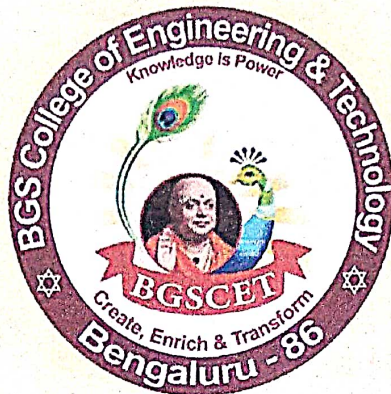


**|| Jai Sri Gurudev ||**

SKH Education Trust(R.) - A unit of Sri Adichunchanagiri Shikshana Trust

**BGS College Of Engineering and Technology**



**VTU - Dec. 2023 /Jan. 2024 - I Sem Question Papers**

# **Chemistry Cycle**





## Chemistry Cycle 2022-Scheme

### Theory Question Papers for Ist Semester

Sl,No	Name of the Subjects
1	Mathematics for CSE Stream-01
2	Applied Chemistry for CSE Stream
3	Introduction to Electronics & Communication
4	Introduction to Python Programming
5	Scientific Foundation of Health
6	Communicative English
7	Indian Constitution

# CBCS SCHEME

BMATS101

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## First Semester B.E./B.Tech. Degree Examination, June/July 2023 Mathematics-I for CSE Stream

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. VTU Formula Hand Book is permitted.  
3. M : Marks, L: Bloom's level, C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	With usual notations prove that $\tan\phi = r \frac{d\theta}{dr}$	06	L2	CO1
	b.	Find the angle between the curves $r^n = a^n \cos n\theta$ and $r^n = b^n \sin n\theta$	07	L2	CO1
	c.	Find the radius of curvature for $\sqrt{x} + \sqrt{y} = \sqrt{a}$ at $[\frac{a}{4}, \frac{a}{4}]$	07	L3	CO1
<b>OR</b>					
Q.2	a.	With usual notations prove that $\rho = \frac{(1+y_1^2)^{3/2}}{y_2}$	07	L2	CO1
	b.	Obtain pedal equation for the curve $r^n = a^n \cos n\theta$	08	L2	CO1
	c.	Using modern mathematical tool write a program/code to plot the curve $r = 2 \cos 2\theta $	05	L3	CO5
<b>Module – 2</b>					
Q.3	a.	Expand $\text{Log}(\cos x)$ by Maclaurin's series upto term containing $x^6$	06	L2	CO2
	b.	If $u = f\left(\frac{x}{y}, \frac{y}{z}, \frac{z}{x}\right)$ , show that $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + z \frac{\partial u}{\partial z} = 0$	07	L2	CO2
	c.	Find the extreme values of the function $x^3 + y^3 - 3x - 12y + 20$	07	L3	CO2
<b>OR</b>					
Q.4	a.	Evaluate $\lim_{x \rightarrow 0} \left( \frac{a^x + b^x + c^x + d^x}{4} \right)^{1/x}$	07	L2	CO3
	b.	If $u = \frac{yz}{x}$ , $v = \frac{zx}{y}$ , $w = \frac{xy}{z}$ , show that $\frac{\partial(u, v, w)}{\partial(x, y, z)} = 4$	08	L2	CO3
	c.	Using modern mathematical tool write a program/code to show that $u_{xx} + u_{yy} = 0$ give $u = e^x (x \cos y - y \sin y)$	05	L2	CO5
<b>Module – 3</b>					
Q.5	a.	Solve: $x \frac{dy}{dx} + y = x^3 y^6$	06	L2	CO3
	b.	Find the orthogonal trajectories of the family of the curves $r^n \sin n\theta = a^n$ where 'a' is parameter.	07	L3	CO3
	c.	Solve: $xyp^2 - (x^2 + y^2)p + xy = 0$	07	L2	CO3
<b>OR</b>					

Q.6	a.	Solve $(x^2 + y^3 + 6x)dx + y^2x dy = 0$	06	L2	CO3
	b.	Find the general and singular solutions of $xp^2 + xp - yp + 1 - y = 0$	07	L3	CO3
	c.	Find the general solution of the equation $(px - y)(py + x) = 2p$ by reducing into Clairaut's form by taking the substitution $X = x^2, Y = y^2$ .	07	L2	CO3

Module - 4

Q.7	a.	Find the least positive values of 'x' such that i) $78 + x \equiv 3 \pmod{5}$ ii) $89 \equiv (x + 3) \pmod{4}$	06	L2	CO4
	b.	Find the solution of the linear congruence $14x \equiv 12 \pmod{18}$	07	L2	CO4
	c.	Encrypt the message STOP using RSA with key (2537, 13) using the prime numbers 43 and 59.	07	L2	CO4

OR

Q.8	a.	i) Find the remainder when $2^{23}$ is divided by 47. ii) Find the last digit in $7^{118}$ .	06	L2	CO4
	b.	Solve the system of linear congruence $x \equiv 2 \pmod{3}; x \equiv 3 \pmod{5}; x \equiv 2 \pmod{7}$ using Remainder Theorem.	07	L2	CO4
	c.	i) Find the remainder when $175 \times 113 \times 53$ is divided by 11. ii) Solve $x^3 + 2x - 3 \equiv 0 \pmod{9}$	07	L2	CO4

Module - 5

Q.9	a.	Find the rank of the matrix $A = \begin{bmatrix} 2 & 3 & -1 & -1 \\ 1 & -1 & -2 & -4 \\ 3 & 1 & 1 & 3 \\ 6 & 3 & 0 & -7 \end{bmatrix}$	06	L2	CO4			
	b.	Test for consistency and solve $2x + 5y + 7z = 52; 2x + y - z = 0; x + y + z = 9.$				07	L2	CO4
	c.	Using Rayleigh's power method find the dominant eigen value and the corresponding eigen vector of $\begin{bmatrix} 6 & -2 & 2 \\ -2 & 3 & -1 \\ 2 & -1 & 3 \end{bmatrix}$ by taking $X_0 = \begin{bmatrix} 1 \\ 1 \\ 1 \end{bmatrix}$ .				07	L2	CO4

OR

Q.10	a.	Solve the system of equations $x + 2y - z = 3; 3x - y + 2z = 1; 2x - 2y + 3z = 2$ by using Gauss-Jordan method.	07	L2	CO4
	b.	Solve the system of equations $20x + y - 2z = 17, 3x + 20y - z = -18; 2x - 3y + 20z = 25$ by using Gauss - Seidel method.	08	L2	CO4
	c.	Using modern mathematical tool write a program/code to find the largest eigen value of $A = \begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$ by power method.	05	L3	CO5

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**First/Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024**  
**Applied Chemistry for CSE Stream**

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
 2. VTU Formula Hand Book is permitted.  
 3. M : Marks , L: Bloom's level , C: Course outcomes.*

Module - 1			M	L	C
Q.1	a.	Explain the working principle of conductometric sensors and mention any two applications.	06	L2	CO2
	b.	Discuss the construction and working of Li-ion batteries. Mention its applications.	07	L2	CO4
	c.	Describe the application of Electrochemical gas sensors for the detection of SO <sub>x</sub> and NO <sub>x</sub> .	07	L3	CO3
<b>OR</b>					
Q.2	a.	Explain the working principle of an Electrochemical sensor in the detection of Dissolved Oxygen (DO).	06	L2	CO2
	b.	Discuss the construction and working of Quantum Dot Sensitized Solar Cells (QDSSCs). Mention its applications.	07	L2	CO4
	c.	Describe the use of disposable sensor in the detection of herbicide Glyphosate.	07	L3	CO3
<b>Module - 2</b>					
Q.3	a.	What are memory devices? Explain the classification of Electronic memory devices with examples.	07	L1 L2	CO1
	b.	What are nanomaterials? Explain any four properties of polythiophenes (P <sub>3</sub> HT) suitable for optoelectronic devices.	07	L1 L2	CO1 CO4
	c.	Mention any three properties and applications of QLED.	06	L1	CO4
<b>OR</b>					
Q.4	a.	Explain the types of organic memory. Devices by taking p-type and n-type semiconductor materials.	07	L2	CO2
	b.	What are photoactive and electroactive materials and explain their working principle in the display system.	07	L2	CO1 CO2
	c.	Mention any 3 properties and applications of LC-displays.	06	L1	CO4
<b>Module - 3</b>					
Q.5	a.	Define metallic corrosion. Describe the electrochemical theory of corrosion taking.	07	L1 L2	CO1 CO2
	b.	Describe galvanizing and mention its applications.	06	L2	CO4
	c.	What is CPR? A thick brass sheet of area 400 inches exposed to moist air. After 2 years of period. It was found to experience a weight loss of 375 g due to corrosion. If the density of brass is 8.73 g/cms, calculate CPR in mpy and mmpy.	07	L2	CO1 CO3
<b>OR</b>					
Q.6	a.	Explain the construction and working of the Calomel electrode.	07	L2	CO2
	b.	Explain the application of conductometric electrodes in the estimation of a weak acid.	06	L2	CO4
	c.	Define concentration cell. Derive an expression for emf of the cell.	07	L1 L2	CO1 CO3

Module – 4			
Q.7	a.	A polydisperse sample of polystyrene is prepared by mixing three monodisperse samples in the following proportions. 1 g of 10000 molecular weight. 2 g of 50000 mol. wt and 2 g of 100000 mol.wt. Determine the number and weight average mol. wt.	07 L2 CO3
	b.	What is Green fuel (hydrogen fuel)? Mention the advantages of Green fuel.	06 L1 CO1
	c.	Explain the construction and working of Photovoltaic cells.	07 L2 CO2
OR			
Q.8	a.	Discuss the conduction mechanism in polyacetylene through oxidative or reductive doping techniques (Any one).	07 L3 CO2
	b.	Explain the generation of hydrogen by alkaline water electrolysis.	07 L2 CO4
	c.	Explain the preparation, properties and applications of Kevlar.	06 L2 CO4
Module – 5			
Q.9	a.	What is e-waste? Explain the need for e-waste management.	07 L2 CO1
	b.	Explain the process of recycling e-waste.	06 L2 CO5
	c.	Discuss the following : (i) Pyrometallurgy (ii) Hydrometallurgy	07 L3 CO5
OR			
Q.10	a.	Explain the extraction of gold from e-waste.	07 L2 CO2
	b.	Write a brief note on the role of stakeholders for example: Producers, Consumers, Statutory bodies.	07 L3 CO5
	c.	Explain the health hazards due to exposure to e-waste.	06 L2 CO3

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**First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024**  
**Introduction to Electronics and Communication**

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
 2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module - 1			M	L	C
Q.1	a.	What is Regulated power supply? With neat block diagram, explain the individual blocks.	8	L2	CO1
	b.	What is a rectifier? With neat circuit diagram and output waveforms, explain full wave bridge rectifier with capacitor filter.	8	L2	CO1
	c.	With circuit diagram brief out the operation of voltage doubler.	4	L2	CO1
OR					
Q.2	a.	Draw the circuit diagram of voltage regulator and explain the operation.	7	L2	CO1
	b.	Explain the concept of negative feedback amplifier with relevant equations and diagrams.	5	L2	CO1
	c.	Explain Frequency response of RC coupled amplifier.	8	L2	CO1
Module - 2					
Q.3	a.	Explain the Barkhausen criteria for oscillations. In wein bridge oscillator if $C_1 = C_2 = 200nF$ determine the frequency of oscillation when $R_1 = R_2 = 4k\Omega$ .	7	L3	CO2
	b.	With neat circuit diagram, explain the operation of ladder network oscillator.	7	L2	CO2
	c.	Explain the operation of single stage Astable multivibrator with its circuit diagram.	6	L2	CO2
OR					
Q.4	a.	List out the Ideal characteristics of an op-amp.	7	L2	CO2
	b.	Explain the following with respect to operational amplifier, i) Inverting amplifier ii) Integrator.	8	L2	CO2
	c.	An operational amplifier operating with negative feedback produces an output voltage of 2V when supplied with an input of $400\mu V$ . Determine the value of closed - loop voltage gain and express the answer in decibels.	5	L3	CO2
Module - 3					
Q.5	a.	Convert the following : i) $(FACE)_{16} = ( )_{10}$ ii) $(65.45)_{10} = ( )_2$ iii) $(1111011011011.11011)_2 = ( )_8$ iv) $(2604.10546875)_{10} = ( )_{16}$	8	L3	CO3

	b.	Perform the following : i) $(1010100)_2 - (1000100)_2$ using 2's compliment. ii) $(4456)_{10} - (34324)_{10}$ using 10's compliment method.	6	L3	CO3
	c.	State and prove De – Morgan's theorems with its truth table.	6	L2	CO3
<b>OR</b>					
Q.6	a.	Implement the Boolean functions using logic gates. i) $F_1 = x + y'z$ ii) $x'y'z + x'yz + xy'$	6	L3	CO3
	b.	Write the step by step procedure to design a combinational circuit.	6	L2	CO3
	c.	Implement full adder circuit with its truth table and draw the logic diagram of sum and carry.	8	L3	CO3
<b>Module – 4</b>					
Q.7	a.	What is an embedded system? Compare embedded system and General computing systems.	7	L2	CO4
	b.	Explain classification of embedded systems.	7	L2	CO4
	c.	What is the difference between RISC and CISC processors?	6	L2	CO4
<b>OR</b>					
Q.8	a.	Discuss major application areas of embedded systems with examples.	7	L2	CO4
	b.	Write short note on : i) Transducers ii) Sensors iii) Actuators.	6	L2	CO4
	c.	Write a short note on 7-segment LED display.	7	L2	CO4
<b>Module – 5</b>					
Q.9	a.	With neat block diagram, explain modern communication system.	8	L2	CO5
	b.	Write a note on Hard wired channel and soft wired channel.	6	L2	CO5
	c.	Explain with a neat diagram, the concept of Radio wave propagation and its different types.	6	L2	CO5
<b>OR</b>					
Q.10	a.	Explain Amplitude Modulation (AM) and Frequency Modulation (FM) with neat waveforms.	8	L2	CO5
	b.	List out the advantages of Digital communication over Analog communication.	6	L2	CO5
	c.	Explain different multiple Access Techniques.	6	L2	CO5

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BPLCK105B/BPLCKB105

## First Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024 Introduction to Python Programming

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. M : Marks , L: Bloom's level , C: Course outcomes.

Module - 1			M	L	C
Q.1	a.	List and explain the use of comparison operator in python. Write the step by step execution of the following expression in python. $3/2 * 4 + 3 + (10/4)**3 - 2$	6	L1	CO1
	b.	Explain the control statements, if, else, elif with proper syntax and examples.	6	L2	CO1
	c.	Develop a python program to calculate the area and circumference of a circle input the value of radius and print the results.	8	L3	CO1
OR					
Q.2	a.	Explain the string concatenation and string replication operator with an example.	6	L2	CO1
	b.	Explain local and global scope of variable with suitable example.	6	L2	CO1
	c.	Develop a program to read the student details Like Name, USN and Marks in three subjects. Display the student details, total marks and percentage with suitable messages.	8	L3	CO1
Module - 2					
Q.3	a.	What is list? Explain the concept of list indexing and slicing with examples.	6	L2	CO2
	b.	With suitable examples, explain the list methods append( ), extend( ), sort( ), count( ) and pop( ).	8	L2	CO2
	c.	Read N numbers from the console and create a list. Develop a program to print mean, variance and standard deviation with suitable message.	6	L3	CO2
OR					
Q.4	a.	Define tuple data type? List out the difference between tuple and list.	6	L2	CO2
	b.	Identify and explain the dictionary methods like get( ), item( ), keys( ) and values( ) in python with examples.	8	L2	CO2
	c.	Develop a python program to swap two numbers without using intermediate variables. Prompt the user for input.	6	L2	CO3

Module – 3					
Q.5	a.	Write the output of the following : i) 'HeLlO'.upper() . isupper ( ) ii) 'HeLlO'.upper() .lower() iii) '___'.Join('There can be only one'.split( ) )	6	L2	CO3
	b.	With examples, explain any five string methods.	6	L2	CO3
	c.	Develop a python program to count the total number of vowels, consonants in a string.	8	L3	CO3
OR					
Q.6	a.	Make use of the concept of file handling and explain Reading and writing process with suitable python programs.	7	L2	CO3
	b.	Explain the concept of file path, also discuss absolute and relative paths.	7	L2	CO3
	c.	Briefly, explain saving variables with shelve module.	6	L2	CO3
Module – 4					
Q.7	a.	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	6	L2	CO3
	b.	List out the benefits of compressing file with zip file module, also explain the concepts of walking a directory tree.	8	L2	CO3
	c.	List out the difference between shutil.copy( ) and shutil.copytree( ) methods.	6	L3	CO3
OR					
Q.8	a.	Briefly explain Assertion and raising a exception.	6	L2	CO3
	b.	Develop a python program with a function named DivExp which takes two parameters a, b and returns a value C. ( $C = a/b$ ). Write suitable assertion for $a > 0$ in function DivExp and raise an exception for when $b = 0$ . Program has to read two values from the console and call a function DivExp.	8	L3	CO3
	c.	Briefly explain the difference logging levels.	6	L2	CO3
Module – 5					
Q.9	a.	Define classes and objects in Python. Construct the class called rectangle and initialize it with height = 100, width = 200, starting point as (x = 0, y = 0) and write the method to display the center point coordinates of a rectangle.	8	L2	CO4
	b.	Briefly explain the concept of prototyping and planning.	6	L2	CO4
	c.	Explain Clearly __init( ) and __str( )__ method with examples.	6	L2	CO4
OR					
Q.10	a.	Explain the term objects are mutable with an example.	6	L2	CO4
	b.	Explain the concept of polymorphism with examples.	8	L2	CO4
	c.	Explain briefly pure functions and modifiers with examples.	6	L2	CO4

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Question Paper Version : A

First/Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024  
**Scientific Foundation of Health**

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the fifty 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. Being inactive form of life style is called as \_\_\_\_\_  
a) Sedentary life style                      b) Spirited life style  
c) Busy life style                              d) Lively
  2. A person who is able to serve himself, his nation and his community is called as?  
a) Gangster                      b) Sick person                      c) Healthy                      d) Saddest
  3. Balance in exercise, balanced nutrition and adequate rest is referred as  
a) Social health                      b) Physical health                      c) Emotional health                      d) Intectual health
  4. Individual who do not think they will get flue are less likely to get a yearly flue short is an example of \_\_\_\_\_  
a) Negative belief                      b) Uncertainty                      c) Healthy belief                      d) None of the above
  5. Emotional health brings an ability in individual to \_\_\_\_\_  
a) React to the situation                      b) Respond to the situation  
c) Withdraw from the situation                      d) None of the above
  6. A person has ability to bounce back after difficult experiences and adapt to adversity is called as \_\_\_\_\_ health.  
a) Mental health                      b) Financial health                      c) Social health                      d) Physical health
  7. The prime factor which influences psychological health is \_\_\_\_\_  
a) Positive mindset                      b) Gloomy outlook                      c) Dim view                      d) All the above
  8. One who suffer from mental illness always see himself as  
a) Happy and Active                      b) Gloomy & Pessimist  
c) Unhappy and Worried                      d) Both (b) & (c)
  9. Spiritual wellness involves  
a) Developing compassion, caring and forgiving  
b) Peace of mind, happiness and mercy full  
c) Human values, honesty and self realization                      d) All the above

10. Lack of physical health for longer time affects
  - a) Productivity and performance of Individual
  - b) Financial health of individual
  - c) Mental health of individual
  - d) All the above
11. An increased intake of energy dense foods that are high in fat and sugar leads to \_\_\_\_
  - a) Cancer
  - b) Obesity and overweight
  - c) Brain hemorrhage
  - d) Visual disability
12. Mindfulness of eating means
  - a) Chewing food
  - b) Enjoying food
  - c) Creating positive vibration to food
  - d) Both (b) & (c)
13. What should be the proper proportion of fats in every meal?
  - a) Equal to carbohydrates, vitamins and minerals
  - b) Greater than carbohydrates, vitamins and minerals
  - c) Less than carbohydrates, vitamins and minerals
  - d) None of the above
14. Anorexia nervosa, Bulimia nervosa and Binge eaters are belongs to \_\_\_\_
  - a) Eating disorders
  - b) Breathing disorders
  - c) Sleeping disorders
  - d) All the above
15. The fundamental cause of obesity and over weight is
  - a) Balance in calori intake and calori spent
  - b) Imbalance in calori intake and calori spent
  - c) Calori spent is more than calories consumed
  - d) None of the above
16. Excessive intake of nutrients which creates a stress on bodily function called as \_\_\_\_
  - a) Malnutrition
  - b) Over nutrition
  - c) Modified nutrition
  - d) Moderate nutrition
17. Which of the following is Non Communicable Diseases (NCD's)?
  - a) Stroke
  - b) Cold
  - c) Cough
  - d) Fever
18. The following is an example for saturated fat
  - a) Pork
  - b) Chicken
  - c) Butter
  - d) Cheese
19. Excess of BMI (Body Mass Index) in a person leads to
  - a) Cancer
  - b) Obesity
  - c) Sugar
  - d) Weight loss
20. Physical fitness in an index of
  - a) Perfect height & weight ratio
  - b) Perfect body structure
  - c) Perfect body composition
  - d) All the above
21. Which of the following is behavioral addiction?
  - a) Nicotine
  - b) Alcohol
  - c) Drugs
  - d) Gambling
22. The key strand to overcome from addiction
  - a) Stop using substances
  - b) A powerful and positive mindset
  - c) Poverty
  - d) None of the above
23. Which of the following statement is true :
  - a) Addiction leads to physical disorders which in turn leads to mental disorder
  - b) Addiction which affects only physical health
  - c) Addiction which affects only mental health
  - d) All the above



37. "Wearing seat belt while driving" is an example for  
 a) Unhealthy behavior through social engineering  
 b) Healthy behavior through social engineering  
 c) Social responsibility  
 d) Both (b) & (c)
38. \_\_\_\_\_ influence people mindset to both positive and negative.  
 a) Social gathering    b) Travelling    c) Media    d) All the above
39. Dress code of individual is an example of \_\_\_\_\_ communication.  
 a) Spoken    b) Verbal    c) Non - verbal    d) None of the above
40. An unhealthy relationship cause \_\_\_\_\_  
 a) Lot of stress    b) Trust in each other  
 c) Harmony in each other    d) All the above
41. How to maintain better quality of life in chronic illness?  
 a) Good medical advice, living healthy life style and negative mindset.  
 b) Good medical advice and positive mindset  
 c) Good medical advice and living healthy life style.  
 d) Good medical advice, living healthy life style and positive mindset.
42. The disease which cannot be cured but it can be managed is called as  
 a) Acute illness    b) Infection disease    c) Chronic illness    d) Allergy
43. The following is an example for chronic disease :  
 a) Diabetes    b) Cold    c) Cough    d) Head ache
44. Following are the measures required in maintaining Quality of life in chronically ill state.  
 a) Emotional support    b) Understanding the medication  
 c) Reliable information about diseases, its treatment and management  
 d) All the above
45. The following are the steps to avoid transmitted infections :  
 a) Good hygiene    b) Vaccinations    c) Temperature    d) Both (a) & (b)
46. Virus, Bacteria, Fungus are means of transmission of \_\_\_\_\_ disease.  
 a) Infection    b) Cancer    c) Stroke    d) Obesity
47. Health compromising behavior are commonly seen in \_\_\_\_\_ class of people.  
 a) High    b) Middle    c) Low    d) None of these
48. Which of the following health communication style makes use of the patients knowledge and experience?  
 a) Doctor – centered communication    b) Patient – centered communication  
 c) Practitioner – centered communication    d) None of these
49. Health has intimacy with \_\_\_\_\_  
 a) Behaviour    b) Society    c) Personality    d) All the above
50. What is a sign of toxic friendship?  
 a) Lack of empathy    b) Understanding    c) Being supportive    d) None of these

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Question Paper Version : A

First/Second Semester B.E./B.Tech./B.Ds. Degree Examination, Dec.2023/Jan.2024  
**Communicative English**

Time: 1 hr.]

[Max. Marks: 50

## INSTRUCTIONS TO THE CANDIDATES

1. Answer all the fifty 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. 'Communication' The word originates from Laten word  
a) Communicm      b) Communico      c) Communicative      d) None of these
  2. Communication is a \_\_\_\_\_ process.  
a) one way      b) two - way      c) three - way      d) None of these
  3. In order to achieve the production target for a particular month, the discussion held between the production manager and supply manager will certainly be a perfect instance of \_\_\_\_\_ Communication.  
a) Vertical      b) Spiral      c) Cross wises      d) Horizontal
  4. 'Poor Printing' it is a type of Barrier \_\_\_\_\_  
a) Verbal barrier      b) Psychological barrier  
c) Physiological barrier      d) Physical barrier
  5. 'Transcendental meditation' is example of \_\_\_\_\_ Communication.  
a) Extrapersonal      b) Interpersonal      c) Intrapersonal      d) Non - verbal
  6. The most straight forward, basic interpersonal communication meaning is \_\_\_\_\_ Communication.  
a) Mass Communication      b) Interpersonal  
c) Extrapersonal      d) None of these
  7. Flashing eyes, avoiding eye contact may also cause \_\_\_\_\_ to effective Communication.  
a) Vernal barrier      b) Listening barrier  
c) Psychological barrier      d) Non - Verbal barrier
  8. In general oral Communication is the interchange of \_\_\_\_\_ between the sender and the receiver.  
a) cues and clues      b) speaking      c) gestures      d) verbal messages

9. 'Follows a set pattern such as sequence of elements in a report' this is \_\_\_\_\_  
Communication.  
a) Professional      b) General      c) Personal      d) None of these
10. In Organizations, informal communication also permeates. This informal communication is called \_\_\_\_\_  
a) Personal      b) Professional      c) Grapevine      d) None of these
11. One native regional accent that has gained social prestige is the \_\_\_\_\_ of English.  
a) Received pronunciation      b) Reverse perception  
c) Transcription      d) None of these
12. A vowel sound whose quality does not change over the duration of the vowel is called \_\_\_\_\_  
a) Vowel      b) Diphthong      c) Pure vowel      d) Consonant
13. The consonant sounds that come before vowel sound are called \_\_\_\_\_  
a) Coda      b) Onset      c) Medical      d) None of these
14. What is the division of syllables of word 'Information'?  
a) in-form-ation      b) inform-ation      c) in-information      d) in - for - ma - tion
15. Transcribe the word 'daughter'.  
a) /'dɔ: t̩ ð /      b) /dɔ 't̩ ð /      c) /dɔ : tr /      d) /d 3 : t̩ ð /
16. 'No. The women with the plastic bag'. In this sentence which words are having falling tone?  
a) No, The woman      b) Plastic bag      c) No. bag      d) None of these
17. Find the silent letter in the word 'though'.  
a) th      b) ou      c) ugh      d) gh
18. In the word 'Sheep' often mispronounced sound is  
a) /ʃ /      b) /S /      c) ee      d) p
19. Correct the spelling of the following word :  
a) Renumeration      b) Remuneration      c) Remunation      d) Remuration
20. How to pronounce the word 'Next'?  
a) nekast      b) nekest      c) nekist      d) nekst
21. I have \_\_\_\_\_ to buy a car. (Use appropriate noun)  
a) no rupees      b) no notes      c) no money      d) no moneys
22. \_\_\_\_\_ and \_\_\_\_\_ want to purchase a yacht. (fill with suitable pronoun).  
a) He, I and you      b) You, he and I      c) I, he and you      d) You, I and he
23. The flower smells \_\_\_\_\_. (Appropriate Adjective is)  
a) sweet      b) sweetly      c) sweeter      d) sweetest
24. It is \_\_\_\_\_ hotter today, (place an adverb).  
a) most      b) very      c) more      d) much



25. Hardly had he arrived \_\_\_\_\_ the portico crumbled. (Choose correct conjunction)  
 a) than                      b) then                      c) when                      d) None of these
26. We could barely do anything. (suitable question Tag).  
 a) Couldn't we?    b) Could we?    c) Can we?    d) None of these
27. A Person who believes in God, we call him  
 a) Theist                      b) Atheist                      c) Eccentric                      d) Spinster
28. 'I saw a man' in this sentence which is pronounced with a weak verb, without any special emphasis.  
 a) I                      b) man                      c) saw                      d) a
29. Flour is made \_\_\_\_\_ wheat. (suitable preposition)  
 a) of                      b) by                      c) from                      d) in
30. \_\_\_\_\_ Humanity is in danger. (Choose the correct option).  
 a) A                      b) An                      c) The                      d) Not needed any article

**Fill in the banks with appropriate prefixes :**

31. The army people \_\_\_\_\_ attacked the enemy.  
 a) in -                      b) Inter                      c) Counter                      d) Un
32. My research Supervisor is \_\_\_\_\_ critical about everything.  
 a) hyper                      b) un                      c) mono                      d) intra

**Choose the pairs of word / phrases :**

33. Archive : Document  
 a) Warehouse : merchandise                      b) Library : Shelves  
 c) Theater : Plays                      d) Cinema : Projector
34. Coal : Mineral  
 a) Oxygen : Water    b) river : dam                      c) gold : metal                      d) silver : mine

**Choose the correct subject – verb concord in the sentences :**

35. Diabetes \_\_\_\_\_ a silent killer.  
 a) is                      b) are                      c) were                      d) None of these
36. The Jury gave \_\_\_\_\_ verdict in an unbiased manner.  
 a) their                      b) them                      c) its                      d) None of these

**Complete the sentence with appropriate tense from :**

37. Sir, I \_\_\_\_\_ passed my B.Tech in 2003  
 a) have                      b) has                      c) was                      d) Not required
38. We \_\_\_\_\_ finished our assignment just now.  
 a) have                      b) has                      c) had                      d) None of these

**Choose the correct option :**

39. \_\_\_\_\_ was visible at this late hour.  
 a) No man                      \*b) No                      c) No men                      d) None of these

40. The tycoon had expired before the \_\_\_\_\_.  
 a) Physician arrives                      b) Physician arriving  
 c) Physician arrived                      d) Physician had arrived
41. When \_\_\_\_\_, I will tell him everything.  
 a) he is coming                      b) he comes                      c) he will come                      d) None of the above
42. Which of these must be avoided in Presentation?  
 a) Proper grammar                      b) Complex words                      c) Short sentence                      d) Clear voice
43. Which of these can be used to break the monotony in a speech?  
 a) Humour                      b) Constant tone                      c) Low voice                      d) Sad story
44. Mother tongue influence can be effectively minimized in the classroom by \_\_\_\_\_.  
 a) using the mother tongue more often                      b) giving examples from the mother tongue  
 c) giving a lot of exposure in the target language  
 d) giving inputs from the target language in a simple graded manner.
45. The art of clear and concise manner of speaking, with clarity of meaning and thought called \_\_\_\_\_.  
 a) Elocution                      b) Latency                      c) Extempore                      d) Story telling

**Read Comprehension : Read the passage carefully and select the suitable answer from the given options :**

Quite recently India laid the foundation stone for one of its most sought – after projects running a Bullet Train. It was very well considered as a dream project of the Honorable Prime Minister. Entire India felt proud of having its first ever bullet train scheduled to run between Mumbai and Ahmedabad, a distance of 508 km in about 2 hours 35 minutes. In his own words, “To grow, one needs to expand one’s dreams and decide one’s strength to achieve that. It’s the New India which has to fly high”. “Bullet Train is a project that will provide pace to development. Along with new technology, it will also bring results faster”, he added. According to Achal Khare, the Managing Director of the National High speed Rail Corporation, the project would be completed by December 2005.

46. The \_\_\_\_\_ for the Bullet Train project was laid recently.  
 a) railway track                      b) signaling system                      c) foundation stone                      d) None of these
47. The bullet train will take about \_\_\_\_\_ to run between both the States.  
 a) 3 hrs, 25 min                      b) 2 hr, 55 min                      c) 2 hr, 35 min                      d) None of these
48. According to Prime Minister, the two benefits that the bullet train will bring are to provide pace to \_\_\_\_\_ to faster \_\_\_\_\_.  
 a) travel, trains                      b) train, travel, results  
 c) development, trains                      d) development, results
49. The bullet train schedule to run between \_\_\_\_\_ and \_\_\_\_\_.  
 a) Mumbai and Ahmedabad                      b) Mumbai and Delhi  
 c) Mumbai and Gujarat                      d) None of these
50. The project is expected to be \_\_\_\_\_ by December 2023.  
 a) completed                      b) operationalised                      c) started                      d) None of these

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Question Paper Version : A

First/Second Semester B.E. Degree Examination, Dec.2023/Jan.2024

## Indian Constitution

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the fifty 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 idea of a Constituent Assembly for India was put forwarded by  
a) B.G. Tilak      b) M. K. Gandhi      c) M. N. Roy      d) Motilal Nehru
  2. In Which year, did the Indian National Congress for the first time demand a Constituent Assembly?  
a) 1934      b) 1935      c) 1936      d) 1937
  3. First time Constituent Assembly Constituted under the scheme formulated by the \_\_\_\_\_  
a) Cabinet Mission Plan      b) Mount Batten Plan  
c) Non – Cooperation Movement      d) None of these
  4. Members of the Constituent Assembly were \_\_\_\_\_  
a) All Elected      b) All Nominated  
c) Partly elected and partly nominated      d) Selected
  5. Constituent Assembly hold its first meeting on \_\_\_\_\_  
a) Nov. 9, 1946      b) Dec. 9, 1946      c) Nov. 9, 1947      d) Dec. 9, 1947
  6. When did "Objective Resolution" was adopted by the Constituent Assembly?  
a) 1946      b) 1948      c) 1947      d) 1950
  7. First Draft of the Constitution was published on  
a) Jan. 24, 1950      b) Jan. 24, 1948      c) Aug. 15, 1947      d) Feb. 1948
  8. Drafting Committee had \_\_\_\_\_ number of members.  
a) 10      b) 15      c) 07      d) 05
  9. Provincial Constitution Committee was head by \_\_\_\_\_  
a) Dr. Rajendra Prasad      b) Dr. B. R. Ambedkar  
c) Sardar Vallabhai Bhai Patel      d) Jawaharlal Nehru
  10. The concept of "A Union of States" in the Indian Constitution has been derived from  
a) The American Declaration      b) The Australian Constitution  
c) The British North American Act      d) The Swiss Constitution

11. India can make its own laws because, India is  
 a) Independent      b) Sovereign      c) Secular      d) Democratic
12. Preamble is  
 a) Part of the Constitution      b) Amendable part  
 c) Non – Amendable      d) Both 'a' and 'c'
13. Fundamental Rights are \_\_\_\_\_  
 a) Enforceable      b) Absolute      c) Extraterritorial      d) None of these
14. "Rights are not only the privileges, they are the weapons in hands of citizens to control the Arbitrary Government" – who gave this statement?  
 a) Dr. Baby Rajendra Prasad      b) S.V. Patel  
 c) J. L. Nehru      d) Dr. B. R. Ambedkar
15. The Preamble to the Constitution declares India as \_\_\_\_\_  
 a) Sovereign , Democratic , Republic  
 b) Sovereign, Socialist, Secular, Democratic, Republic  
 c) Socialist , Democratic , Republic  
 d) Sovereign , Democratic , Republic , Secular.
16. The Preamble aims to secure \_\_\_\_\_  
 a) Fundamental Rights      b) Fundamental Duties  
 c) Dignity of the Individual      d) Security of the People
17. Freedom to form an Assembly can be restricted on the ground  
 a) Public order      b) Morality      c) Health      d) Wealth
18. Fundamental Rights are not applicable to  
 a) Foreigner      b) Criminals  
 c) Members of Armed Forces      d) Both 'a' & 'c'
19. For enforcement of Fundamental Rights Supreme Court can issue  
 a) An order      b) Direction      c) Writs      d) All the these
20. Provisions of Art. 20 applicable only in  
 a) Criminal cases      b) Civil cases      c) Administrative cases      d) Military cases
21. It is a law passed to give effect to directive principles of State Policy.  
 a) Equal Pay for Equal Work Act      b) Right to Information Act  
 c) Juvenile Delinquency Act      d) Passport Act
22. Fundamental Duties are \_\_\_\_\_  
 a) Enforceable      b) Absolute      c) Restricted      d) Non - enforceable
23. Free Legal Aid is applicable to  
 a) APL Families      b) Financial Incapable Persons  
 c) NRI Families      d) CPI Families
24. It shall be duty of the every Citizen of India  
 a) Value our Culture      b) Renounce Foreign Culture  
 c) Impose our Culture      d) Preserve Western Culture

25. Fundamental Rights and Directive Principles are  
 a) Complementary to each other      b) Opposite to each other  
 c) Extension to each other            d) None of these
26. All the Executive powers of Union shall vest with  
 a) The Prime Minister    b) The President    c) The Parliament    d) The People
27. Who is Competent Authority in India to declare War?  
 a) Defense Minister    b) Prime Minister    c) Chief of the Army    d) President
28. Union Legislature shall be \_\_\_\_\_  
 a) Bi Cameral            b) Uni Cameral            c) Tri Cameral            d) Any Cameral
29. There shall not be more than \_\_\_\_\_ gap between two sessions of the Parliament.  
 a) 6 months            b) 6 weeks            c) 6 days            d) 6 years
30. The Prime Minister is \_\_\_\_\_  
 a) Elected            b) Appointed            c) Nominated            d) Both (a) & (b)
31. Maximum strength of the Lok – Sabha is  
 a) 550            b) 550 + 2            c) 545            d) 600
32. Which House of the Parliament is known as Elders and Knowledge House?  
 a) Lok - Sabha            b) Raj - Sabha            c) Both            d) None of these
33. How many time is President can return the Bill for consideration to Parliament?  
 a) Once            b) Twice            c) Thrice            d) Any number of times
34. Which of the following non – member of Parliament has the right to address it?  
 a) Auditor General of India            b) Chief Justice of India  
 c) Attorney General of India            d) Chief Election Commissioner
35. Sovereignty of Indian Parliament is restricted by  
 a) Powers of the President            b) Judicial Review  
 c) Leader of the opposition            d) Power of the Prime - Minister
36. Which one of the following Bills must be passed by each House of the Indian Parliament separately by special majority?  
 a) Ordinary Bill            b) Money Bill  
 c) Finance Bill            d) Constitutional Amendment Bill
37. To be recognized as an official opposition party in the Parliament, how many seats should it have to win?  
 a)  $1/3^{\text{rd}}$  of total strength            b)  $1/4^{\text{th}}$  of total strength  
 c)  $1/10^{\text{th}}$  of total strength            d)  $1/6^{\text{th}}$  of total strength
38. This is not the Committee of the Parliament.  
 a) Standing Committee            b) Public Account Committee  
 c) Estimates Committee            d) Welfare of Minorities

39. The Salary of the President and Vice – President is charged on  
 a) Contingency Fund b) P.M's Fund  
 c) Parliament Fund d) Consolidated Fund
40. The Parliament of India exercises control over the functions of the Council of Ministers through  
 a) Adjournment motion b) Question hour  
 c) Supplementary question d) All of these
41. Which among the following is the final authority to interpret the Constitution?  
 a) President b) Supreme Court c) Council of Minister d) Parliament
42. A Governor holds office  
 a) For Five years b) For a period specified by the Parliament  
 c) During the pleasure of the President d) None of these
43. Chairman of Legislative Council is  
 a) Appointed by the Governor b) The Governor  
 c) Elected by the members of the Legislative Council  
 d) Appointed by the Speaker
44. Election Commission is a  
 a) Elected body b) Constitutional body  
 c) Statutory body d) None of these
45. A proclamation of National Emergency must be placed before the Parliament for its approval.  
 a) Within 1 month b) Within 2 month c) Within 6 month d) Within 1 year
46. President's Rule can be imposed for a maximum period of  
 a) 1 year b) 2 years c) 6 month d) 3 years
47. Which Constitutional Act made elementary education a Fundamental Right?  
 a) 86<sup>th</sup> CAA 2002 b) 87<sup>th</sup> CAA 2003 c) 91<sup>st</sup> CAA 2003 d) 100<sup>th</sup> CAA 2013
48. Who summons, prorogues and dissolves the State Legislative?  
 a) Chief Minister b) Speaker  
 c) Governor of the State d) President of India
49. Minimum and Maximum strength of the Legislative Assembly is  
 a) 60 and 500 b) 40 and 100 c) 70 and 700 d) 100 and 1000
50. \_\_\_\_\_ number of people represents graduate Constituency in the Vidhan Parishyadh  
 a) 1/10<sup>th</sup> b) 2/3<sup>rd</sup> c) 1/2<sup>th</sup> d) 1/5<sup>th</sup>

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