2 receives the mail by using SMTP. **(08 Marks)**

Module-2

3 a. How multiplexing and demultiplexing for a connectionless oriented will be performed at transport layer? **(06 Marks)**
   b. Describe the various fields of UDP segment and also explain about UDP checksum with an example. **(07 Marks)**
   c. Explain how TCP provides a flow control service by using different variables. **(07 Marks)**

OR

4 a. Explain the operation of selective repeat protocol. **(06 Marks)**
   b. Explain all the fields in a TCP segment. **(07 Marks)**
   c. How TCP connection management is done for three way handshake by the client and server for establishing and closing a connection. Explain. **(07 Marks)**

Module-3

5 a. Explain distance vector algorithm with an example. **(08 Marks)**
   b. Explain the three switching techniques in a router. **(06 Marks)**
   c. Draw IPV$_6$ datagram format, mention the significance of each fields. **(06 Marks**

OR

6 a. Explain link state algorithm with an example. **(08 Marks)**
   b. Describe the intra-AS routing protocol : RIP in detail. **(06 Marks)**
   c. Discuss about uncontrolled flooding and controlled flooding in broadcast routing algorithm. **(06 Marks)**

Module-4

7 a. Classify the different network attacks and explain denial of service attack. (07 Marks)
   b. What are the two different techniques used to protect network from attacks? Explain. (07 Marks)
   c. Write the steps involved in Data Encryption Standard (DES) along with a diagram. (06 Marks)

OR

8 a. Explain key generation, encryption and decryption phases in RSA algorithm. Illustrate with an example. (07 Marks)
   b. Explain the technique involved in Hash function for authentication along with a diagram. (07 Marks)
   c. Discuss about packet filtering and proxy server with respect to firewalls. (06 Marks)

Module-5

9 a. What are the classification in multimedia network applications? Explain. (08 Marks)
   b. What are the two types of loss anticipation schemes? Explain. (07 Marks)
   c. What do you mean by a Jitter and how to remove the Jitter at the receiver for audio by fixed and adaptive play out delay? (05 Marks)

OR

10 a. Explain the working of CDN. (08 Marks)
   b. Explain about HTTP streaming in case of streaming stored video. (07 Marks)
   c. Discuss about the properties of audio and video in multimedia networking. (05 Marks)

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CBCS SCHEME

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Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
Database Management System

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1   a.   Define the following terms :
      i)   Database
      ii)   DBMS catalog
      iii) Entity
      iv) Snapshot
      v)   Degree of a relationship.   **(05 Marks)**
   b.   Explain types of end-users with suitable examples.   **(05 Marks)**
   c.   List and explain advantages of using DBMS approach.   **(10 Marks**

OR

2   a.   Define the following terms
      i)   Cardinality
      ii)   Weak entity
      iii) Program data independence
      iv) Total participation
      v)   Value sets.   **(05 Marks)**
   b.   Describe three schema architecture. Why do we need mappings between schema levels?   **(05 Marks)**
   c.   Explain different types of attributes in ER model with suitable examples for each. **(10 Marks**

Module-2

3   a.   Explain the entity integrity and referential integrity constraints. Why is each considered important. Give examples.   **(05 Marks)**
   b.   Discuss equijoin and natural join with suitable examples using relational algebra notation.   **(05 Marks)**
   c.   Given the schema :
      Passenger (<u>pid</u>, pname, pgender, pcity)
      Agency (<u>aid</u>, anme, acity)
      Flight (<u>fid</u>, fdate, time, src, dest)
      Booking (<u>pid, aid, fid, fdate</u>)
      Give relation algebra expression for the following :
      i)   Get the complete details of all flights to new Delhi
      ii)   Find only the flight numbers for passenger with paid 123 for flights to Chennai before 06/11/2020
      iii) Find the passenger names for those who do not have any bookings in any flights
      iv) Get the details of flights that are scheduled on both dates 01/12/2020 and 02/12/2020 at 16:00 hours
      v)   Find the details of all male passengers who are associated with jet agency.   **(10 Marks)**

OR

4 a. Explain the ER to relational mapping algorithm with suitable example for each step.
       (10 Marks)

   b. Write SQL query for the following database scheme :
       Employee(employee_name, street, city)
       Works (employee_name, company_name, salary)
       Company(company_name, city)
       Manages(employee_name, manager_name)
       i)   Find the names, street address, and cities of residence for all employees who work for 'First Bank Corporation' and earn more than $10,000
       ii) Find the names of all employees in the database who do not work for 'First Bank Corporation'. Assume that all people work for exactly one company
       iii) Find the names of all employees in the database who earn more that every employee of 'Small Bank Corporation'. Assume that all people work for at most one company
       iv) Find the name of the company that has the smallest payroll
       v)   Find the names of all employees in the database who live in the same cities and on the same streets as do their managers.   (10 Marks)

Module-3

5 a. Explain cursors and its properties in embedded SQL with suitable example.   (05 Marks)
   b. How are triggers defined in SQL? Explain with example.   (05 Marks)
   c. Illustrate insert, delete, update, alter and drop statements in SQL.   (10 Marks)

OR

6 a. With an example, explain stored procedures In SQL.   (05 Marks)
   b. Briefly explain types of JDBC drives.   (05 Marks)
   c. Illustrate aggregate functions in SQL.   (10 Marks)

Module-4

7 a. Explain types of update ananalies with examples.   (05 Marks)
   b. Explain Armstrong inference rules.   (05 Marks)
   c. What is the need for normalization? Explain 1NF, 2NF and 3NF with examples.   (10 Marks

OR

8 a. What is functional dependency? Write an algorithm to find minimal cover for set of functional dependencies. Construct minimal cover m for set of functional dependencies which are :   E : {B $\rightarrow$ A, D $\rightarrow$ A, AB $\rightarrow$ D}   (10 Marks)
   b. Consider the schema R = ABCD, subjected to FDs F = {A $\rightarrow$ B, B $\rightarrow$ C}, and the non-binary partition D1 = {ACD, AB, BC}. State whether D1 is a lossless decomposition? [give all steps in detail].   (10 Marks)

Module-5

9 a. Define transaction. Discuss ACID properties.   (05 Marks)
   b. With a neat diagram explain transition diagram of a transaction.   (05 Marks)
   c. Why concurrency control and recovery are needed in DBMS? Explain types of problems that may occur when two simple transactions run concurrently.   (10 Marks)

OR

10 a. When deadlock and starvation problem occur? Explain how these problems can be resolved.   (10 Marks)
   b. Briefly discuss the two-phase locking techniques for concurrency control.   (10 Marks)

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USN [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]   18CS54

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
Automata Theory and Computability

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1 a. Define the following with example:
      i) String   ii) Language   iii) Alphabet   iv) Symbol   (04 Marks)
   b. Design a DFSM to accept each of the following language:
      i) $L = \{w \in \{a, b\}^* ; w$ has all strings that ends with sub string abb $\}$
      ii) $L = \{w;$ where $|w|$ mod $3 = 0$ where $\Sigma = \{a\}\}$
      iii) $L = \{w \in \{a, b\}^*$ every a region in w is of even length.$\}$ (09 Marks)
   c. Construct an equivalent DFA from the following given NFA using subset construction
      method. (Refer Fig.Q.1(c))   (07 Marks)
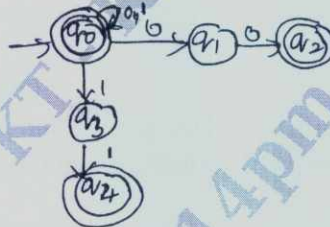
Fig.Q.1(c)

OR

2 a. Construct a minimum state automation equivalent to the FA given table

States	0	1
→q_0	q_1	q_5
q_1	q_6	q_2
q_2	q_0	q_2
q_3	q_2	q_6
q_4	q_7	q_5
q_5	q_2	q_6
q_6	q_6	q_4
q_7	q_6	q_2

                                                                          (10 Marks)
   b. Consider the following NFA with ∈-moves construct on equivalent DFA.   (10 Marks)

Fig.Q.2(b)

Module-2

3 a. Define Regular expression. Write RE for the following languages:
   i) $L = \{a^n b^m \mid m + n \text{ is even}\}$
   ii) $L = \{a^n b^m \mid m \geq 1 \; n \geq 1 \; nm \geq 3\}$
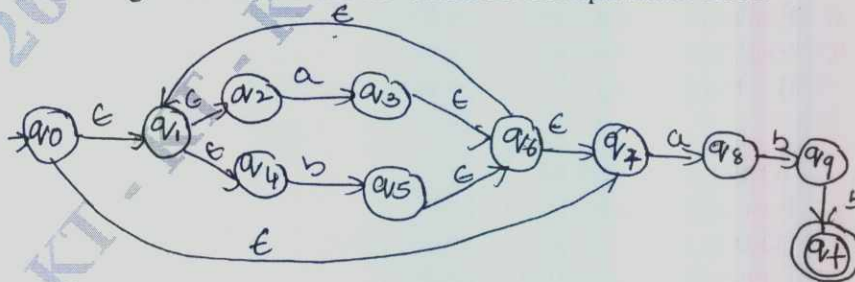   iii) $L = \{a^{2n} b^{2m} \mid n \geq 0, m \geq 0\}$ **(10 Marks)**

   b. Construct an $\in$ - NFA for the regular expression $0 + 01^*$ **(05 Marks)**
   c. Construct on FA for the regular expression $10 + (0 + 11)0^*1$ **(05 Marks)**

OR

4 a. State and prove pumping lemma theorem for regular languages.   **(08 Marks)**
   b. Prove that $L = \{a^p \mid p \text{ is a prime}\}$ is not a regular.   **(08 Marks)**
   c. List out closure properties of regular sets.   **(04 Marks)**

Module-3

5 a. Define CFG. Write a CFG to specify
   i) all string over {a, b} that are even and odd palindromes.
   ii) $L = \{a^n b^{2n} \text{ over } \Sigma = \{a, b\} n \geq 1\}$ **(10 Marks)**

   b. Write the procedure for removal of $\in$-productions. Simplify the following grammar.
   $S \rightarrow aA \mid aBB$
   $A \rightarrow aAA \mid \in$
   $B \rightarrow bB \mid bbC$
   $C \rightarrow B$ **(10 Marks)**

OR

6 a. Define PDA. Design a PDA for the language that accepts the string with $n_a(w) < n_b(w)$ where $w \in \mid (a + b)^*$ and show the instantaneous description of the PDA on input abbab.   **(10 Marks)**

   b. What is CNF and GNF? Convert the following grammar into GNF.
   $S \rightarrow AA \mid a$
   $A \rightarrow SS \mid b$ **(10 Marks)**

Module-4

7 a. With a neat diagram, explain variant of turning machine.   **(10 Marks)**
   b. Construct a Turning machine that accept the language $0^n, 1^n$ where n > 1 and draw transition graph for Turning Machine.   **(10 Marks)**

OR

8 a. Define Turning Machine with its tuples.   **(04 Marks)**
   b. Explain the working principle of Turning Machine with diagram. Design a Turing Machine to accept strings formed on {0, 1} and ending with 000. Write transition diagram and ID for w = 101000.   **(16 Marks)**

Module-5

9 a. Explain restricted turing machines.   **(08 Marks)**
   b. Explain the following with example:
   i) Decidability   ii) Decidable languages   iii) Undecidable languages.   **(12 Marks)**

OR

10   Write a short note on:
   a. Post correspondence problem
   b. Halting problems in Turning Machine
   c. Linear Bound Automation (LBA)
   d. Classes of P and NP   **(20 Marks)**

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18CS55

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
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. Explain elif, for, while, break and continue statements in python with examples for each.
   (10 Marks)
   c. Write a Python program to check whether a given number is even or odd. **(04 Marks)**

OR

2 a. How can we pass parameters in user defined functions? Explain with suitable example.
   (05 Marks)
   b. Explain local and global scope with local and global variables. **(08 Marks)**
   c. Demonstrate the concept of exception. Implement a code which prompts the user for Celsius temperature, convert the temperature to Fahrenheit, and print out the converted temperature by handling the exception. **(07 Marks)**

Module-2

3 a. What is list? Explain append( ), insert( ) and remove( ) methods with examples. **(08 Marks)**
   b. How is tuple different from a list and which function is used to convert list to tuple.
   (05 Marks)
   c. Create a function to print out a blank tic – tac – toe board. **(07 Marks)**

OR

4 a. Discuss get( ), item( ), keys( ) and values( ) Dictionary methods in python with examples.
   (08 Marks)
   b. With example code explain join( ) and split( ) string methods. **(06 Marks)**
   c. Develop a program to accept a sentence form the user and display the longest word of that sentence along with its length. **(06 Marks**

Module-3

5 a. What are regular expression? Describe question mark, star, plus-and dot Regex symbols with suitable python code snippet. **(09 Marks)**
   b. With code snippet, explain saving variables using the shelve module and PPrint Pformat( ) functions. **(06 Marks)**
   c. Write a program that reads a string with five characters which starts with 'a' and ends with 'z'. Print search successful if pattern matches string. **(05 Marks)**

OR

6 a. Explain functions of Shutil Module with examples. **(08 Marks)**
   b. Explain buttons in the Debug control widow. **(05 Marks)**
   c. What is meant by compressing files? Explain reading, extracting and creating ZIP files with code snippet. **(07 Marks)**

Module-4

7 a. What is class, object, attributes. Explain copy.copy( ) with an example. (06 Marks)
   b. Demonstrate pure functions and modifiers with examples. (08 Marks)
   c. Use the datetime module to write a program that gets the current date and prints that day of the week. (06 Marks)

OR

8 a. Explain operator overloading and polymorphism with examples. (08 Marks)
   b. Illustrate the concepts of inheritance and class diagrams with examples. (08 Marks)
   c. Write a function called print time that takes a time object and print it in the form hour : minute : second. (04 Marks)

Module-5

9 a. Explain parsing HTML with the BeautifulSoup Module with code snippet for creating finding an element and getting data. (09 Marks)
   b. What methods do Selenium's web element object have for simulating mouse clicks and keyboard keys. Explain with python code snippet. (06 Marks)
   c. Write a python program to access cell in a worksheet. (05 Marks)

OR

10 a. Write a program to get a list of all files with the .pdf extension in the current working director and sort them. (06 Marks)
    b. Demonstrate the json module with python program. (06 Marks)
    c. What are the advantages of CSV files? Explain the Reader objects and Writer objects with python code. (08 Marks)

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18CS56

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
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 a neat diagram a architecture of UNIX operating system. **(10 Marks)**
   b. List and explain the silent features of UNIX operating system. **(10 Marks)**

OR

2 a. What is a parent child relationship? With the help of neat diagram, explain UNIX file system. **(06 Marks)**
   b. Explain any five file related commands with an example. **(10 Marks)**
   c. With suitable example, bring out the differences between absolute and relative pathnames. **(04 Marks)**

Module-2

3 a. Which command is used for listing of file attributes? Explain the significance of each field. **(08 Marks)**
   b. File current permissions are rw_r_xr_ _ specify chmod expression required to change for the following using both relative and absolute methods:
   (i) rwxrwxrwx   (ii) r_ _r_ _ _ _   (iii) _ _ _ _ _ _ _ _ _
   (iv) _ _ _r_ _r_ _   (v) _ _ _ _ _ x_w_ **(10 Marks)**
   c. What is a shell? Briefly give the shell interpretive cycle. **(02 Marks)**

OR

4 a. With the help of an example, explain grep command with all the options. **(10 Marks)**
   b. Explain three standard files supported by UNIX. **(06 Marks)**
   c. What is the output for the following:
   (i) ls [ijk]*doc   (ii) [A – Z] ????*   (iii) *-[!s][!h]   (iv) *[!0 – 9] **(04 Marks)**

Module-3

5 a. Describe general UNIX file API's with syntax and explain each field in detail. **(10 Marks)**
   b. Explain with a neat diagram memory layout of a C program and briefly discuss the different functions used for memory allocation. **(10 Marks)**

OR

6 a. Explain the UNIX Kernal support for process considering parent – child process show the related data structures. **(10 Marks)**
   b. Bring out the differences between fork and vfork functions. **(05 Marks)**
   c. Explain getrlimit and setrlimit function with prototype. **(05 Marks)**

Module-4

7 a. Explain setuid and setgid functions with example and explain various ways to change user ids. (06 Marks)

   b. What are pipes? What are its limitations? Write a program to send data from parent to child over a pipe. (08 Marks)

   c. What are Interpreter Files? Give the difference between interpreter files and interpreter. (06 Marks)

OR

8 a. What is a FIFO? With a neat diagram, explain client server communication using FIFO. (08 Marks)

   b. What are stream pipe? What are the different ways to view stream pipes? (04 Marks)

   c. Explain briefly with example: (i) message queue   (ii) semaphores (08 Marks)

Module-5

9 a. What are signals? Mention different source of signals? Write a program to setup signal handlers for SIGINIT and SIGALRM. (10 Marks)

   b. What are Daemon process? Enlist their characteristics. Also write a program to transform a normal user process into a Daemon process. (10 Marks)

OR

10 a. Explain the kill( ) API and alaram( ) API. (10 Marks)

    b. Explain the Sigsetjmp and Siglongjmp functions with an example. (10 Marks)

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CBCS SCHEME

18CIV59

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Question Paper Version : **B**

Fifth Semester B.E Degree Examination, Jan./Feb. 2021
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.

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1. The Environmental Protection Act 1986 deals with
   a) Water   b) Air   c) Soil   d) All of these

2. How to remove leachate from landfill?
   a) By gravity   b) By pumping from low points
   c) Both a and b   d) None of these

3. Ground water is a source of trouble at which place
   a) Plains   b) Slopes   c) Rivers   d) Lakes

4. The hot spots of biodiversity are characterized by
   e) Low endemicity and low threat of extinction
   f) Low endemicity and high threat of extinction
   g) High endemicity and low threat of extinction
   h) High intensity and threat of extinction

5. The world environment day is on
   a) 5th June   b) 3rd October   c) 25th December   d) 11th July

6. Fossil fuels are converted into energy by
   a) Burning   b) Cooling   c) Sublimation   d) Melting

7. Which place in India the tidal energy has been experimented?
   a) Goa   b) Karnataka   c) Kerala   d) Tamil Nadu

8. India has the largest share of
   a) Manganese   b) Mica   c) Copper   d) Diamond

9. Which of the following are major environmental issues involved in mining?
   a) Air pollution from dust
   b) Water pollution
   c) Soil degradation
   d) all of these

10. In an ecosystem the flow of energy is
    a) Bidirectional   b) Cyclic   c) Unidirectional   d) Multidirectional

11. People who are exposed to radon in drinking of water may have risk of getting
    a) Cancer
    b) Typhoid
    c) Blue baby syndrome
    d) Cholera

12. Remote sensing uses which of the following waves in its procedure.
    a) Sonar waves
    b) Electromagnetic waves
    c) Gamma ray
    d) None of these

13. What is called for the practice of regulating forest resources to meet the society and industry while preserving forest health?
    a) Environmental Protection
    b) Sustainable forest management
    c) forest policy
    d) Unsustainable forest management

14. Soil erosion is prevented by
    a) Deforestation
    b) Afforestation
    c) Overgrazing
    d) Removal of vegetation

15. Which one of the following states is the leading produce of iron ore?
    a) Chhattisgarh   b) Jharkhand   c) Karnataka   d) Madhya Pradesh

16. Prevention and Control of Air Pollution Act in India was passed
    a) 1970   b) 1975   c) 1981   d) 1990

17. An important NGO involved in Global Environmental Protection.
    a) UNICEF   b) Green Peace   c) WHO   d) CPCB

18. Which one of the following is a source of sulphur dioxide in atmosphere?
    a) Volcanoes
    b) Thermal power station
    c) H_2SO_4 manufacturing
    d) All of these

19. The important non-metallic resource is
    a) Petroleum   b) Bauxite   c) Sidertile   d) None of these

20. Which of the following reservoirs contain most water?
    a) Atmosphere   b) biosphere   c) Ground water   d) Lakes and rivers

21. World Summit on sustainable development was held at
    a) Johansberg in 2002
    b) Rio de Janerio in 1992
    c) Kyoto in 1994
    d) Stockhom in 2000

22. Ozone layer thickness is measured in
    a) PPM   b) PPB   c) Decibels   d) Dobson units

23. Which of following related to GIS?
    a) Euclidean space   b) Ramanujan space   c) Pythagorean space   d) None of these

24. Remote sensing techniques make use of the properties of following radiation by the sensed objects
   a) Electric waves
   b) Sound waves
   c) Electromagnetic waves
   d) Wind waves

25. What is the fullform of NGOs?
   a) Non Governmental Organization
   b) Null Governmental Organizations
   c) Nice Governmental Organization
   d) None of these

26. Which one of the following has maximum genetic diversity in India?
   a) Tea
   b) Teak
   c) Mango
   d) Wheat

27. The carbon "credit is permit" is permit representing the right to emit
   a) One tone of Carbon Dioxide
   b) 10 tonnes of Carbon Dioxide
   c) 5 tonnes of Carbon Dioxide
   d) 15 tonnes of Carbon Dioxide

28. What is the role of NGOs in natural resource management?
   a) Creating awareness among the public on current environmental issues and solution
   b) Being involved in the protection of human rights to a clean environment
   c) Data generation on natural resources time line and history
   d) Making profit from Government

29. The primary objective of ISO14001 is
   e) An internationally agreed standard sets out the requirements for an environmental manage system
   f) It helps organizations to improve their environmental performance through more efficient use of resources
   g) It helps organization for the reduction of waste gaining competitive advantage and trust of stakeholders
   h) All the above

30. Which one of the following in not a renewable exhaustible natural resource?
   a) Aquatic animals
   b) Wild life
   c) Soil fertility
   d) Minerals

31. Eco-toxicology is study of
   a) Chemical interaction of organism and environment
   b) Physical interactions of organism and environment
   c) Thermal interaction of organism and environment
   d) Biological interaction organism and environment

32. What is the 1st step in primary treatment plants?
   a) Fine screening
   b) Course screening
   c) Chlorination
   d) Oxidation

33. What are the sources of air pollutants in the atmosphere?
   a) Coal fired power station
   b) Vehicle exhaust
   c) Industries
   d) Coal

34. Which of the following chemicals damage the ozone layer?
   a) Polyvinyl chloride
   b) Chlorofluorocarbons
   c) DDT
   d) Hydroflurocarbons

35. Which of these energy source is renewable?
   a) Wind
   b) Nuclear
   c) Coal
   d) Oil

36. Which one of the following is a great achievement of the Chipko movement?
    a) More trees are planted
    b) Development in Himalayan region
    c) Successfully resisted deforestation
    d) Soil erosion gets declined

37. The percentage of forest cover in India is
    a) 14.69%
    b) 15.39%
    c) 19.39%
    d) 19.67%

38. GIS stands for
    a) Geographic Information System
    b) Generic Information System
    c) Geological Information System
    d) Geographic Information Sharing

39. The effect of Acid Rain is
    a) Reduces soil fertility
    b) Increases atmospheric temperature
    c) Causing respiratory problem
    d) Skin cancer

40. Environmental protection is reasonability of
    a) Government of India
    b) NGO
    c) Individual
    d) All of these

41. Excess fluoride in drinking water is likely to cause
    a) Blue babies
    b) Fluorosis
    c) Fever
    d) Cough and chill

42. All the following waste can be incinerated except
    a) Reactive Chemical Waste
    b) Vaccine
    c) Mutilated parts
    d) Discarded drugs

43. Which Vaccination should be given to workers who deals with biomedical waste?
    a) Hbs Ag
    b) Tetanus
    c) Rabies
    d) Both a and b

44. Nickel is released from
    a) Alloys
    b) Display
    c) Calculators
    d) Circuit boards

45. Which of the following solid wastes describes the term 'Municipal Solid Waste'?
    a) Toxic
    b) Hazardous
    c) Non toxic
    d) Non-hazardous

46. The blue baby syndrome is caused by the contamination of water due to
    a) Phosphates
    b) Sulphur
    c) Arsenic
    d) Nitrates

47. The organic material of solid waste will decompose
    a) By the flow of water
    b) By filtration
    c) By drying
    d) By the oxidation in presence of oxygen

48. The pH value of the acid rain water is
    a) 5.7
    b) 7.0
    c) 8.5
    d) 7.5

49. The global warming may bring about the following changes in atmosphere
    a) Increase in temperature of earth
    b) Drought
    c) direct impact on human health
    d) All of these

50. Which agency deals with the health effect that may occur from environmental exposure to toxic chemicals?
    a) Environmental Protection Agency
    b) The Center for Disease Control and Prevention
    c) The Agency for Toxic Substances and Disease Registry
    d) The Nuclear Regulatory Commission

51. The primary source of Green House Gases (GHG) is
    a) Wind   b) Fossil fuel   c) Water   d) Green plants

52. The Kyoto protocol was adopted at the
    a) Third conference of UNFCC in 1997
    b) Convention on the trans boundary effects of industrial accidents
    c) United nations framework convention on climate change in 1992
    d) convention on Biological diversity

53. Which one of following is not a green house gas?
    a) Water vapour   b) Oxygen   c) Methane   d) Carbon monoxide

54. E.T.S stands for
    a) Emission Tracking system   b) Europe Trading System
    c) Environmental Tracking System   d) Engine Tracking System

55. The primary cause of acid rain around the world is due to
    a) Carbon dioxide   b) Sulphur dioxide   c) Carbon monoxide   d) Ozone

56. Ozone layer is present in
    a) Troposphere   b) Stratosphere   c) Mesosphere   d) Thermosphere

57. Sustainable development means
    a) Meeting present needs without compromising on future needs
    b) Progress in human well beings
    c) Balance between human needs and ability of earth to provide the resources
    d) All the above

58. Which of the following element make e-waste hazardous in nature?
    a) Lead   b) Glass   c) Plastic   d) Iron

59. What is the hazardous pollutant released from LED?
    a) Arsenic   b) Barium   c) Cobalt   d) Cadmium

60. Cyotoxic and expired drugs are disposed off by
    a) Dumping   b) Autoclave
    c) Incineration   d) Chemical disinfection

61. COD is
    a) Chemical Oxygen Demand
    b) Measure of dissolved impurities in water
    c) Amount of oxygen required to oxidize organic and organic impurities
    d) All the above

62. Which of the following compounds may be toxic to human beings?
    a) Amino acids   b) Polychlorinated biphenyl
    c) Vitamins   d) Proteins

63. Many rivers polluted due to
    a) Heavy flux of sewage
    b) Industrial effluents
    c) Agricultural and domestic waste
    d) All of these

64. The sound intensity in measured in
    a) dB
    b) NB
    c) Horse power
    d) MB

65. Air Pollution from automobiles can be controlled by fitting
    a) Electrostatic precipitator
    b) Wet Scrubber
    c) Catalytic converter
    d) All of these

66. Sound above what level are considered hazardous noise pollution
    a) above 75 dB
    b) above 30 dB
    c) above 150 dB
    d) above 120 dB

67. Noise pollution at residential area
    a) 45 dB
    b) 80 dB
    c) 55 dB
    d) 90 dB

68. Which of the following is not a man-made hazard?
    a) Leakage of toxic waste
    b) Wars and civil strife
    c) Drought
    d) Environmental pollution

69. The Bhopal gas tragedy was caused due to
    a) Methyl isocyanate leakage
    b) Nitrous oxide leakage
    c) Acid rain
    d) Radioactive poisoning

70. The Kyoto protocol is
    a) The response to treat the climate change
    b) To reduce the emission of green house gases
    c) a and b
    d) To give permission to emit green house gases

71. Select the correct statement about biodiversity.
    a) The desert animals of Rajasthan and Gujrat have a very high of animal species as well as rare animals.
    b) Large scale planting of biodiversity cotton has no adverse effect on biodiversity
    c) Western Ghats have a very high degree of species richness and endemism
    d) Conservation biodiversity is just a fad pursued by developing countries

72. Global warming can be controlled by
    a) Reducing deforestation and cutting down the use of fossil fuel
    b) Reducing afforestation and increasing the use of fossil fuel
    c) Increasing the deforestation and increasing the growth of human population
    d) Increasing deforestation and increasing the use of fossil fuels

73. Bhopal Gas Disaster is a kind of
    a) Natural disaster
    b) Man-made disaster
    c) None of these
    d) Water leakage

74. The instrument which records earthquake wave is called
    a) Climograph
    b) Seismograph
    c) Hyther graph
    d) None of these

75. Which of the following diseases appeared as public health concern in the last quarter of 20th century?
    a) HIV
    b) Ebola virus
    c) Corona Virus
    d) All of these

76. The National Disaster Management Authority (NDMA) is headed by
    a) President of India
    b) Prime minister of India
    c) Governor of States
    d) Chief Minister of States

77. Cloud seeding is process of
    a) Adding chemical material to cloud to obtain precipitation
    b) To get more rainfall
    c) It is artificial process to get rainfall during drought
    d) All the above

78. Which of the following has been used to seed clouds?
    a) Silver iodide
    b) Silver chromate
    c) Sodium Chloride
    d) Potassium chromate

79. The scientist who experimented cloud seeding first time
    a) Isaac Newton   b) Vincent Schaefer   c) Rutherford   d) C.V. Raman

80. Carbon trading deals
    a) Carbon emissions
    b) Acid rain
    c) Sulphur dioxide emissions
    d) None of these

81. Extensive planting of trees to increase forest cover is called
    a) Afforestation   b) Deforrestation   c) Agro forestation   d) None of these

82. The percentage of geographical area of country under forest cover is
    a) 23%   b) 43%   c) 13%   d) 33%

83. What is the permissible range of pH for drinking water as per Indian standards?
    a) 6 to 9   b) 6.5 to 7.5   c) 6 to 8.5   d) 6.5 to 8.5

84. Forest rich area in Karnataka is found in
    a) Western Ghats   b) Bandipur   c) Nagarhole   d) Mangalore

85. Major sources of fluoride is
    a) River water   b) Tooth paste   c) Ground water   d) food products

86. The oceans are the largest storage of water on earth containing
    a) 95% of earths water
    b) 85% of earths water
    c) 97% earths water
    d) 75% of earths water

87. Solar energy is an ideal energy source because of
    a) Unlimited supply
    b) No air and water pollution
    c) No hazardous byproducts
    d) All of these

88. The only disadvantages of hydrogen energy source
    e) Takes more energy to produce hydrogen than the energy that could be obtained from it.
    f) Causes air and water pollution
    g) Releases toxic byproducts
    h) Hazardous effect due to risk of leakage

89. Wind energy generation depends on
    a) Directions of wind
    b) Velocity of wind
    c) Humidity
    d) All of these

90. 'OTEC' is an energy technology that converts
   a) Energy in large tides of ocean to generate electricity
   b) Energy in ocean waves to generate electricity
   c) Energy in ocean due to thermal gradient to generate electricity
   d) Energy in fast moving ocean currents to generate electricity

91. Which of the following is not the meaning of ecosystem?
   e) Unit where in all organisms live a healthy life
   f) A small unit that can be self sufficient
   g) Co-existence of diverse things by mutual adjustment
   h) A unit which includes all the organisms in a given area interacting with physical environment to from a natural unit of stability

92. The factors responsible for stable ecosystem are balance between
   a) Predators and prey   b) Vegetation, herbivores and carnivores
   c) Competing species and biotic factors d) All of these

93. Which of it is not an example of ecosystem?
   a) Forest   b) Desert   c) Water   d) Grassland

94. E.I.A can be expanded as
   a) Environment and Industrial Act   b) Environment and Impact Activities
   c) Environmental Impact Assessment   d) Environmentally Important Activity

95. Earth day is held every year on
   a) 5th June   b) 23rd Nov   c) 22nd April   d) 26th Jan

96. Soil erosion removes surface soil which contains
   a) Organic matter   b) Plant nutrients   c) Both a and b   d) None of these

97. Mineral resources are
   a) Renewable   b) Non-renewable   c) Equally distributed d) None of these

98. Fluoride though is an effective agent to prevent dental caries has a permissible limit of
   a) 0.5 mg/lit of water   b) 1.5 mg/lit of water
   c) 5 mg/lit of water   d) 1.0 mg/lit of water

99. Deforestation means
   a) Maintenance of forest for recreation
   b) Creating land for habitant of wild life
   c) Conversion of forest land to agricultural land homes etc
   d) Planting trees

100. Decrease of oxygen level in water mainly causes
   a) Fluorosis   b) Death of aquatic life
   c) Water purification   d) All of these

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