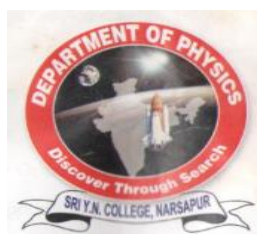




**SRI Y N COLLEGE (A), NARSAPUR**

**Course-1& Course II: Essentials and  
Applications of Mathematical, Physical and  
Chemical Sciences**

**Semester End Examination & Mid  
Examinations Model Question paper**



**2023-2024**

**DEPARTMENT OF PHYSICS**

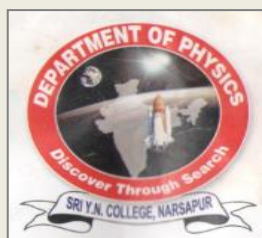
**SRI Y.N.COLLEGE (A)  
NARSAPUR**



**SRI Y N COLLEGE (A), NARSAPUR**

**SEMESTER-I**

**COURSE-1: ESSENTIALS AND  
APPLICATIONS OF MATHEMATICAL,  
PHYSICAL AND CHEMICAL SCIENCES**



**2023-2024**

**DEPARTMENT OF PHYSICS**

**SRI Y.N.COLLEGE (A)**

**NARSAPUR**



**Batch 2023-2027**  
**SRI Y.N.COLLEGE (AUTONOMOUS): NARSAPUR**  
**I B.Sc., Hon's under CBCS w.e.f A.Y. 2023-2024**  
**For I Semester Geography major**

**Course-1: Essentials and Applications of Mathematical, Physical and Chemical Sciences**  
**Course - 1**  
**SEMESTER-I**

## QUESTION BANK

### UNIT – I: ESSENTIALS OF MATHEMATICS

#### I. Multiple choice questions

1. The value of  $i^{108}$  is [     ]  
(A) 0                      (b) 1                      (c) i                      (d)  $-i$
2. The conjugate of  $\frac{1}{3+4i}$  is [     ]  
(a)  $3 + 4i$               (b)  $\frac{3-4i}{25}$               (c)  $3 - 4i$               (d) None of these
3. Which of the following is not defined? [     ]  
(a)  $\cos 0^\circ$               (b)  $\tan 45^\circ$               (c)  $\sec 90^\circ$               (d)  $\sin 90^\circ$
4.  $\vec{i} \cdot \vec{i} =$  [     ]  
(a) 0                      (b) 1                      (c)  $\vec{j}$                       (d)  $\vec{k}$
5. The value of  $\vec{i} \cdot (\vec{j} \times \vec{k}) + \vec{j} \cdot (\vec{i} \times \vec{k}) + \vec{k} \cdot (\vec{i} \times \vec{j})$  is [     ]  
(a) 1                      (b) -1                      (c) 2                      (d) 3
6.  $|\vec{i} - 2\vec{j} + 3\vec{k}| =$  [     ]  
(a) 14                      (b) 6                      (c) 1                      (d)  $\sqrt{14}$
7. Statistics means [     ]  
(a) to collect and tabulate                      (b) to analyse  
(c) to conclude                      (e) all of the above
8. Best measure of central tendency (average) is [     ]  
(a) Median                      (b) Mode                      (c) Mean                      (d) None of these
9. Median is \_\_\_\_\_ [     ]  
(a) Most repeated value                      (b) Middle value  
(c) Product value                      (d) None
10. Mode is \_\_\_\_\_ [     ]  
(a) Most repeated value                      (b) Middle Value  
(c) Product value                      (d) None of these

#### II. Fill in the blanks

11. The value of  $(\sqrt{-25}) \times (\sqrt{-9})$  is \_\_\_\_\_
12. If  $\tan A = \frac{2}{3}$ , then the value of  $\sin^2 A + \cos^2 A =$  \_\_\_\_\_
13.  $\vec{i} \times \vec{i} =$  \_\_\_\_\_
14. The arithmetic mean of  $1, 2, 3, \dots, n$  is \_\_\_\_\_

15. If mode of the following data is 7, then the value of k in

2,4,6,7,5,6,10,6,7,2k+1,9,7,13 is\_\_\_\_\_

### III. Matching Questions

16. Reciprocal of  $1 - i$  lies in

[     ] (Ans.) First quadrant

17. The value of  $\frac{\cot 30^\circ}{\tan 60^\circ}$  is

[     ] (Ans.) 0

18.  $\cot^2 \theta - \frac{1}{\sin^2 \theta} =$

[     ] (Ans.) -1

19.  $\vec{i} \times \vec{j}$

[     ] (Ans.)  $\vec{k}$

## Unit-2: ESSENTIALS OF PHYSICS

### I. Multiple Choice Questions

1. Which system of units is internationally accepted? [    ]  
(a) CGS system    (b) FPS system    (c) MKS system    (d) SI system
2. What is the SI unit of luminous intensity? [    ]  
(a) Candela    (b) Lux    (c) Lumen    (d) watt
3. Newton's law of motion is not valid when: [    ]  
(a) Mass remains constant    (b) Forces are balanced  
(c) Mass is variable    (d) The velocity of an object is constant
4. The second law of thermodynamics is concerned with [    ]  
(a) Energy conservation    (b) Energy Transfer direction  
(c) Temperature measurement    (d) Heat capacity of solids
5. Which of the following electromagnetic waves has the highest frequency? [    ]  
(a)  $\gamma$  rays    (b) visible light    (c) Infrared rays    (d) Radio waves
6. Which type of wave can propagate through vacuum? [    ]  
(a) Electromagnetic waves    (b) Acoustic waves  
(c) Both acoustic & electromagnetic waves    (d) None of the above.
7. Which type of wave is sound propagated through air [    ]  
(a) Longitudinal Waves    (b) Transverse Waves  
(c) Electromagnetic Waves    (d) Mechanical Waves.
8. Matter waves are [    ]  
(a) Electromagnetic waves    (b) Transverse waves  
(c) Longitudinal waves    (d) Exhibit diffraction
9. Electrons determine the properties and bonding behavior of an atom [    ]  
(a) Nuclear    (b) Chemical  
(c) Physical    (d) Magnetic
10. The de-Broglie wavelength can be measured if it of the order of: [    ]  
(a) The size of the atom    (b) The size of the Nucleus  
(c) The size of the universe    (d) The size of the molecule

### II. Fill in the Blanks

11. The First law of thermodynamics is based on the principle of \_\_\_\_\_
12. Electromagnetic waves in Nature are \_\_\_\_\_
13. The work done by the magnetic field on a moving charge is \_\_\_\_\_
14. The Spectrum of Sun is \_\_\_\_\_
15. What is the SI unit of length \_\_\_\_\_

### III. Matching Questions

16. Which planet is closest to the sun? [     ] (Ans.) Mercury
17. The galaxy to which our solar system belongs is called [     ] (Ans.) Milky Way
18. Which has the longest wave length? [     ] (Ans.) Radio rays
19. SI Unit of electric current [     ] (Ans.) Ampere
20. The mass energy relation is given by [     ] (Ans.)  $E=mc^2$

## Unit-3: ESSENTIALS OF CHEMISTRY

### I. Multiple Choice questions

1. The science which deals with the study of matter is [     ]  
(a) Material science (b) Physics  
(c) Genetics (d) Chemistry
2. What is the primary function of carbohydrates in living organisms? [     ]  
(a) Energy storage (b) Structural support  
(c) Hormone production (d) Above all
3. Which vitamin is essential for vision, healthy skin, and mucus membranes? [     ]  
(a) Vitamin C (b) Vitamin A  
(c) Vitamin D (d) Vitamin E
4. What does environmental chemistry focus on? [     ]  
(a) Drug discovery  
(b) Pollution and waste management  
(c) Electronic configuration of elements  
(d) Energy production
5. Which vitamin helps the body absorb calcium for bone health? [     ]  
(a) Vitamin C (b) Vitamin A  
(c) Vitamin D (d) Vitamin K
6. In which field does chemistry play a crucial role in solving crimes? [     ]  
(a) Medicinal chemistry (b) Analytical chemistry  
(c) Industrial chemistry (d) Forensic chemistry
7. Which branch of chemistry involves studying metals and minerals? [     ]  
(a) Inorganic chemistry (b) Organic chemistry  
(c) Analytical chemistry (d) Medicinal chemistry
8. What is the primary function of Vitamin K in the body? [     ]  
(a) Energy metabolism (b) Blood clotting  
(c) Cell builder (d) Shield against infections
9. What is the general molecular formula for carbohydrates? [     ]  
(a)  $(\text{NH}_2)_n$  (b)  $(\text{COOH})_n$   
(c)  $(\text{CH}_2\text{O})_n$  (d)  $(\text{C}_2\text{H}_5)_n$
10. How atomic size varies from top to bottom in groups of periodic table [     ]  
(a) Increases (b) Decreases  
(c) No change (d) Changes to elliptical

### II. Fill in the blanks

11. Medicinal Chemistry plays a crucial role in \_\_\_\_\_discovery.
12. Carbohydrates serve as a primary source of \_\_\_\_\_for the body.
13. Saturated fats are typically \_\_\_\_\_at room temperature.
14. \_\_\_\_\_Chemistry helps to understand pollution problems.
15. The periodic table provides valuable information about the element's \_\_\_\_\_

### III. Matching Questions

16. Vitamin A    [    ] (Ans.) Important for vision, healthy skin & mucous membranes
17. Vitamin K    [    ] (Ans.) Helps blood clot and prevents excessive bleeding.
18. Vitamin B6    [    ] (Ans.) Essential for nerve function and cell building
19. Vitamin C    [    ] (Ans.) Acts as a shield against illnesses and promotes healing.
20. Vitamin D    [    ] (Ans.) Helps bones and teeth grow strong and aids in calcium utilization.



## UNIT- IV: ESSENTIALS OF GEOGRAPHY

### I. Multiple Choice questions

1. The mantle occupies \_\_\_\_\_ of the Earth. [      ]  
(a) 15% (b) 1%  
(c) 84% (d) 48%
2. Which among the following is made of solid rocks? [      ]  
(a) Core (b) Mantle  
(c) Crust (d) None of the options
3. In which state is the core of the Earth? [      ]  
(a) Solid (c) Gas  
(b) Liquid (d) Both solid and liquid
4. The uppermost part of the mantle and crust are called the [      ]  
(a) Hydrosphere (b) Atmosphere  
(c) Lithosphere (d) Exosphere
5. Why is the term 'SIAL' used to refer to the crust and lithosphere [      ]  
(a) Silica (Si) and Aluminium (Al) (b) Silica (Si) and Alluvial (Al)  
(c) Silicon Oxide (Si) and Aluminium (Al) (d) Silicon Dioxide and Aluminum Oxide
6. Earth's layers are composed of [      ]  
(a) Crust, Mantle , water (b) Air , core , water  
(c) Crust , Mantle , Core (d) None of the above
7. Which of the following is a nonrenewable energy resource [      ]  
(a) Solar (b) Methane  
(c) Hydroelectric (d) Coal
8. From the list given below pick the item that is not a natural resource [      ]  
(a) Soil (b) Water  
(c) Electricity (d) Air
9. The most rapidly dwindling natural resource in the world is [      ]  
(a) Water (b) Forests  
(c) Wind (d) Sunlight
10. Which of the following is an example of non-biodegradable waste [      ]  
(a) Food waste (b) Plastic  
(c) Paper (d) Wood
11. Which of the following is not a method of soil conservation [      ]  
(a) Contour ploughing (b) Terrace farming  
(c) Crop rotation (d) Deforestation
12. Resource Conservation Policy introduced by [      ]  
(a) Gifford Pinchot (b) Zimmer Men  
(c) Jean Brunet (d) M.S. Swaminathan
13. Who was the scientist who classified resources scientifically [      ]  
(a) Zimmer Men (b) John W Alexander  
(c) Alexander Von Humboldt (d) W.M. Davis

14. How many essential elements of Remote sensing [      ]  
 (a) Two (b) Three  
 (c) Five (d) Four
15. IRS is stand by [      ]  
 (a) Indian Remote Sensing (b) Indian Remote Satellite  
 (c) Indian Remote Service (d) Internal Remote sensor
16. Who is the founder of Remote Sensing [      ]  
 (a) Evelyn Pruitt (b) Nicéphore Niépce  
 (c) Wilbur Wright (d) Gaspard-Félix Tournacho
17. The system that uses the sun as a source of electromagnetic energy and records the naturally radiated and reflected energy from the object is called [      ]  
 (a) Geographical Information System (b) Global Positioning System  
 (c) Passive Remote Sensing (d) Active Remote Sensing
18. ISRO abbreviation is [      ]  
 (a) Indian Satellite Remote Organization  
 (b) Indian Space Research Observation  
 (c) Indian Space Research Organization  
 (d) Indian Satellite Research Organization
19. Which factors affects the spatial resolution of remote sensing imagery (      )  
 (a) The wavelength of the radiation used  
 (b) The altitude of the platform carrying the sensor  
 (c) The type of sensor used  
 (d) All of the above
20. Which of the following remote sensing platforms is best suited for monitoring ocean temperatures? (      )  
 (a) Airborne platforms (b) Spaceborne platforms  
 (c) Ground-based platforms (d) All of the above
21. Which of the following is the largest delta of the world? (      )  
 (a) Mississippi (b) Nile  
 (c) Ganga (d) Bolga
22. Which of the river is known as Yellow river (      )  
 (a) Yangtisiquang (b) Sequang  
 (c) Hwang – ho (d) Yamuna
23. Which of the following is the longest river of the World ? (      )  
 (a) Amazon (b) Nile  
 (c) Kango (d) Mississippi
24. Water dividing line of Indian rivers passes through – (      )  
 (a) Aravali Range (b) Satpura Range  
 (c) Vindhychal ranges (d) Himalayan ranges
25. Which Delta is also known Sundarvan (      )  
 (a) Ganga delta (b) Kaveri delta  
 (c) Narmada delta (d) Godavari delta

26. Which of the following is glacier is not found in the UP Himalaya ( )  
 (a) Milan (b) Gangotri  
 (c) Kosa (d) Batura
27. Which of the following is not the volcanic mountain ( )  
 (a) Cotopaxi (b) Mt. Taal  
 (c) Fuziyama (d) Atlas
28. V-Shaped valley is formed by ( )  
 (a) River (b) Glacier  
 (c) Wind (d) Ground Water
29. A rapidly moving and often large sea wave generated submarine earthquake is ( )  
 (a) Typhoon (b) Tsunami  
 (c) Cyclone (d) Hurricane
30. Geomorphology is study of ( )  
 (a) Relief feature (b) Oceans  
 (c) Mountains (d) Plateau

## II. Fill in the blanks

31. Remote sensing is a \_\_\_\_\_ recording of information.
32. \_\_\_\_\_ radiation is generally used in remote sensing technology.
33. The continental crust is basically made up of a \_\_\_\_\_
34. The upper mantle and Earth crust together called a \_\_\_\_\_
35. \_\_\_\_\_ Platforms are used to record detailed information about the objects features of the earth's surface.
36. Renewable resources are \_\_\_\_\_
37. Resources that get replenished in nature are called \_\_\_\_\_
38. \_\_\_\_\_ is considered the accumulation of different branches of earth science.
39. Physical features are the natural features are called \_\_\_\_\_
40. \_\_\_\_\_ is the study of landforms and the processes that shape them.
41. Atlas maps are mainly of \_\_\_\_\_
42. \_\_\_\_\_ are the highest mountain ranges of the world.
43. \_\_\_\_\_ are those land forms they are formed due to the underground water action.
44. The study of weather is known as \_\_\_\_\_
45. The solar energy that reaches earth is called \_\_\_\_\_

### III. Matching Questions

46. Core	[     ]	Ans.) Innermost layer
47. Clay	[     ]	Ans.) Changes into Slate
48. SiAl	[     ]	Ans.) Silica and Alumina
49. Resource conservation Policy	[     ]	Ans.) Gifferr Pinchot
50. Renewable resources	[     ]	Ans.) Plants and Water
51. Passive Remote Sensing	[     ]	Ans.) Landsat
52. Active Remote Sensing	[     ]	Ans.) LiDAR
53. Continental Drift Theory	[     ]	Ans.) Wegener
54. Father of Modern Geography	[     ]	Ans.) Humboldt
55. Largest Physiography	[     ]	Ans.) Deccan Plateau
56. Geo synchronous	[     ]	Ans.) METEOSAT
57. Kelvin Scale	[     ]	Ans.) Temperature Measure
58. Bird foot delta	[     ]	Ans.) Mississippi river
59. Sundarbans	[     ]	Ans.) West Bengal
60. Sorrow of China	[     ]	Ans.) Hwang – ho

## I. Multiple Choice Questions

- 11

## II. Fill in the Blanks

11. WAN stands for\_\_\_\_\_
12. The two kinds of Main Memory are\_\_\_\_\_
13. \_\_\_\_\_refers to the physical parts of a computer that you can see and touch.
14. A Firewall is \_\_\_\_\_
15. The Unauthorized intrusion in to a Computer Network is \_\_\_\_\_

## III. Matching Questions

- |                                    |   |
|------------------------------------|---|
| 16. Very Large Scale Integration   | [    ] (Ans.) Fourth Generation         |
| 17. Verifying the identity of user | [    ] (Ans.) Authentication            |
| 18. DNS is also called as          | [    ] (Ans.) Phone book of Internet    |
| 19. MAN                            | [    ] (Ans.) Metropolitan Area Network |
| 20. Inventor of WWW                | [    ] (Ans.) Tim Berners-Lee           |



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**SEMESTER-I**

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## QUESTION BANK- ANSWERS

### UNIT – I: ESSENTIALS OF MATHEMATICS

#### I. Multiple choice questions

1. (b) 1
2. (b)  $\frac{3-4i}{25}$
3. (c)  $\sec 90^\circ$
4. (b) 1
5. (d) 3
6. (d)  $\sqrt{14}$
7. (d) All of the above
8. (c) Mean
9. (b) Middle Value
10. (a) Most repeated value

#### II. Fill in the blanks

11. -15
12. 1
13.  $\bar{0}$
14.  $\frac{n+1}{2}$
15. 3

#### III. Matching Questions

16. First quadrant
17. 0
18. -1
19.  $\bar{k}$

## **UNIT – II: ESSENTIALS OF PHYSICS**

### **I. Multiple Choice Questions**

1. (d) SI system
2. (a) Candela
3. (c) Mass is variable
4. (b) Energy Transfer direction
5. (a)  $\gamma$  rays
6. (a) Electromagnetic waves
7. (a) Longitudinal Waves
8. (d) Exhibit diffraction
9. (b) Chemical
10. (a) The size of the atom

### **II. Fill in the Blanks**

11. Conservation of energy
12. Transverse
13. Always zero
14. Continuous
15. Meter

### **III. Matching Questions**

16. Mercury
17. Milky Way
18. Radio rays
19. Ampere
20.  $E=mc^2$



### **Unit-III: ESSENTIALS OF CHEMISTRY**

#### **I. Multiple choice questions**

1. (d) Chemistry
2. (d) Above all
3. (b) Vitamin A
4. (b) Pollution and waste management
5. (c) Vitamin D
6. (d) Forensic Chemistry
7. (a) Inorganic Chemistry
8. (b) Blood Clotting
9. (c)  $(\text{CH}_2\text{O})_n$
10. (a) Increases

#### **II. Fill in the blanks**

11. Drug
12. Energy
13. Solids
14. Environmental
15. Behaviour

#### **III. Match the following**

35. Important for vision, healthy skin & mucous membranes
36. Helps blood clot and prevents excessive bleeding.
37. Essential for nerve function and cell building
38. Acts as a shield against illnesses and promotes healing.
39. Helps bones and teeth grow strong and aids in calcium utilization.

## **UNIT- IV: ESSENTIALS OF GEOGRAPHY**

### **I. Multiple choice questions**

1. (c) 84%
2. (b) Mantle
3. (d) Both solid and liquid
4. (c) Lithosphere
5. (a) Silica (Si) and Aluminium (Al)
6. (c) Crust , Mantle , Core
7. (d) Coal
8. (c) Electricity
9. (b) Forests
- 10.(b) Plastics
- 11.(d) Deforestation
- 12.(a) Gifferr pincat
- 13.(a) Zimmer Men
- 14.(b) Three
- 15.(a) Indian Remote Sensing
- 16.(a) Evelyn Pruitt
- 17.(d) Active Remote sensing
- 18.(c) Indian Space Research Organization
- 19.(d) All of the above
- 20.(b) Spaceborne platforms
- 21.(c) Ganga
- 22.(c) Hwang – ho
- 23.(b) Nile
- 24.(a) Aravali Range
- 25.(a) Ganga delta
- 26.(d) Batura
- 27.(d) Atlas
- 28.(a) River
- 29.(b) Tsunami
- 30.(a) Relief feature

## **II. Fill in the Blanks**

- 31. None contact
- 32. Electromagnetic radiation
- 33. Silica and Alumina
- 34. Lithosphere
- 35. Ground Bourne
- 36. Non – exhaustible resources
- 37. Renewable resources
- 38. Physical Geography
- 39. Earth's Surface
- 40. Geomorphology
- 41. Small Scale
- 42. Himalayas
- 43. Karst land forms
- 44. Meteorology
- 45. Insolation

## **III. Matching Questions**

- 46. (Ans.) Innermost layer
- 47. (Ans.) Changes into Slate
- 48. (Ans.) Silica and Alumina
- 49. (Ans.) Giffers Pincat
- 50. (Ans.) Plants and Water
- 51. (Ans.) Landsat
- 52. (Ans.) LiDAR
- 53. (Ans.) Wegner
- 54. (Ans.) Humboldt
- 55. (Ans.) Deccan Plateau
- 56. (Ans.) METEOSAT
- 57. (Ans.) Temperature Measure
- 58. (Ans.) Mississippi river
- 59. (Ans.) West Bengal
- 60. (Ans.) Hwang - ho

## **UNIT-V: ESSENTIALS OF COMPUTER SCIENCE**

### **I. Multiple Choice Questions:**

1. (a) CPU
2. (b) Gaming
3. (c) RAM
4. (d) All
5. (c) HTML
6. (b) Carbon Copy
7. (b) Malicious Software
8. (c) Internet Service Provider
9. (d) All of the above
10. (d) Spam

### **II. Fill in the Blanks**

11. Wide Area Network
12. RAM and ROM
13. Hardware
14. Network Security Device
15. Hacking

### **III. Matching Questions**

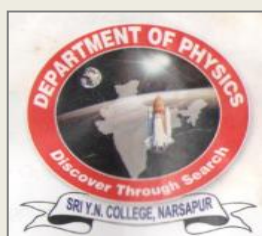
16. Ans) Fourth Generation
17. Ans) Authentication
18. Ans) Phone book of Internet
19. Ans) Metropolitan Area Network
20. Ans) Tim Berners-Lee



**SRI Y N COLLEGE (A), NARSAPUR**

**SEMESTER-II**

**COURSE-2: ADVANCES IN  
MATHEMATICAL, PHYSICAL AND  
CHEMICAL SCIENCES**



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**SEMESTER-I**

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**QUESTION BANK**

**UNIT – I: ADVANCES IN BASIC MATHEMATICS**

**I. Multiple Choice Questions**

1. The equation of the line which is parallel to x – axis and passing through the point (3, –4) is [     ]  
(a)  $y + 4 = 0$  (b)  $y - 4 = 0$   
(c)  $x + 4 = 0$  (d)  $x - 4 = 0$
2. The equation of a straight line, whose y – intercept is -3 and which is parallel to the line joining the points (–2,3) and (4, –5) [     ]  
(a)  $4x - 3y + 9 = 0$  (b)  $4x - 3y - 9 = 0$   
(c)  $4x + 3y + 9 = 0$  (d)  $3x + 4y + 9 = 0$
3. The equation of the line passing through the point (1,2) and perpendicular to the line  $x + y + 1 = 0$  is [     ]  
(a)  $y - x + 1 = 0$  (b)  $y - x - 1 = 0$   
(c)  $y - x + 2 = 0$  (d)  $y - x - 2 = 0$
4. Find the value of  $\lim_{x \rightarrow 0} \frac{\sqrt{1+x}-1}{x}$  [     ]  
(a)  $\frac{1}{2}$  (b)  $\frac{3}{2}$  (c)  $-\frac{1}{2}$  (d) 1
5. Find the value of  $\lim_{x \rightarrow 2} \frac{x^3-2x^2}{x^2-5x+6}$  [     ]  
(a) 0 (b) 4 (c) - 4 (d) None of these
6.  $\frac{d}{dx} \log(\sec x + \tan x) =$  [     ]  
(a)  $\frac{1}{\sec x + \tan x}$  (b)  $\sec x$  (c)  $\tan x$  (d)  $\sec x + \tan x$
7.  $\frac{d}{dx} (e^{\sin^{-1} x + \cos^{-1} x}) =$  [     ]  
(a)  $\frac{2}{\sqrt{1-x^2}}$  (b) 0 (c)  $\frac{1}{\sqrt{1-x^2}}$  (d)  $e^{\sin^{-1} x + \cos^{-1} x}$
8.  $\int \frac{f'(x)}{f(x)} dx =$  [     ]  
(a)  $\log|f(x)| + c$  (b)  $|f(x)| + c$   
(c)  $\log|f(x)|^2 + c$  (d) None of these
9.  $\int \log x dx =$  [     ]  
(a)  $x \log x - x + c$  (b)  $x \log x + x + c$   
(c)  $\frac{1}{x} + c$  (d)  $\frac{1}{2} (\log x)^2 + c$

10. The matrix  $P = \begin{bmatrix} 0 & 0 & 4 \\ 0 & 4 & 0 \\ 4 & 0 & 0 \end{bmatrix}$  is a [      ]
- (a) Square matrix (b) Diagonal matrix  
(c) Unit matrix (d) None of these

## II. Fill in the Blanks

11. The distance between the points (2,3,5) and (4,3,1) is \_\_\_\_\_
12.  $\lim_{x \rightarrow 3^+} \frac{x}{|x|} =$  \_\_\_\_\_
13.  $\lim_{x \rightarrow 0} \frac{|\sin x|}{x} =$  \_\_\_\_\_
14. If  $x = at^2, y = 2at$  then  $\frac{dy}{dx} =$  \_\_\_\_\_
15. The value of determinant  $\begin{vmatrix} 1 & 2 & 4 \\ -1 & 3 & 0 \\ 4 & 1 & 0 \end{vmatrix}$  is \_\_\_\_\_

## III. Matching Questions

16. The point slope form of a line is [      ] (Ans.)  $y - y_1 = m(x - x_1)$
17. Normal form of a line is [      ] (Ans.)  $x \cos \alpha + y \sin \alpha = p$
18.  $\lim_{x \rightarrow 0} \frac{\sin x}{x}$  [      ] (Ans.) 1
19.  $\lim_{x \rightarrow 0} \frac{a^x - 1}{x}$  [      ] (Ans.)  $\log a$
20.  $\int e^x \{f(x) + f'(x)\} dx$  [      ] (Ans.)  $e^x f(x) + c$

## Unit-2: ADVANCES IN PHYSICS

### I. Multiple Choice Questions

1. Which energy source contributes the most to the total primary energy production in India ? [    ]  
(a) Oil            (b) Natural gas            (c) Coal            (d) Nuclear            (e) Hydro-power
2. Which energy conversion process has the high efficiency for converting thermal energy [    ]  
(a) Burning fossil fuels            (b) Photovoltaic (PV) cells  
(c) Fuel Cells            (d) Wind turbines
3. What effect limits the energies at which electron-hole pairs are present in quantum dots? [    ]  
(a) Quantum confinement effect            (b) Band gap effect  
(c) Coulomb force effect            (d) Photoluminescence effect
4. Which of the following materials are commonly used to prepare quantum dots? [    ]  
(a) Noble metals like gold and silver            (b) Organic polymers  
(c) Heavy metals like cadmium and lead            (d) Insulating materials like glass
5. In quantum computing, what fundamental units are being investigated as prospective candidates for quantum dots? [    ]  
(a) Electrons            (b) Protons            (c) Quarks            (d) Qubits
6. In which field of medicine is nanotechnology most commonly used to create novel technologies and improve diagnostics and treatments? [    ]  
(a) Neurology            (b) Oncology  
(c) Cardiology            (d) Ophthalmology
7. What is the most well known shape memory alloy (SMA) composed of roughly 50% Nickel and 50% titanium? [    ]  
(a) Nitinol            (b) Flexinol            (c) Niti Alloy            (d) Super-elastic Niti wire
8. What is the primary application of shape memory alloy in the medical field? [    ]  
(a) Building adaptable robotic systems  
(b) Making self-fitting clothing  
(c) Creating stents and surgical instruments  
(d) Designing smart textiles
9. What property of Nitinol allows it to regain its original shape after going through significant deformations? [    ]  
(a) Super elasticity            (b) Thermo chromism  
(c) Ferromagnetism            (d) Fluorescence
10. Which field of engineering can benefit from the use of shape memory materials to create self-repairing structures and shape-changing parts? [    ]  
(a) Bio medical engineering            (b) Mechanical engineering  
(c) Civil engineering            (d) Robotics engineering



## II. Fill in the Blanks

11. Nano materials are \_\_\_\_\_ types?
12. \_\_\_\_\_ principle is used by solar cells to produce electricity.
13. When quantum dots are illuminated using UV light \_\_\_\_\_ get sufficient energy to break free from their atoms.
14. \_\_\_\_\_ difference produce a glow that more red quantum dots.
15. Displays using quantum dots have the benefit of consuming \_\_\_\_\_ power than other displays.

## III. Matching Questions

- |   |  |
|---|--|
| 16. IGRT stands for   | [    ] (Ans.) Image-Guided Radiation Treatment |
| 17. BB84 stands for   | [    ] (Ans.) Bennelt – Brasard 1984           |
| 18. Types of Nano materials   | [    ] (Ans.) Four                             |
| 19. The security of the key distributed is based on the principle is            | [    ] (Ans.) Quantum Mechanics                |
| 20. Which energy source has the highest percentage of global energy consumption | [    ] (Ans.) Oil                              |

## Unit-3: ADVANCES IN CHEMISTRY

### I. Multiple Choice Questions

1. Which phase involves submitting a New Drug Application (NDA) for regulatory approval? [    ]  
(a) Registry phase (b) Clinical development  
(c) Lead optimization (d) Discovery phase
2. What does ADME stand for in the drug development process? [    ]  
(a) Analytical Development and Manufacturing Evaluation  
(b) Advanced Drug Modeling and Evaluation  
(c) Affinity, Dosage, Monitoring, Evaluation  
(d) Absorption, Distribution, Metabolism, Excretion
3. What is the primary focus of Structure-Based Drug Design (SBDD)? [    ]  
(a) Determining target protein structures (b) Analyzing ligand structures  
(c) Identifying potential targets (d) Synthesizing lead compounds
4. In drug discovery process, which phase involves evaluating ADME and toxicity profiles of lead compounds? [    ]  
(a) Discovery phase (b) Development phase  
(c) Registry phase (d) Experimental testing
5. Chemical biology is valuable for studying disease progression, monitoring treatment responses, and gaining insights into cellular and molecular processes. This statement primarily highlights its application in: [    ]  
(a) Drug discovery (b) Disease research  
(c) Environmental monitoring (d) Biotechnology
6. In biotechnology, chemical biology is used for creating: [    ]  
(a) Engineered organisms (b) Drug targets  
(c) Biosensors (d) Chemical probes
7. What is the consequence of habitat destruction caused by chemical pollutants? [    ]  
(a) Increased biodiversity (b) Enhanced ecological balance  
(c) Habitat loss (d) Soil fertility improvement
8. Which respiratory issue can be caused or exacerbated by air pollutants? [    ]  
(a) Diabetes (b) Asthma  
(c) Arthritis (d) Migraines
9. Chemical pollutants cause neurological effects are [    ]  
(a) Carbon dioxide (b) Oxides of sulphur  
(c) Lead and Mercury (d) Oxides of nitrogen
10. The excessive plant nutrient input to any water body leads to rapid growth of algae is called [    ]  
(a) Water pollution (b) Eutrophication  
(c) Acid rain (d) Habitat destruction

## II. Fill in the Blanks

11. Nano sensors can detect contaminants and pathogens in food products, contributing to ensuring \_\_\_\_\_
12. Imatinib is used to treat certain types of \_\_\_\_\_
13. Titanium dioxide is a widely used photocatalyst for \_\_\_\_\_
14. The role of CADD in drug discovery primarily lies in the \_\_\_\_\_ phase, reducing time and cost.
15. \_\_\_\_\_ enables the systematic identification of novel potential uses for drugs already approved for other indications.

## III. Matching Questions

- |                       |        |  |
|-----------------------|--------|--|
| 16. Hit validation    | [    ] | (Ans.) Select top-ranking ligands for validation           |
| 17. Food safety       | [    ] | (Ans.) Contaminant detection                               |
| 18. Biotechnology     | [    ] | (Ans.) Designing and constructing novel biological systems |
| 19. Chemical genomics | [    ] | (Ans.) Large scale screening of small molecules            |
| 20. Eutrophication    | [    ] | (Ans.) Excessive growth of algae                           |

## UNIT- IV: ADVANCED APPLICATIONS GEOGRAPHY

### I. Multiple Choice Questions

1. The site of human settlement refers to [       ]  
(a) Location of human settlement in any area  
(b) Relation between environment and human settlement  
(c) Situation of human settlement near urban area  
(d) The physical and cultural characteristics and the attribute of the place
2. What is the big segment for defining urban and rural area [       ]  
(a) Size of population (b) Activity  
(c) Settlement pattern (d) Income
3. The concept of Rural – Urban fringe was propounded by [       ]  
(a) Pahl (b) Homar Hoyt  
(c) Patrrick Geddas (d) R.J.Pryor
4. Rural house is an index of the [       ]  
(a) Modern Architectural design (b) Fashion and style  
(c) Environment (d) Locally available materials
5. Eskimos are the primitive people living in [       ]  
(a) Western Europe (b) North America  
(c) North Asia (d) Central Africa
6. The winter snow house of Eskimos are called [       ]  
(a) Kayak (b) Yurt  
(c) Igloo (d) Toupic
7. To which species is the Gond tribe related [       ]  
(a) Dravidian (b) Proto – Astroloid  
(c) Nordic (d) Negrito
8. Who among the following is the elder god of Gond tribe [       ]  
(a) Marang Buru (b) Gurudev  
(c) Thakur Dev (d) Dharmesh
9. Gujjar a tribal group of [       ]  
(a) Nomadic (b) Semi – Nomadic  
(c) Uncultured (d) Matrilineal
10. In which state is Gujjar tribe [       ]  
(a) Himachal Pradesh (b) Punjab  
(c) Jammu and Kashmir (d) Haryana
11. Fishing, Mining, Farming and Forestry are examples of what economic [       ] activity  
(a) Primary (b) Secondary  
(c) Tertiary (d) Quaternary
12. When we produce a good by exploiting natural resources [       ]  
(a) Primary sector (b) Service sector  
(c) Public sector (d) Tertiary sector

13. Name one functioning activity of the Tertiary sector. [      ]  
 (a) This sector gradually became associated with different kinds of industries.  
 (b) Activities in which natural products are changed into other forms through ways of manufacturing.  
 (c) Produce a good by exploiting natural resources.  
 (d) Goods that are produced would need to be transported by trucks or trains and then sold in wholesale and retail shops.
14. The task of measuring GDP is undertaken by the [      ]  
 (a) State government (b) Provincial government  
 (c) All of the options are correct (d) Central government
15. What is the main driver of international migration? [      ]  
 (a) Good conditions in home countries (b) Poor conditions in home countries  
 (c) Good conditions in receiving countries (d) Poor conditions in receiving countries
16. Which state of India, receives maximum migrants [      ]  
 (a) Maharashtra (b) Punjab  
 (c) Haryana (d) Gujarat
17. What are the causes of Migration [      ]  
 (a) Poverty (b) Education  
 (c) Health (d) All
18. Which kind of data are to be used by GIS. [      ]  
 (a) Spatial (b) Binary  
 (c) Numeric (d) Complex
19. GIS stands for - [      ]  
 (a) Global Information System (b) Global information Scheme  
 (c) Geographic Information system (d) Geographic Information scheme
20. Which is known as spatial database [      ]  
 (a) Current databases (b) Mono databases  
 (c) Geo data bases (d) Decimal values
21. The term Geography derived from [      ]  
 (a) Combination of two Latin words (b) Combination of two American words  
 (c) Combination of two Greek words (d) Combination of two Spanish words
22. The term Geography was firstly used by [      ]  
 (a) Freeman and Raup (b) Hipparcus  
 (c) Posidonious (d) Eratasthonese
23. Who was the first geographer that prepare a world map to scale [      ]  
 (a) Anaximander (b) Thales  
 (c) Herodotus (d) None of these
24. Who was the scientist classified resources scientifically [      ]  
 (a) Zimmer Men (b) Jean Brune  
 (c) Gifer Pincat (d) John.W.Alexander

25. Who is the Missile man of India [      ]  
 (a) Atal Bihar Vaajpei (b) APJ Abdul Kalam  
 (c) Narendra Modi (d) Satish Dhawan
26. NRSA means [      ]  
 (a) National Remote Sensing Agency (b) National Remote Sensing Authority  
 (c) National Remote Satellite Agency (d) National Remote Satellite Authority
27. Where is located Satish Dhawan Space Center [      ]  
 (a) Visakhapatnam (b) Sriharikota  
 (c) Kakinada (d) Amaravati
28. Where is located NRSA [      ]  
 (a) Hyderabad (b) Bengaluru  
 (c) Mumbai (d) Chennai
29. The maps in which lines of equal values shown are called [      ]  
 (a) Choropleth Maps (b) Bonitative Maps  
 (c) Isopleth Maps (d) Dot Maps
30. Topographical maps in India, are prepared by [      ]  
 (a) Land Revenue Dept. (b) Meteorological Dept.  
 (c) Geological Survey of India (d) Survey of India

## II. Fill in the Blanks

31. Urban settlements are \_\_\_\_\_ than rural settlements
32. Rural areas act as \_\_\_\_\_ factor while urban areas are the \_\_\_\_\_ factor.
33. \_\_\_\_\_ towns or cities are socially and economically independent, either completely or Partially.
34. The dogs which help the Eskimos are called \_\_\_\_\_
35. Greenland lies in the \_\_\_\_\_
36. \_\_\_\_\_ state of India has highest urbanization.
37. Regional planning is started in India in \_\_\_\_\_
38. The first known use of the term GIS was by \_\_\_\_\_
39. The two very important and common input devices are \_\_\_\_\_
40. \_\_\_\_\_ data represent features as discrete Points, lines and Polygons.
41. \_\_\_\_\_ data represent the landscape as a matrix of square cells.
42. Migration from \_\_\_\_\_ to \_\_\_\_\_ areas is common in developing countries.
43. \_\_\_\_\_ When a person leaves his or her own country and moves to another.
44. \_\_\_\_\_ When a person arrives in a new country after leaving his or her own country.
45. Gujjar Bakarwal usually migrates between \_\_\_\_\_ ranges and \_\_\_\_\_ areas.

### III. Matching Questions

- |                                  |   |   |                                 |
|----------------------------------|---|---|---------------------------------|
| 46. Principle of Human Geography | [ | ] | (Ans.) Ellsworth Huntington     |
| 47. Agricultural location theory | [ | ] | (Ans.) Von Thunen               |
| 48. Daily movement               | [ | ] | (Ans.) Diurnal migration        |
| 49. Export of goods              | [ | ] | (Ans.) Quaternary activities    |
| 50. Bio – gas                    | [ | ] | (Ans.) Renewable resource       |
| 51. Overlaying                   | [ | ] | (Ans.) Vector or Raster         |
| 52. Lines                        | [ | ] | (Ans.) Linear features          |
| 53. Synchronization              | [ | ] | (Ans.) DBMS                     |
| 54. Eskimos                      | [ | ] | (Ans.) Igloo                    |
| 55. Polar caps                   | [ | ] | (Ans.) Sparsely populated       |
| 56. India                        | [ | ] | (Ans.) Largest tea producing    |
| 57. China                        | [ | ] | (Ans.) Biggest rice producing   |
| 58. South-East Asia              | [ | ] | (Ans.) Paddy cultivation region |
| 59. Uttarpradesh                 | [ | ] | (Ans.) Sugar bowl of India      |
| 60. Bushmens                     | [ | ] | (Ans.) Kalahari desert          |

## I. Multiple Choice Questions

- 11



## II. Fill in the Blanks

11. The base of \_\_\_\_\_ system is 10.
12. Computer understands only \_\_\_\_\_ code.
13. \_\_\_\_\_ refers to the number of cycles completed by the wave.
14. \_\_\_\_\_ network devices stores IP addresses.
15. \_\_\_\_\_ connects to networks.
16. WAN stands for \_\_\_\_\_
17. A Network of Networks is known as \_\_\_\_\_

## III. Matching Questions

- |                              |  |
|------------------------------|--|
| 18. A signal is              | [    ] (Ans.) Electromagnetic waves                |
| 19. DSL modem                | [    ] (Ans.) Broadband based                      |
| 20. Guided media are         | [    ] (Ans.) Wired Media                          |
| 21. Optical fibre            | [    ] (Ans.) Used for long distance communication |
| 22. Band width of Microwaves | [    ] (Ans.) 1 Mbps -10 Mbps                      |



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**Course-2: Advances in Mathematical, Physical and Chemical Sciences**  
**Course - 2**  
**SEMESTER-I**

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## QUESTION BANK- ANSWERS

### UNIT – I: Advances in Basic Mathematics

#### I. Multiple choice questions

1. (a)  $y + 4 = 0$
2. (c)  $4x + 3y + 9 = 0$
3. (b)  $y - x - 1 = 0$
4. (a)  $\frac{1}{2}$
5. (c)  $-4$
6. (b)  $\sec x$
7. (b)  $0$
8. (a)  $\log|f(x)| + c$
9. (a)  $x \log x - x + c$
10. (a) Square matrix

#### II. Fill in the blanks

11.  $2\sqrt{5}$
12.  $1$
13. Does not exist
14.  $\frac{1}{t}$
15.  $-52$

#### III. Matching Questions

16.  $y - y_1 = m(x - x_1)$
17.  $x \cos \alpha + y \sin \alpha = p$
18.  $1$
19.  $\log a$
20.  $e^x f(x) + c$

## **UNIT – II: ADVANCES IN PHYSICS**

### **I. Multiple Choice Questions**

1. (c) Coal
2. (c) Fuel Cells
3. (a) Quantum conferment effect
4. (c) Heavy metals like cadmium and lead
5. (d) Qubits
6. (b) Oncology
7. (a) Nitinol
8. (c) Creating stents and surgical instruments
9. (a) Super elasticity
10. (d) Robotics engineering

### **II. Fill in the Blanks**

11. Four
12. Photovoltaics
13. Electrons
14. Lower energy
15. Less

### **III. Matching Questions**

16. Image-Guided Radiation Treatment
17. Bennelt – Brasard 1984
18. Four
19. Quantum Mechanics
20. Oil

### **Unit-III: ADVANCES IN CHEMISTRY**

#### **I. Multiple Choice Questions**

1. (a) Registry phase
2. (d) Absorption, Distribution, Metabolism, Excretion
3. (a) Determining target protein structures
4. (b) Development phase
5. (b) Disease research
6. (a) Engineered organism
7. (c) Habitat loss
8. (b) Asthma
9. (c) Lead and Mercury
10. (b) Eutrophication

#### **II. Fill in the blanks**

11. Food safety
12. Leukemia
13. Dye removal
14. Discovery
15. CADD

#### **III. Matching Questions**

16. Select top-ranking ligands for validation
17. Contaminant detection
18. Designing and constructing novel biological systems
19. Large scale screening of small molecules
20. Excessive growth of algae

## **UNIT- IV: ADVANCED APPLICATIONS OF GEOGRAPHY**

### **I. Multiple Choice Questions**

1. (d) The Physical and Cultural Characteristics and the attribute of the place
2. (b) Activity
3. (d) R.J.Pryor
4. (c) Environment
5. (b) North Asia
6. (c) Igloo
7. (a) Dravidian
8. (b) Gurudev
9. (a) Nomadic
- 10.(a) Himachal Pradesh
- 11.(a) Primary
- 12.(a) Primary sector
- 13.(d) Goods that are produced would need to be transported by trucks or trains and then sold in wholesale and retail shops.
- 14.(d) Central government
- 15.(b) Poor Conditions in home countries
- 16.(a) Maharashtra
- 17.(d) All
- 18.(a) Spatial
- 19.(c) Geographic Information system
- 20.(b) Mono databases
- 21.(c) Combination of two Greek words
- 22.(d) Eratasthonese
- 23.(a) Anaximander
- 24.(a) Zimmer Men
- 25.(c) APJ Abdul Kalam
- 26.(a) National Remote Sensing Agency
- 27.(b) Sriharikota
- 28.(a) Hyderabad
- 29.(c) Isopleth Maps
- 30.(d) Survey of India

## **II. Fill in the blanks**

31. Larger
32. Push, Pull
33. Satellite
34. Huskies
35. Frigid Zone
36. Maharastra
37. 1961
38. Roger Tamilson
39. Keyboard, Mouse
40. Vector
41. Raster
42. Cold, Ward
43. Emigration
44. Immigration
45. Shivalik, Kashmir

## **III. Matching Questions**

46. (Ans.) Ellsworth Huntington
47. (Ans.) Von Thunen
48. (Ans.) Diurnal migration
49. (Ans.) Quaternary activities
50. (Ans.) Renewable resource
51. (Ans.) Vector or Raster
52. (Ans.) Linear features
53. (Ans.) DBMS
54. (Ans.) Igloo
55. (Ans.) Sparsely populated
56. (Ans.) Largest tea producing
57. (Ans.) Biggest rice producing
58. (Ans.) Paddy cultivation region
59. (Ans.) Sugar bowl of India
60. (Ans.) Kalahari desert

## **UNIT-V: ADVANCED APPLICATIONS OF COMPUTER SCIENCE**

### **I. Multiple Choice Questions**

1. (c) 1002
2. (c) 2
3. (b) BITS
4. (c) 15
5. (a) Digital signal
6. (c) connecting to internet
7. (b) NIC
8. (b) URL
9. (c) optical fiber
- 10.(d) Modem

### **II. Fill in the Blanks**

- 11.Decimal
- 12.Binary
- 13.Frequency
- 14.Switch
- 15.Gate way
- 16.Wide Area Network
- 17.Internet

### **III. Matching Questions**

- 18.Electromagnetic waves
- 19.Broadband based
- 20.Wired Media
- 21.Used for long distance communication
- 22.1 Mbps-10 Mbps



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**For I Semester Geography major**

**Course-1: Essentials and Applications of Mathematical, Physical and Chemical Sciences**  
**Semester End Examination Model Question paper**

**Course - 1**  
**SEMESTER-I**

**Time: 3 Hours**

**Max.Marks: 60 M**

**SECTION-A**

**I. Answer All the Multiple Choice Questions. Each one carries one mark. 40x1=40 M**

**Unit-1:** Q.No.1 to Q.No.5

**Unit-II:** Q.No.6 to Q.No.10

**Unit-III:** Q.No.11 to Q.No.15

**Unit-IV:** Q.No.16 to Q.No.35

**Unit-V:** Q.No.36 to Q.No.40

**SECTION-B**

**II. Answer all fill in the Blanks questions. Each one carries one mark. 10x1=10 M**

**Unit-1:** Q.No.41

**Unit-II:** Q.No.42

**Unit-III:** Q.No.43

**Unit-IV:** Q.No.44 to Q.No.49

**Unit-V:** Q.No.50

**SECTION –C**

**III. Answer all the Match questions. Each one carries one mark. 10x1=10 M**

**Unit-1:** Q.No.51

**Unit-II:** Q.No.52

**Unit-III:** Q.No.53

**Unit-IV:** Q.No.54 to Q.No.59

**Unit-V:** Q.No.60





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**For I Semester Geography majors**  
**Course-2: Advances of Mathematical, Physical and Chemical Sciences**  
**Semester End Examination Model Question paper**  
**Course-2**  
**SEMESTER-I**

**Time: 3 Hours**

**Max.Marks: 60 M**

**SECTION-A**

**I. Answer All the Multiple Choice Questions. Each one carries one mark.      40x1=40 M**

**Unit-1:** Q.No.1 to Q.No.5

**Unit-II:** Q.No.6 to Q.No.10

**Unit-III:** Q.No.11 to Q.No.15

**Unit-IV:** Q.No.16 to Q.No.35

**Unit-V:** Q.No.36 to Q.No.40

**SECTION-B**

**II. Answer all fill in the Blanks questions. Each one carries one mark.      10x1=10 M**

**Unit-1:** Q.No.41

**Unit-II:** Q.No.42

**Unit-III:** Q.No.43

**Unit-IV:** Q.No.44 to Q.No.49

**Unit-V:** Q.No.50

**SECTION –C**

**III. Answer all the Match questions. Each one carries one mark.      10x1=10 M**

**Unit-1:** Q.No.51

**Unit-II:** Q.No.52

**Unit-III:** Q.No.53

**Unit-IV:** Q.No.54 to Q.No.59

**Unit-V:** Q.No.60



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**Course-1: Essentials and Applications of Mathematical, Physical and Chemical Sciences**  
**Internal Assessment Examination Model Question Paper**

**Course - 1**  
**SEMESTER-I**

**Time: 1.30 Hours**

**Max.Marks: 28 M**

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**SECTION-A**

**I. Answer All the Multiple Choice Questions. Each one carries one mark.      20x1=20 M**

**Unit-1:** Q.No.1 and Q.No.2

**Unit-II:** Q.No.3 and Q.No.4

**Unit-III:** Q.No.5 and Q.No.6

**Unit-IV:** Q.No.7 to Q.No.18

**Unit-V:** Q.No.19 and Q.No.20

**SECTION-B**

**II. Answer all fill in the Blanks questions. Each one carries one mark.      4x1=4 M**

**Unit-II:** Q.No.21

**Unit-III:** Q.No.22

**Unit-IV:** Q.No.23

**Unit-V:** Q.No.24

**SECTION –C**

**III. Answer all the Match questions. Each one carries one mark.      4x1=4 M**

**Unit-II:** Q.No.25

**Unit-III:** Q.No.26

**Unit-IV:** Q.No.27

**Unit-V:** Q.No.28



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**For I Semester Maths, Phy, Chemistry, Computer Science, Electronics majors**  
**Course-2: Advances of Mathematical, Physical and Chemical Sciences**  
**Internal Assessment Examination Model Question Paper**  
**Course - 2**  
**SEMESTER-I**

**Time: 1.30 Hours**

**Max.Marks: 28 M**

**SECTION-A**

**I. Answer All the Multiple Choice Questions. Each one carries one mark.      20x1=20 M**

**Unit-1:** Q.No.1 and Q.No.2

**Unit-II:** Q.No.3 and Q.No.4

**Unit-III:** Q.No.5 and Q.No.6

**Unit-IV:** Q.No.7 to Q.No.18

**Unit-V:** Q.No.19 and Q.No.20

**SECTION-B**

**II. Answer all fill in the Blanks questions. Each one carries one mark.      4x1=4 M**

**Unit-II:** Q.No.21

**Unit-III:** Q.No.22

**Unit-IV:** Q.No.23

**Unit-V:** Q.No.24

**SECTION –C**

**III. Answer all the Match questions. Each one carries one mark.      4x1=4 M**

**Unit-II:** Q.No.25

**Unit-III:** Q.No.26

**Unit-IV:** Q.No.27

**Unit-V:** Q.No.28